

Per EPA guidance, the appropriate values for surface roughness length ( $z_0$ ) should be used in the AERMET meteorological processor to prepare the meteorological data for AERMOD.<sup>19</sup> The EPA recommended upwind distance for processing the land cover data to determine the effective  $z_0$  for input to AERMET is 1 kilometer (km) relative to the meteorological tower (measurement site). However, for this modeling analysis the TCEQ guidance of using the 1 km distance relative to the application site (i.e., Dorchester Cement Plant) is used to process the land cover data. EPA has developed a tool called AERSURFACE that can be used as an aid in determining realistic and reproducible surface characteristic values, including surface roughness.

An analysis will be performed by Black Mountain using the latest version of AERSURFACE (version 20060) to confirm the appropriate surface roughness meteorological data set for the proposed project site. AERSURFACE requires the input of land cover data from U. S. Geological Survey (USGS) National Land Cover Data (NLCD), which is used to determine the land cover types for the user-specified location. In this modeling analysis, the 2016 NLCD data files will be downloaded from the following website:  
<ftp://newftp.epa.gov/Air/aqmg/nlcd/2016/>.

Preliminary analyses indicate that the resulting surface roughness at the Dorchester Cement Plant estimated using AERSURFACE is 0.082 m, which corresponds to the low surface roughness category. As such, the meteorological data set processed with low surface roughness characteristics will be used in the modeling analysis. An electronic copy of the AERSURFACE input and output file will be provided with the AQA report.

### 5.3 Terrain

Receptor terrain elevations input to the AERMOD model will be determined using National Elevation Dataset (NED) data obtained from the U.S. Geological Survey (USGS) National Map with a 1/3 arc second resolution (approximately 10-meters). The receptor elevations will be calculated using the AERMOD terrain preprocessor, AERMAP (version 18081). The elevations of on-property and off-property sources included in the NAAQS and PSD Increment Analyses will also be determined using AERMAP.

In addition to terrain elevation, an additional parameter called the hill height scale is required for each receptor to feed AERMOD's terrain modeling algorithms. AERMOD computes the impact at a receptor as a weighted interpolation between horizontal and terrain-following states using a critical dividing streamline approach. This scheme assumes that part of the plume mass will contain enough energy to ascend and traverse over a terrain feature while the remainder will impinge and traverse around a terrain feature under certain meteorological conditions. The hill height scale is computed by the AERMAP terrain preprocessor for each receptor as a measure of the one terrain feature in the modeling domain that would have the greatest effect on plume behavior at that receptor.

The hill height scale does not represent the critical dividing streamline height itself, but supplies the computational algorithms with an indication of the relative relief within the modeling domain for the determination of the critical dividing streamline height for each hour of meteorological data.

According to Section 2.1.2 of the AERMAP User's Guide, the NED array boundary for AERMAP must include all terrain features that exceed a 10 percent elevation slope from any given receptor in order to properly calculate the hill height scale at each receptor.<sup>20</sup> The domain for the hill height analysis will be set to at least the minimum area required for proper handling of elevation slope.

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<sup>19</sup> EPA, AERMOD Implementation Guide, Revised August 17, 2019.

<sup>20</sup> U.S. EPA, Office of Air Quality Planning and Standards, *User's Guide for the AERMOD Terrain Preprocessor (AERMAP)*, Research Triangle Park, NC, EPA-454/B-18-004, April 2018.

## 5.4 Building Wake Effects (Downwash)

The stack emission sources for the Dorchester Cement Plant considered in this analysis will be evaluated in terms of their proximity to nearby structures. The purpose of this evaluation is to determine whether stack discharges will be caught in the turbulent wakes of these structures, leading to downwash of the plumes. Wind blowing around a building creates zones of turbulence that are greater than if the building was absent. These effects generally cause higher ground-level pollutant concentrations since building downwash inhibits dispersion from elevated stack discharges. AERMOD incorporates the Plume Rise Model Enhancements (PRIME) algorithms for estimating enhanced plume growth and restricted plume rise for plumes affected by building wakes.<sup>21</sup>

The U.S. EPA has promulgated stack height regulations that restrict the use of stack heights in excess of "Good Engineering Practice" (GEP) in air dispersion modeling analyses. Under these regulations, that portion of a stack in excess of the GEP height is generally not creditable when modeling to determine source impacts. This essentially prevents the use of excessively tall stacks to reduce the ground-level pollutant concentrations. The stack height not subject to the effects of downwash, called the GEP stack height, is defined as the greater of 65 meters or by the following formula:

$$H_{GEP} = H + 1.5L$$

Where:

$H_{GEP}$  = GEP stack height,

H = structure height, and

L = lesser dimension of the structure (height or projected width).

This equation is limited to stacks located within 5L of a structure. Stacks located at a distance greater than 5L are not subject to the wake effects of the structure. If there is more than one stack at a given facility, the above equation must be successively applied to each stack. If more than one structure is involved, the equations must also be successively applied to each structure. In general, the lowest GEP stack height for any source is 65 meters by default.<sup>22</sup>

Direction-specific building dimensions and the dominant downwash structure parameters used as inputs to the dispersion models will be determined using the *BREEZE*® BPIPP software, developed by Trinity Consultants, Inc. This software incorporates the algorithms of the U.S. EPA-sanctioned Building Profile Input Program with PRIME enhancement (BPIP-PRIME), version 04274.<sup>23,24</sup> BPIP-PRIME is designed to incorporate the concepts and procedures expressed in the GEP Technical Support document, the Building Downwash Guidance document, and other related documents.

The output from the BPIP-PRIME downwash analysis lists the names and dimensions of the structures generating wake effects and the locations and heights of the affected emission sources (i.e., stacks). In

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<sup>21</sup> L.L. Schulman, D.G. Strimaitis, and J.S. Scire, *Development and Evaluation of the Prime Plume Rise and Building Downwash Model*, AWMA, 50:378-390, 2000.

<sup>22</sup> 40 CFR §51.100(ii)

<sup>23</sup> U.S. Environmental Protection Agency, *User's Guide to the Building Profile Input Program*, Research Triangle Park, NC, EPA-454/R-93-038, Revised April 21, 2004.

<sup>24</sup> L.L. Schulman, D.G. Strimaitis, and J.S. Scire, *Addendum to ISC3 User's Guide: The Prime Plume Rise and Building Downwash Model*, Electric Power Research Institute, Concord, MA, November 1997.



addition, the output contains a summary of the dominant structure for each emission unit (considering all wind directions) and the actual building height and projected widths for all wind directions. This information is then incorporated into the data input files for the AERMOD air dispersion model.

The height for the structures considered in the downwash analysis will be provided in the AQA report. The locations of the modeled downwash structures will be provided in a plot plan submitted with the AQA report.

## 5.5 Receptor Design

In the air quality dispersion modeling Significance Analysis, the modeled ground-level concentrations will be determined within a series of fenceline-based nested grids:

- ▶ Fenceline grid with receptors placed at 25 m intervals along the fenceline;
- ▶ Tight Cartesian grid with 25 m resolution extending approximately 250 m from the facility fenceline and at least 300 m from any emissions source;
- ▶ Fine Cartesian receptor grid with 100 m resolution extending from tight grid to approximately 2.0 km from any emissions source;
- ▶ Medium Cartesian receptor grid with 500 m resolution extending from the fine grid to approximately 7.5 km from any emissions source; and
- ▶ Coarse Cartesian receptor grid with 1 km resolution extending from the medium grid to approximately 25 km from any emissions source, or to at least the distance to the furthest significant receptor (not to exceed 50 km) from any emissions source, whichever is greater. In addition, if concentrations are increasing near the edge of the receptor grid, the grid will be extended such that concentrations decrease near the edge of the grid.

If a Full Impact Analysis is required, only the receptors with modeled impacts greater than the SIL (i.e., the significant receptors) will be modeled for the particular pollutant and averaging period that is above the SIL.

Off-property inventory sources will be included in any required NAAQS and PSD Increment Analysis. As necessary, Black Mountain will employ the Mitsubishi Approach where significant receptors located within the property boundary of an off-property source will be evaluated separately without the contribution of that particular site's respective sources. The Mitsubishi Approach methodology has been accepted by U.S. EPA.<sup>25</sup> Following the Mitsubishi Approach, the significant receptors obtained from the Significance Analysis and evaluated separately in the NAAQS and PSD Increment Analysis will be divided into following:

- ▶ Run 1:
  - Receptors - All significant receptors except those located within each of the specified inventory sites' property boundary;
  - Sources - All sources (Dorchester Cement Plant sources and all inventory sources including those at the specified sites' properties) will be included.
- ▶ Run 2:
  - Receptors - All significant receptors within one of the specified inventory site's property boundary;
  - Sources - All sources will be included except those within the property boundary of the specified inventory site. Subsequent runs will be performed for each off-property inventory site, as required.

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<sup>25</sup> Memorandum from Robert D. Bauman, Chief, SO<sub>2</sub>/Particulate Matter Programs Branch (MD-15) to Gerald Fontenot, Chief, Air Programs Branch, Region VI (6T-A), Ambient Air, October 17, 1989;  
<https://www3.epa.gov/scram001/guidance/mch/ama5.txt>.

## 5.6 Ambient Air

According to TCEQ modeling guidelines, “ambient air” is defined as the portion of the atmosphere external to buildings to which the public has access.<sup>26</sup> The TCEQ further recognizes that “ambient air” begins at the property line.<sup>27</sup> However, for PSD modeling, ambient air begins at the applicant’s fenceline or other physical barrier to public access.<sup>28</sup> For the purposes of this air dispersion modeling analysis, land located outside of the fenceline will be considered ambient air.

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<sup>26</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

<sup>27</sup> Ibid.

<sup>28</sup> Ibid.

## **6. MODELING EMISSIONS INVENTORY**

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The following sections discuss the methodology proposed to represent the Dorchester Cement Plant emission sources and the methodology for obtaining the nearby off-property industrial emission sources that will be included in the air quality dispersion modeling analysis.

### **6.1 On-Property Sources - Proposed Project**

#### **6.1.1 Modeled Emission Rates**

The PSD permit application explains the methodology for calculating the emissions in tons per year (tpy) and pounds per hour (lb/hr) for the proposed modification to the Dorchester Cement Plant. The proposed project emissions sources are listed in Appendix A.

The above sources will be evaluated in the PSD air dispersion modeling analysis due to emissions of pollutants that trigger PSD review. Preliminary source parameters for all the project sources are provided in Appendix A. The modeled project emission rates are based on the change in emissions from the project sources. As the proposed project PSD permit application for the Dorchester Cement Plant is being reviewed by TCEQ, if there are any changes to the emission source(s) rate and parameters, the changes will be included in the AQA.

#### **6.1.2 Modeled Source Parameters**

In a typical air quality dispersion modeling analysis, emission sources can be represented as point, area, line, volume, or open pit sources. The majority of the project emission sources at the Dorchester Cement Plant are represented as point sources since they discharge through stacks with no obstructions to vertical exhaust flow.

Fugitive emissions from the unloading operations, material handling and storage, and MSS operations are modeled as a volume source. The volume sources size calculations are based on the unloading and storage areas. The material handling and storage operations are located in enclosed buildings.

Emission sources and corresponding source parameters used in the modeling analyses are provided in Appendix A. To reflect any additional changes following the submittal of this protocol, updates to the modeled parameters will be provided in the AQA report, as necessary.

### **6.2 On-Property Sources – Existing**

The Dorchester Cement Plant is a new source. Therefore, there are no existing on-property sources.

### **6.3 Off-Property Inventory Sources**

Modeling of off-property inventory sources will be required for a particular pollutant and averaging period if a Full Impact Analysis is triggered for that pollutant and averaging period (i.e., modeled ground-level concentrations from the Significance Analysis are greater than the corresponding SILs). It is anticipated that maximum predicted project concentrations for NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> will be above the corresponding SILs. In case the final SIL modeling indicates that maximum predicted concentrations for any other

pollutant(s) for any averaging period(s) is greater than the corresponding SILs, then a revised modeling protocol will be submitted which addresses the additional compounds that exceed their respective SILs.

### 6.3.1 NAAQS Inventory

A NAAQS inventory will be developed for the pollutant(s) and averaging period(s) exceeding the SILs. To develop the NAAQS inventory, Black Mountain will obtain pollutant-specific regional source data from the TCEQ's Air Permits Allowable Database (APAD) and State of Texas Air Reporting System (STARS) for sources located within 50 km of the proposed Dorchester Cement Plant. The nearby sources included in full impact modeling will be based on the guidance contained in Section 8.3.3 of Appendix W to Part 51 – "Guideline on Air Quality Models" (Guideline) which states:

*"a. In multi-source areas, determining the appropriate background concentration involves: (1) Identification and characterization of contributions from nearby sources through explicit modeling, and (2) characterization of contributions from other sources through adequately representative ambient monitoring data. A key point here is the interconnectedness of each component in that the question of which nearby sources to include in the cumulative modeling is inextricably linked to the question of what the ambient monitoring data represents within the project area.*

*b. Nearby sources: All sources in the vicinity of the source(s) under consideration for emissions limits that are not adequately represented by ambient monitoring data should be explicitly modeled. Since an ambient monitor is limited to characterizing air quality at a fixed location, sources that cause a significant concentration gradient in the vicinity of the source(s) under consideration for emissions limits are not likely to be adequately characterized by the monitored data due to the high degree of variability of the source's impact."*

The above guidance focuses on which sources should be modeled (sources in the vicinity of the project that are not adequately represented by ambient monitoring background data.) Existing sources that cause a significant concentration gradient in the vicinity of the project are not likely to be adequately characterized by the monitored background data and will be explicitly modeled. The number of nearby sources to be explicitly modeled in the air quality analysis is expected to be few except in unusual situations. The areas with significant concentration gradients from the project are expected to occur within 10 km of the project site.

U.S. EPA has acknowledged that the procedure of including inventory sources located within 50 km of a site may in many cases result in cumulative impact assessments that are overly conservative, and that this procedure may not always be necessary to fulfill the requirements of a cumulative impact assessment.<sup>29,30</sup>

Per the U.S. EPA's 1-hour NO<sub>2</sub> modeling guidance:

*"Even accounting for some terrain influences on the location and gradients of maximum 1-hour concentrations, these considerations suggest that the emphasis on determining which nearby sources to include in the modeling analysis should focus on the area within about 10 kilometers of*

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<sup>29</sup> U.S. EPA Memorandum from Tyler Fox to Regional Air Division Directors, *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard*, March 1, 2011; [https://www.epa.gov/sites/production/files/2015-07/documents/appwno2\\_2.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf).

<sup>30</sup> Federal Register Vol. 82, No. 10, 5182, January 17, 2017, Final Rule; [https://www.epa.gov/sites/production/files/2020-09/documents/appw\\_17.pdf](https://www.epa.gov/sites/production/files/2020-09/documents/appw_17.pdf).



*the project location in most cases. The routine inclusion of all sources within 50 kilometers of the project location, the nominal distance for which AERMOD is applicable, is likely to produce an overly conservative result in most cases."*

Therefore, consistent with this guidance, Black Mountain proposes to limit the inventory sources to those located within approximately 10 km of Dorchester Cement Plant if the ROI is less than or equal to 10 km, or limit the inventory sources to sources within the ROI if the ROI is greater than 10 km.

In addition, the preliminary modeling results indicate that the maximum impact occurs near the fence line. Thus, it is expected that sources located at a distance of more than 10 km from the Dorchester Cement Plant would not have a significant impact in the area of the Dorchester Cement Plant, and maximum impacts from sources located at a distance beyond 10 km or the ROI (if greater than 10 km) would be unlikely to occur at the same location where impacts from on-site sources are the highest.

Therefore, given U.S. EPA's assertion that including nearby sources out to 50 km from the project location will produce overly conservative results and the utilization of a background monitor located within the modeling domain, limiting the inventory sources to those located within the greater of 10 km or the ROI is representative of actual ambient concentrations expected in the area and is consistent with recent U.S. EPA guidance. Furthermore, use of a background monitor in the modeling domain sufficiently accounts for more distant sources.

Using the requested APAD and STARS data retrievals, a unique listing of Regulated Entities (RN) and emissions points will be created, and sources beyond 10 km or the ROI, as applicable, will be excluded. Because some of the information obtained from APAD is incomplete or not up-to-date, Black Mountain will update the APAD data within the greater of 10 km or the ROI of the Dorchester Cement Plant by reviewing the available permits and emissions inventory for the APAD sources and make updates as necessary to make the data more complete and up-to-date as follows:

- ▶ If any emission rates are missing (i.e., shown as zeros) or incorrect in APAD:
  - Black Mountain will review the available permitting files to identify missing emission rates.
  - Black Mountain will review the latest TCEQ provided STARS data to identify actual emission rates.
  - Should emission rates not be available through permitting files or STARS data then the emission rate will be set to zero (0).
- ▶ If either stack parameters or source location coordinates are missing (i.e. shown as zeros) in APAD:
  - Black Mountain will first review the latest TCEQ provided STARS data to identify the missing stack parameters and source locations.
  - If source location coordinates are not available from the STARS data, Black Mountain will model these sources using the average of the coordinates from other sources at the same site.
  - If stack parameters are not available from the STARS data, Black Mountain will use conservative default stack parameters per TCEQ guidance as shown in the tables below.<sup>31</sup>

Source Type	Stack Height (m)	Stack Exit Temperature (K)	Stack Exit Velocity (m/s)	Stack Diameter (m)
Flare	1	1,273	20	0.001
Non-Flare	1	0	0.001	0.001

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<sup>31</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019, Appendix C.

Source Type	Stack Height (m)	Length (m)	Width (m)	Rotation (degree)
Fugitive	1	1.0	1.0	0

- If modeling indicates that the above default stack parameters are too conservative, more appropriate assumptions may be made. For example, for boilers with missing stack parameters, average stack parameters for other boiler sources in the inventory may be used as needed and appropriate. Detailed assumptions will be described in the AQA report.
- ▶ When searching for accessible permitting files, the following priority of files will be utilized:
  - If modeling files are available for a site, data from the modeling files will be used.
  - If modeling files are not available, data from the technical review (TRV), permit letter, or maximum allowable emission rates table (MAERT) will be used.
  - If the TRV and MAERT are not available, or if only the TRV is available but it doesn't have parameters and emissions for each source, data from permit applications will be used, if readily available.
  - If none of the above modeling and permitting files are available, data from STARS will be used.
- ▶ When evaluating off-property sources for NAAQS or Increment:
  - Black Mountain will review the basis of the hourly and annual emission rates, as needed, to verify if the reported emissions are based on normal and/or MSS operations. Where possible, emission rates will be updated to reflect normal operations. This verification will be conducted using either MAERT tables or permit applications.
  - Black Mountain will add sources within the ROI or 10 km, as appropriate, based on review of case-by-case NSR applications completed since 2020 and available from the TCEQ Central File Room Online, along with any readily available pending case-by-case NSR applications submitted on or before the date this modeling protocol is approved.

All details regarding refinements completed to the off-property sources will be provided in the inventory data summary tables in the AQA.

### 6.3.2 PSD Increment Inventories

PSD increment modeling is only expected for 24-hour PM<sub>2.5</sub> and Black Mountain will use the procedures outlined in TCEQ's modeling guidance.<sup>32</sup> The full impacts increment analysis will only include receptors exceeding the SIL for the particular pollutant and averaging period. The NAAQS emissions inventory may be used as a conservative surrogate for the PSD Increment analysis. The NAAQS emissions inventory will include all sources within the ROI or 10 km radius from the project site.

If the modeling results using the NAAQS emissions inventory for the PSD Increment analysis are too conservative, then Black Mountain will compile a PSD increment emissions inventory for the increment affecting sources. The compiled PSD increment inventory will include identification of major sources that have been modified since the major source baseline date, and changes at minor sources since the minor source baseline date, and the quantification and characterization of associated increment consuming emissions that could impact air quality near the Dorchester Cement Plant.

<sup>32</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

## 7. AIR QUALITY MONITORING DATA

The proposed Dorchester Cement Plant will be located in Grayson County. Grayson County is currently designated as attainment or unclassified for all criteria pollutants.<sup>33</sup> Items related to the air quality monitoring data to be utilized in the air quality dispersion modeling analysis are discussed below.

### 7.1 Pre-Construction Monitoring (Revised)

The U.S. EPA's monitoring de minimis concentrations establish the levels at which a facility needs to conduct pre-construction ambient air quality monitoring for pollutants subject to PSD review in order to evaluate the existing air quality. If the maximum modeled ground-level concentrations from the affected emissions sources in the Significance Analysis do not exceed the U.S. EPA monitoring de minimis concentrations, also referred to as the Significant Monitoring Concentrations (SMC), pre-construction monitoring may be avoided. Table 7-1 shows the applicable pre-construction monitoring de minimis concentrations.

**Table 7-1. Monitoring De Minimis Levels**

<b>Pollutant</b>	<b>Averaging Period</b>	<b>Monitoring De Minimis Level (µg/m<sup>3</sup>)</b>
NO <sub>2</sub>	Annual	14
PM <sub>10</sub>	24-hour	10
CO	8-hour	575
SO <sub>2</sub>	24-hour	13
PM <sub>2.5</sub>	24-hour	0 <sup>a</sup>
Ozone	8-hour	-- <sup>b</sup>

Notes:

- On January 22, 2013, the U.S. Court of Appeals for the District of Columbia Circuit issued a ruling to vacate the PM<sub>2.5</sub> SMC (Sierra Club v. EPA). Furthermore, on December 9, 2013, the EPA published a final rule (78 FR73698) to revise the PM<sub>2.5</sub> SMC to 0 µg/m<sup>3</sup>.
- Any net emissions increase of 100 tpy or more of VOCs or NOX requires an ozone ambient impact analysis including pre-construction monitoring.

It is expected based on preliminary modeling that the Significance Analysis results for the specified averaging periods for the pollutants subject to PSD review for the proposed project will be less than the applicable PSD monitoring de minimis concentrations listed in Table 7-1, and pre-construction monitoring will not be required for these pollutants, with the exception of PM<sub>2.5</sub> and PM<sub>10</sub>. Pre-construction ambient monitoring for PM<sub>2.5</sub> and PM<sub>10</sub> will be addressed since modeled PM<sub>2.5</sub> and PM<sub>10</sub> impacts are expected to be greater than the respective SMCs. If modeling predicts impacts of additional compounds exceeding their respective monitoring de minimis levels, a revised protocol will be submitted addressing the selection and justification of the applicable air quality monitoring data. In addition, ozone precursor NO<sub>x</sub> and VOC emissions are greater than 100 tpy. Therefore, pre-construction O<sub>3</sub> monitoring is required.

<sup>33</sup> The United States Environmental Protection Agency (U.S. EPA) Green Book. Source: <https://www3.epa.gov/airquality/greenbook/ancl.html>, accessed in April 2021.



### 7.1.1 Pre-Construction PM<sub>2.5</sub> and PM<sub>10</sub> Monitoring

Black Mountain has evaluated ambient PM<sub>2.5</sub> and PM<sub>10</sub> data from existing monitoring sites representative of Grayson County and the Dorchester Cement Plant location to satisfy the PSD pre-construction monitoring requirements for PM<sub>2.5</sub> and PM<sub>10</sub> and to determine ambient background concentrations to be used in the NAAQS analyses, as appropriate. The representative background PM<sub>2.5</sub> and PM<sub>10</sub> monitor proposed for the Dorchester Cement Plant are discussed in Sections 7.2.3 and 7.2.4.

### 7.1.2 Pre-Construction O<sub>3</sub> Monitoring

Ozone is a regional pollutant that is not directly emitted into the atmosphere like the other criteria pollutants. Ozone has an appreciable formation time because the mixing of reactants and products occurs over a large volume of air. Grayson county is adjacent to the DFW ozone non-attainment area. Available ozone monitoring data in the DFW area were reviewed, and the Pilot Point Monitor, EPA Site Number 48-121-1032, was selected as a conservative monitor to satisfy the ozone pre-construction monitoring requirements. Figure 7-1 shows the location of the Pilot Point Monitor and the project site relative to the DFW nonattainment area.

**Figure 7-1. Location of Pilot Point Monitor and Project Site**





The TCEQ Modeling Guidelines<sup>34</sup> and PSD pre-construction monitoring requirements<sup>35</sup> allow the use of existing regional monitoring data. The following three criteria are used for determining whether the ozone data meet the TCEQ and PSD pre-construction monitoring requirements:<sup>36</sup> (1) location, (2) data quality, and (3) data currentness. These criteria are addressed below:

- ▶ **Location:** The measured data must be representative of the areas where the maximum concentration occurs for the proposed stationary source, existing sources, and a combination of the proposed and existing sources. As shown in Figure 7-1, the Pilot Point Monitor is located downwind of the DFW area (existing sources). The downwind distance from the DFW area emission sources provides the travel time required for the formation of ozone. Data quality: The data was collected and validated by TCEQ and published on TCEQ's website.
- ▶ **Data currentness:** The 2019 – 2022 data are current since they have been collected within the preceding three years.

Table 7-2 provides a summary of the ozone data collected by the Pilot Point Monitor. The Pilot Point Monitor is located in the DFW ozone nonattainment area and has measured concentrations above the NAAQS. Due to the project's close location to the DFW ozone nonattainment area, the project's ozone impacts must be below the ozone SIL of 1 ppb. The ozone ambient impact analysis is provided in Section 10.

**Table 7-2. Ozone Concentration Summary for the Pilot Point Monitor (EPA ID 48-121-1032)**

Location	Fourth Highest Daily Eight-hour Average <sup>a</sup> (ppb)			Three-year Average <sup>b</sup> (ppb)
	2020	2021	2022	
Pilot Point Monitor	71	85	77	78

a. Data obtained from TCEQ webpage: <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>.

b. The three-year average concentration is calculated as the arithmetic mean of the three most recent years of the fourth highest daily maximum eight-hour average ozone concentrations.

## 7.2 NAAQS Analysis Monitor Background Concentrations (Revised)

In the NAAQS analysis, modeled ambient air concentrations are based on emissions from on-property and off-property industrial sources. To appropriately assess compliance with NAAQS, the modeled impacts from the Dorchester Cement Plant and the NAAQS inventory sources are typically combined with ambient background concentrations, which represent the air quality concentrations due to sources that are not explicitly modeled (e.g., mobile sources, small but local stationary sources, non-regulated fugitive sources, and large but distant sources). However, the background concentration may also include industrial emission sources already accounted for in the inventory. Thus, adding the background concentration to the modeled ground-level concentrations should yield a conservative total concentration since impacts from the inventory sources are included in both the maximum modeled ground-level concentration and the background

<sup>34</sup> TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), Appendix Q - Conducting an Ambient Ozone Impacts Analysis, November 2019.

<sup>35</sup> U.S. Environmental Protection Agency, *Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)*, EPA-450/4-87-007, dated May 1987.

<sup>36</sup> U.S. Environmental Protection Agency, *Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)*, EPA-450/4-87-007, dated May 1987.

concentration. Also, PM<sub>2.5</sub> and PM<sub>10</sub> background concentrations obtained from a monitor that is representative of the site location is used in lieu of performing preconstruction monitoring for these pollutants, if appropriate. Since it is expected that CO impacts will be below the SILs, background monitor concentrations for CO will not be required.

Criteria used to determine whether monitoring station data is representative of the ambient air quality at the proposed site include location of the monitor compared to the site, similarity of Land Use/Land Cover (LULC), population of the area in which the proposed monitor is located as compared to the site, and tonnage of emissions released in the area of the monitor as compared to the site. In addition, the monitoring data must be of high quality, from an approved State and Local Air Monitoring Station (SLAMS) or similar monitor subject to the quality assurance requirements in 40 CFR Part 58 Appendix A and should typically at a minimum include the three most recent complete years of quality assured data. A complete year (i.e., at least 75% of the sampling days for each quarter are valid) of concentration data for each pollutant with modeled impacts greater than the SIL and/or SMC is available for 2019, 2020, and 2021.

### **7.2.1 NO<sub>2</sub> Monitor Selection**

Black Mountain proposes to use the Denton Airport South Monitor, EPA Site Number 48-121-0034 (Denton Airport South Monitor), as the representative/conservative monitor for the Dorchester Cement Plant site for NO<sub>2</sub> background concentrations. The bases for the selection include:

- ▶ Per TCEQ guidance, when there is no NO<sub>2</sub> monitor within the same county a monitor from an adjacent county can be used when justified.<sup>37</sup> The Denton Airport South Monitor is located in the adjacent Denton County.
- ▶ Figure 7-2 and Figure 7-3 present a visual comparison of the areas surrounding the Denton Airport South Monitor and Dorchester Cement Plant locations, respectively. The yellow circles on the aerial images indicate a 10-km radius surrounding the monitor and the Dorchester Cement Plant, and the red points represent nearby industrial sources according to TCEQ's 2021 Emission Inventory (EI) database. As illustrated in Figure 7-2, the Denton Airport South Monitor is located in a suburban area outside of Denton, Texas, with a few nearby industrial sources. The monitor captures NO<sub>2</sub> emissions from suburban, residential, commercial, and industrial activity from the Denton area. Conversely, the Dorchester Cement Plant is located in a more rural area of Grayson County, with only one industrial source reporting NO<sub>2</sub> emissions within 10 km.
- ▶ Table 7-3 lists each industrial emission source reporting NO<sub>2</sub> emissions located within 10 km of the monitor and the site based on TCEQ EI data. The NO<sub>2</sub> emissions from industrial sources surrounding the Denton Airport South Monitor are greater than those around the Dorchester Cement Plant. In addition, there are more residential, commercial, and industrial sources within 10 km of the Denton Airport South Monitor. Therefore, the NO<sub>2</sub> concentrations from this monitor conservatively represent more residential, commercial, and industrial activity than the area of the Dorchester Cement Plant.
- ▶ Table 7-4 provides a comparison of countywide population, countywide NO<sub>2</sub> emissions from industrial sources reporting NO<sub>2</sub> emissions based on TCEQ 2021 EI data, and emissions from industrial sources reporting NO<sub>2</sub> emissions located within 10 km of the monitor and site locations. The monitor is located in an area that contains a higher population and larger NO<sub>2</sub> emissions.

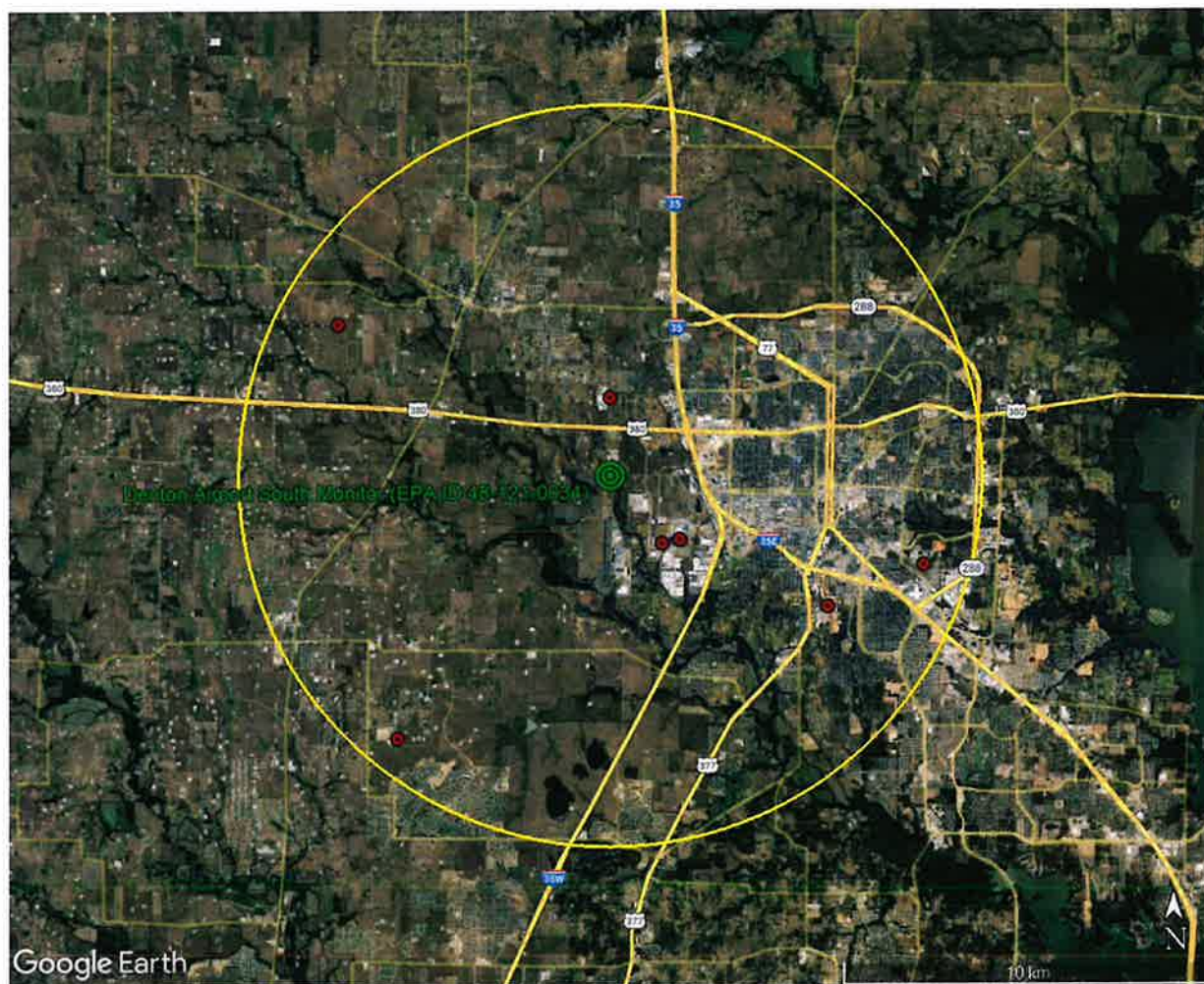
Based on the above reasons, Black Mountain believes that NO<sub>2</sub> monitored concentrations obtained from the Denton Airport South Monitor are a conservative representation of both off-property sources and the ambient background concentration in the vicinity of the proposed Dorchester Cement Plant site.

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<sup>37</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

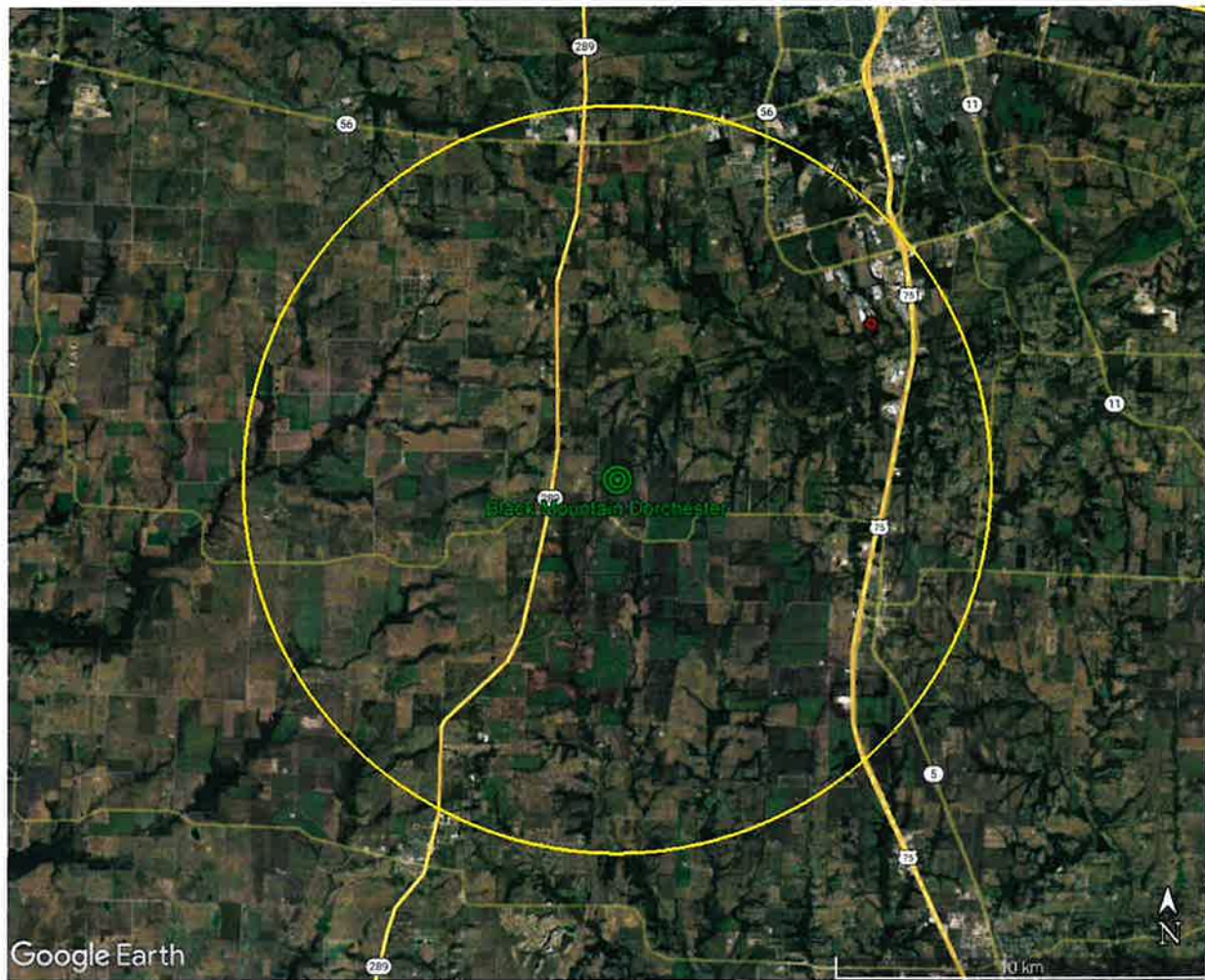
Table 7-5 shows the NO<sub>2</sub> data collected during 2020, 2021, and 2022 are complete (i.e., at least 75% of the sampling days for each quarter are valid) and provides summaries of the background concentrations for NO<sub>2</sub> obtained from the Denton Airport South Monitor.

**Figure 7-2. NO<sub>2</sub> Sources near the Denton Airport South Monitor**





**Figure 7-3. Sources near the Dorchester Cement Plant Site**





**Table 7-3. Emissions Inventory Data for NO<sub>2</sub> Sources within 10 km of Site and Monitor**

<b>Company</b>	<b>Site Name</b>	<b>RN</b>	<b>Distance (km)</b>	<b>Annual NO<sub>2</sub> Emissions (TPY)<sup>a</sup></b>
<b>Emission Sources within 10 km of Dorchester Cement Plant</b>				
PANDA SHERMAN POWER LLC	PANDA SHERMAN POWER STATION	RN106831423	7.99	56.78
<b>Emission Sources within 10 km of Denton Airport South Monitor</b>				
ACME BRICK COMPANY	DENTON PLANT	RN102097904	6.81	19.38
CITY OF GARLAND POWER & LIGHT	SPENCER GENERATING STATION	RN100214766	8.77	3.17
PACCAR INC	PETERBILT MOTORS DENTON FACILITY	RN100211762	2.53	12.36
TETRA PAK MATERIALS LP	MATERIALS LIQUID FOOD CARTON MFG DENTON FACILITY	RN102615747	2.27	1.11
SWG PIPELINE LLC	PONDER COMPRESSOR STATION	RN106160260	9.06	18.55
TARGA MIDSTREAM SERVICES LLC	MUNSON COMPRESSOR STATION	RN106993041	8.38	10.47
BEDROCK PRODUCTION LLC	COLE B 2H SITE	RN108365305	2.14	0.08
CITY OF DENTON	225 MW DENTON ENERGY CENTER	RN106080914	1.35	19.13

**Table 7-4. Summary of NO<sub>2</sub> Emissions and Population for Site and Monitor**

<b>Location</b>	<b>County</b>	<b>Population <sup>a</sup></b>	<b>County Wide NO<sub>2</sub> Emissions <sup>b</sup> (TPY)</b>	<b>NO<sub>2</sub> Emissions within 10 km if the Site/Monitor <sup>b</sup> (TPY)</b>
Dorchester Cement Plant	Grayson	143,131	59	56.78
Denton Airport South Monitor	Denton	977,281	278	84.25

a. 2022 population estimate data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219> (accessed in December 2022)

b. Emission Rates reported in the 2021 Emission Inventory were provided via email by Mr. Adam Bullock, TCEQ, to Mr. Stephen Beene, Trinity Consultants, on March 23, 2023.

**Table 7-5. NO<sub>2</sub> Concentration Summary for the Denton Airport South Monitor (EPA ID 48-121-0034)**

	2020 <sup>a</sup>	2021 <sup>a</sup>	2022 <sup>a</sup>
Quarter 1 Percent Complete: <sup>b</sup>	98.90%	98.89%	98.89%
Quarter 2 Percent Complete: <sup>b</sup>	100.00%	98.90%	100.00%
Quarter 3 Percent Complete: <sup>b</sup>	90.22%	92.39%	92.39%
Quarter 4 Percent Complete: <sup>b</sup>	98.91%	100.00%	98.91%
98 <sup>th</sup> Percentile Daily Maximum 1-hour Concentration (ppb): <sup>c</sup>	34.6	30.0	36.4
3-Year Average 1-hr Concentration (2020-2022) (ppb): <sup>d</sup>	34.0		
3-Year Average 1-hr Concentration (2020-2022) (µg/m <sup>3</sup> ): <sup>e</sup>	63.9		
Annual Average Concentration (ppb): <sup>f,g</sup>	--	--	7
Annual Average Concentration (µg/m <sup>3</sup> ): <sup>e</sup>	--	--	13

- c. Monitor data are obtained from the TCEQ Air Monitoring website ([https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly\\_summary.pl?cams=56](https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly_summary.pl?cams=56)).
- d. Data is demonstrated to be at least 75% complete to satisfy the requirements of 40 CFR Part 50 Appendix S, Section 3.1(b) and 40 CFR Part 50 Appendix S, Section 3.2(b).
- e. The 98<sup>th</sup> percentile daily maximum 1-hour concentrations were determined using the procedures prescribed in 40 CFR Part 50 Appendix S, Section 5.2.
- f. The three-year average of the 98<sup>th</sup> percentile daily maximum 1-hour concentration is rounded as prescribed in 40 CFR Part 50 Appendix S, Section 4.2(c).
- g. The concentration is multiplied by 1.88 to convert ppb to µg/m<sup>3</sup>.
- h. The annual average concentration was determined using the procedures prescribed in 40 CFR Part 50 Appendix S, Section 5.1.
- i. The annual average concentration is rounded as prescribed in 40 CFR Part 50 Appendix S, Section 4.1(b).

### 7.2.2 SO<sub>2</sub> Monitor Selection

Black Mountain proposes to use the Midlothian OFW Monitor, EPA Site Number 48-139-0016 (Midlothian OFW Monitor), as the representative/conservative monitor for the Dorchester Cement Plant site for SO<sub>2</sub> background concentrations. The bases for the selection include:

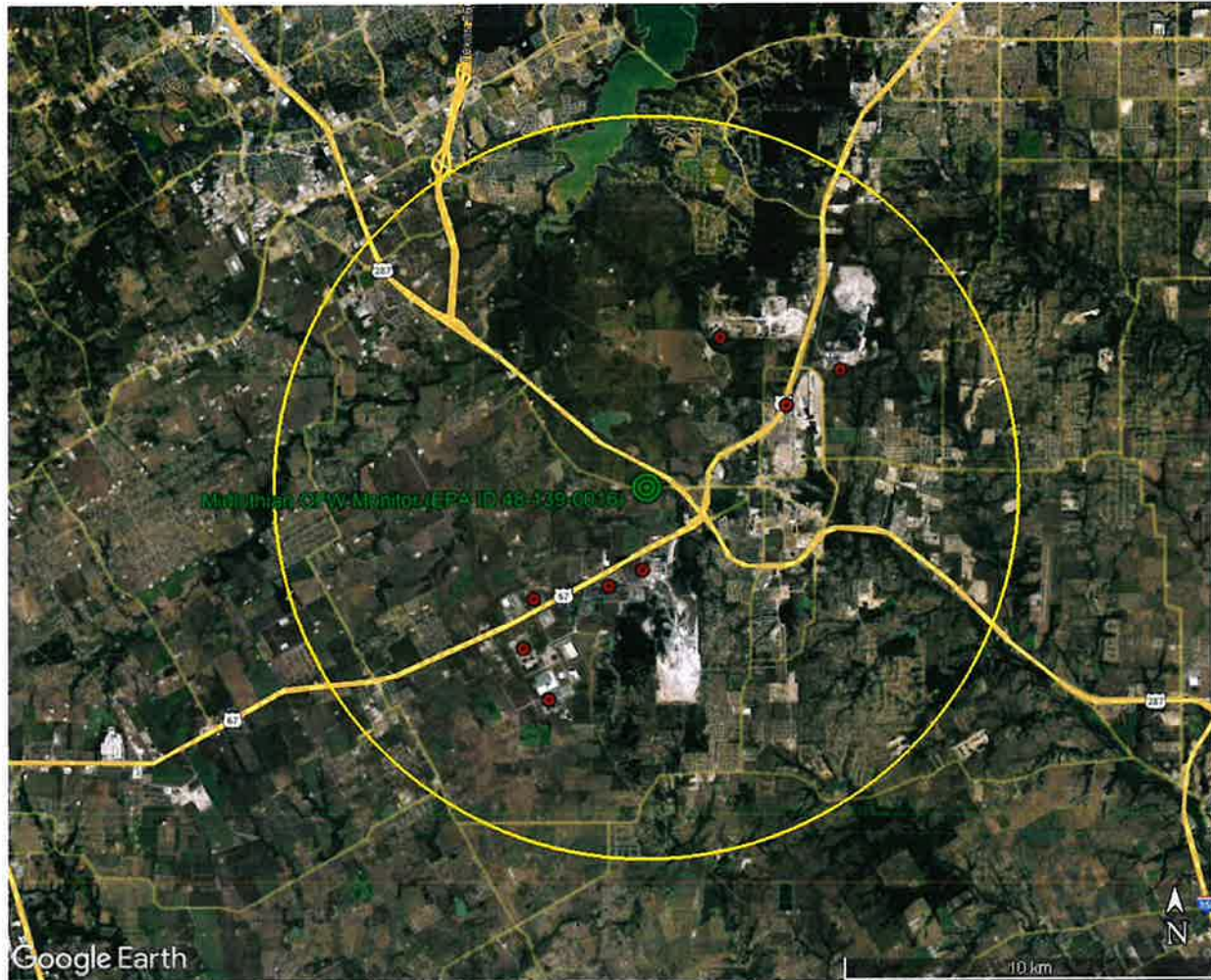
- ▶ There is no SO<sub>2</sub> monitor in Grayson County or an adjacent county. Per TCEQ guidance, when there is no SO<sub>2</sub> monitor within the same county or an adjacent county, then monitoring data from another county can be used when justified.<sup>38</sup>
- ▶ Figure 7-3 and Figure 7-4 present a visual comparison of the areas surrounding the Dorchester Cement Plant and the Midlothian OFW Monitor locations, respectively. The yellow circles on the aerial images indicate a 10-km radius surrounding the monitor and the Dorchester Cement Plant, and the red points represent nearby industrial sources according to TCEQ's 2021 Emission Inventory (EI) database. As illustrated in Figure 7-4, the Midlothian OFW Monitor is located in a suburban area of Midlothian, Texas, with several nearby industrial sources. The monitor captures SO<sub>2</sub> emissions from suburban, residential, commercial, and industrial activity from the Midlothian area. Conversely, the Dorchester Cement Plant is located in a more rural area of Grayson County, with only one industrial source reporting SO<sub>2</sub> emissions within 10 km.
- ▶ Table 7-6 lists each industrial emission source reporting SO<sub>2</sub> emissions located within 10 km of the monitor and the site based on TCEQ EI data. The SO<sub>2</sub> emissions from industrial sources surrounding the Midlothian Monitor are greater than those around the Dorchester Cement Plant. In addition, there

<sup>38</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

are more residential, commercial, and industrial sources within 10 km of the Midlothian Monitor. Therefore, the SO<sub>2</sub> concentrations from this monitor conservatively represent more residential, commercial, and industrial activity than the area of the Dorchester Cement Plant.

- ▶ Table 7-7 provides a comparison of countywide population, countywide SO<sub>2</sub> emissions from industrial sources reporting SO<sub>2</sub> emissions based on TCEQ 2021 EI data, and emissions from industrial sources reporting SO<sub>2</sub> emissions located within 10 km of the monitor and site locations. The monitor is located in an area that contains a higher population and larger SO<sub>2</sub> emissions.

**Figure 7-4. SO<sub>2</sub> Sources near the Midlothian OFW Monitor**



Based on the above reasons, Black Mountain believes that SO<sub>2</sub> monitored concentrations obtained from the Midlothian Monitor are a conservative representation of both off-property sources and the ambient background concentration in the vicinity of the proposed Dorchester Cement Plant site.

Table 7-8 shows the SO<sub>2</sub> data collected during 2019, 2020, and 2021 are complete (i.e., at least 75% of the sampling days for each quarter are valid) and provides summaries of the background concentrations for SO<sub>2</sub> obtained from the Midlothian Monitor. The Midlothian Monitor was shut down during 2022, therefore 2019-2021 are the most recent years of complete data.

**Table 7-6. Emissions Inventory Data for SO<sub>2</sub> Sources within 10 km of Site and Monitor**

<b>Company</b>	<b>Site Name</b>	<b>RN</b>	<b>Distance (km)</b>	<b>Annual SO<sub>2</sub> Emissions (TPY)<sup>a</sup></b>
<b>Emission Sources within 10 km of Dorchester Cement Plant</b>				
PANDA SHERMAN POWER LLC	PANDA SHERMAN POWER STATION	RN106831423	7.99	5.06
<b>Emission Sources within 10 km of Midlothian OFW Monitor</b>				
CHAPARRAL STEEL MIDLOTHIAN LP	CHAPARRAL STEEL MIDLOTHIAN PLANT	RN100216472	2.79	315.14
ASH GROVE CEMENT COMPANY	MIDLOTHIAN PLANT	RN100225978	4.53	7.63
TXI OPERATIONS LP	MIDLOTHIAN PLANT	RN100217199	2.18	669.60
HOLCIM TEXAS LP	MIDLOTHIAN PLANT	RN100219286	6.12	1,898.78
MARTECH LLC	MARTECH	RN101469146	4.40	0.00
QUALICO STEEL CO INC	STRUCTURAL STEEL MFG	RN100552447	4.21	0.00
MIDLOTHIAN ENERGY LLC	MIDLOTHIAN ENERGY FACILITY	RN102596400	6.23	9.59
SHARKA LLC	SHARKA	RN110495884	5.39	0.01

**Table 7-7. Summary of SO<sub>2</sub> Emissions and Population for Site and Monitor**

<b>Location</b>	<b>County</b>	<b>Population <sup>a</sup></b>	<b>County Wide SO<sub>2</sub> Emissions <sup>b</sup> (TPY)</b>	<b>SO<sub>2</sub> Emissions within 10 km if the Site/Monitor <sup>b</sup> (TPY)</b>
Dorchester Cement Plant	Grayson	143,131	6	5.06
Midlothian OFW Monitor	Ellis	212,182	2,978	2,900.74

a. 2020 population estimate data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219> (accessed in December 2022)

b. Emission Rates reported in the 2021 Emission Inventory were provided via email by Mr. Adam Bullock, TCEQ, to Mr. Stephen Beene, Trinity Consultants, on March 23, 2023.



**Table 7-8. SO<sub>2</sub> Concentration Summary for the Midlothian OFW Monitor (EPA ID 48-139-0016)**

	2019 <sup>a</sup>	2020 <sup>a</sup>	2021 <sup>a</sup>
Quarter 1 Percent Complete: <sup>b</sup>	95.56%	95.60%	95.56%
Quarter 2 Percent Complete: <sup>b</sup>	97.80%	100.00%	100.00%
Quarter 3 Percent Complete: <sup>b</sup>	76.09%	96.74%	94.57%
Quarter 4 Percent Complete: <sup>b</sup>	97.83%	100.00%	93.48%
98 <sup>th</sup> Percentile Daily Maximum 1-hour Concentration (ppb): <sup>c</sup>	4.2	5.7	8.1
3-Year Average 1-hr Concentration (2019-2021) (ppb): <sup>d</sup>	6		
3-Year Average 1-hr Concentration (2019-2021) (µg/m <sup>3</sup> ): <sup>e</sup>	16		

a. Monitor data are obtained from the TCEQ Air Monitoring website ([https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly\\_summary.pl?cams=52](https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly_summary.pl?cams=52)).

b. Data is demonstrated to be at least 75% complete to satisfy the requirements of 40 CFR Part 50 Appendix S, Section 3.1(b) and 40 CFR Part 50 Appendix S, Section 3.2(b).

c. The 98<sup>th</sup> percentile daily maximum 1-hour concentrations were determined using the procedures prescribed in 40 CFR Part 50 Appendix S, Section 5.2.

d. The three-year average of the 98<sup>th</sup> percentile daily maximum 1-hour concentration is rounded as prescribed in 40 CFR Part 50 Appendix S, Section 4.2(c).

e. The concentration is multiplied by 2.62 to convert ppb to µg/m<sup>3</sup>.

### 7.2.3 PM<sub>2.5</sub> Monitor Selection

Black Mountain proposes to use the Denton Airport South Monitor, EPA Site Number 48-121-0034 (Denton Airport South Monitor), as the representative/conservative monitor for the Dorchester Cement Plant site for PM<sub>2.5</sub> background concentrations. The bases for the selection include:

- ▶ Per TCEQ guidance, when there is no PM<sub>2.5</sub> monitor within the same county a monitor from an adjacent county can be used when justified.<sup>39</sup> The Denton Airport South Monitor is located in the adjacent Denton County.
- ▶ Figure 7-3 and Figure 7-2 present a visual comparison of the areas surrounding the Dorchester Cement Plant and the Denton Airport South Monitor locations, respectively. The yellow circles on the aerial images indicate a 10-km radius surrounding the monitor and the Dorchester Cement Plant, and the red points represent nearby industrial sources according to TCEQ's 2021 Emission Inventory (EI) database. As illustrated in Figure 7-2, the Denton Airport South Monitor is located in a suburban area outside of Denton, Texas, with a few nearby industrial sources. The monitor captures PM<sub>2.5</sub> emissions from suburban, residential, commercial, and industrial activity from the Denton area. Conversely, the Dorchester Cement Plant is located in a more rural area of Grayson County, with only one industrial source reporting PM<sub>2.5</sub> emissions within 10 km.
- ▶ Table 7-9 lists each industrial emission source reporting PM<sub>2.5</sub> emissions located within 10 km of the monitor and the site based on TCEQ EI data. The PM<sub>2.5</sub> emissions from industrial sources surrounding the Denton Airport South Monitor are greater than those around the Dorchester Cement Plant. In addition, there are more residential, commercial, and industrial sources within 10 km of the Denton Airport South Monitor. Therefore, the PM<sub>2.5</sub> concentrations from this monitor conservatively represent more residential, commercial, and industrial activity than the area of the Dorchester Cement Plant.
- ▶ Table 7-10 provides a comparison of countywide population, countywide PM<sub>2.5</sub> emissions from industrial sources reporting PM<sub>2.5</sub> emissions based on TCEQ 2021 EI data, and emissions from industrial sources

<sup>39</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

reporting PM<sub>2.5</sub> emissions located within 10 km of the monitor and site locations. The monitor is located in an area that contains a higher population and larger PM<sub>2.5</sub> emissions.

Based on the above reasons, Black Mountain believes that PM<sub>2.5</sub> monitored concentrations obtained from the Denton Airport South Monitor are a conservative representation of both off-property sources and the ambient background concentration in the vicinity of the proposed Dorchester Cement Plant site.

Table 7-11 shows the PM<sub>2.5</sub> data collection during 2020, 2021, and 2022 are complete (i.e., at least 75% of the sampling days for each quarter are valid) and provides summaries of the background concentrations for PM<sub>2.5</sub> obtained from the Denton Airport South Monitor.

**Table 7-9. Emissions Inventory Data for PM<sub>2.5</sub> Sources within 10 km of Site and Monitor**

<b>Company</b>	<b>Site Name</b>	<b>RN</b>	<b>Distance (km)</b>	<b>Annual PM<sub>2.5</sub> Emissions (TPY)<sup>a</sup></b>
<b>Emission Sources within 10 km of Dorchester Cement Plant</b>				
PANDA SHERMAN POWER LLC	PANDA SHERMAN POWER STATION	RN106831423	7.99	17.28
<b>Emission Sources within 10 km of Denton Airport South Monitor</b>				
ACME BRICK COMPANY	DENTON PLANT	RN102097904	6.81	0.07
CITY OF GARLAND POWER & LIGHT	SPENCER GENERATING STATION	RN100214766	8.77	0.48
PACCAR INC	PETERBILT MOTORS DENTON FACILITY	RN100211762	2.53	0.36
TETRA PAK MATERIALS LP	MATERIALS LIQUID FOOD CARTON MFG DENTON FACILITY	RN102615747	2.27	0.46
SWG PIPELINE LLC	PONDER COMPRESSOR STATION	RN106160260	9.06	1.64
TARGA MIDSTREAM SERVICES LLC	MUNSON COMPRESSOR STATION	RN106993041	8.38	1.38
BEDROCK PRODUCTION LLC	COLE B 2H SITE	RN108365305	2.14	0.00
CITY OF DENTON	225 MW DENTON ENERGY CENTER	RN106080914	1.35	13.65

**Table 7-10. Summary of PM<sub>2.5</sub> Emissions and Population for Site and Monitor**

Location	County	Population <sup>a</sup>	County Wide PM <sub>2.5</sub> Emissions <sup>b</sup> (TPY)	PM <sub>2.5</sub> Emissions within 10 km if the Site/Monitor <sup>b</sup> (TPY)
Dorchester Cement Plant	Grayson	143,131	20	17.28
Dallas Hinton Monitor	Denton	977,281	97	18.04

a. 2022 population estimate data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219> (accessed in December 2022)

b. Emission Rates reported in the 2021 Emission Inventory were provided via email by Mr. Adam Bullock, TCEQ, to Mr. Stephen Beene, Trinity Consultants, on March 23, 2022.

**Table 7-11. PM<sub>2.5</sub> Concentration Summary for the Denton Airport South Monitor (EPA ID 48-121-0034)**

Year <sup>a</sup>	Quarterly Data Completeness <sup>b</sup> (%)				Quarterly Average Concentration (µg/m <sup>3</sup> )				Number of Complete Days <sup>c</sup>	98 <sup>th</sup> Percentile 24-hr Concentration <sup>d</sup> (µg/m <sup>3</sup> )	Annual Average Concentration <sup>e</sup> (µg/m <sup>3</sup> )
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
2020	100.00	100.00	93.48	100.00	5.72	7.85	9.69	6.48	360	20.14	7.44
2021	100.00	98.90	88.04	96.74	7.36	7.24	9.92	6.03	350	17.00	7.64
2022	100.00	97.80	91.30	100.00	5.05	10.40	8.44	5.91	355	23.13	7.45
<b>Three-Year Average Concentrations (2020-2022): <sup>f</sup></b>											
										20	7.5

a. All concentrations listed in the table are in µg/m<sup>3</sup>. Monitor data are obtained from the TCEQ Air Monitoring website: ([https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly\\_summary.pl?cams=56](https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly_summary.pl?cams=56))

b. Data for 2020-2022 is demonstrated to be at least 75% complete to satisfy the requirements of 40 CFR Part 50 Appendix N, Section 4.1(b) and 40 CFR Part 50 Appendix N, Section 4.2(b).

c. Day is considered complete if at least 75% of the hourly averages are available per 40 CFR Part 50 Appendix N, Section 3(c).

d. The 98<sup>th</sup> percentile 24-hr concentrations were determined using the procedures prescribed in 40 CFR Part 50 Appendix N, Section 4.5.

e. The annual average concentrations were determined using the procedures prescribed in 40 CFR Part 50 Appendix N, Section 4.4.

f. The final background monitor design values are rounded as prescribed in 40 CFR Part 50 Appendix N, Section 4.3.



#### 7.2.4 PM<sub>10</sub> Monitor Selection

Black Mountain proposes to use the Convention Center Monitor, EPA Site Number 48-113-0050, as the representative/conservative monitor for the Dorchester Cement Plant site for PM<sub>10</sub> background concentrations. The bases for the selection include:

- ▶ Per TCEQ guidance, when there is no PM<sub>10</sub> monitor within the same county or an adjacent county, then monitoring data from another county can be used when justified.<sup>40</sup>
- ▶ Figure 7-3 and Figure 7-5 present a visual comparison of the areas surrounding the Dorchester Cement Plant and the Convention Center Monitor locations, respectively. The yellow circles on the aerial images indicate a 10-km radius surrounding the monitor and the Dorchester Cement Plant, and the red points represent nearby industrial sources according to TCEQ's 2021 Emission Inventory (EI) database. As illustrated in Figure 7-5, the Convention Center Monitor is located in an urban area of Dallas, Texas, with several nearby industrial sources. The monitor captures PM<sub>10</sub> emissions from suburban, residential, commercial, and industrial activity from the Dallas area. Conversely, the Dorchester Cement Plant is located in a more rural area of Grayson County, with only one industrial source reporting PM<sub>10</sub> emissions within 10 km.
- ▶ Table 7-12 lists each industrial emission source reporting PM<sub>10</sub> emissions located within 10 km of the monitor and the site based on TCEQ EI data. The PM<sub>10</sub> emissions from industrial sources surrounding the Convention Center Monitor are greater than those around the Dorchester Cement Plant. In addition, there are more residential, commercial, and industrial sources within 10 km of the Convention Center Monitor. Therefore, the PM<sub>10</sub> concentrations from this monitor conservatively represent more residential, commercial, and industrial activity than the area of the Dorchester Cement Plant.
- ▶ Table 7-13 provides a comparison of countywide population, countywide PM<sub>10</sub> emissions from industrial sources reporting PM<sub>10</sub> emissions based on TCEQ 2021 EI data, and emissions from industrial sources reporting PM<sub>10</sub> emissions located within 10 km of the monitor and site locations. The monitor is located in an area that contains a higher population and larger PM<sub>10</sub> emissions.

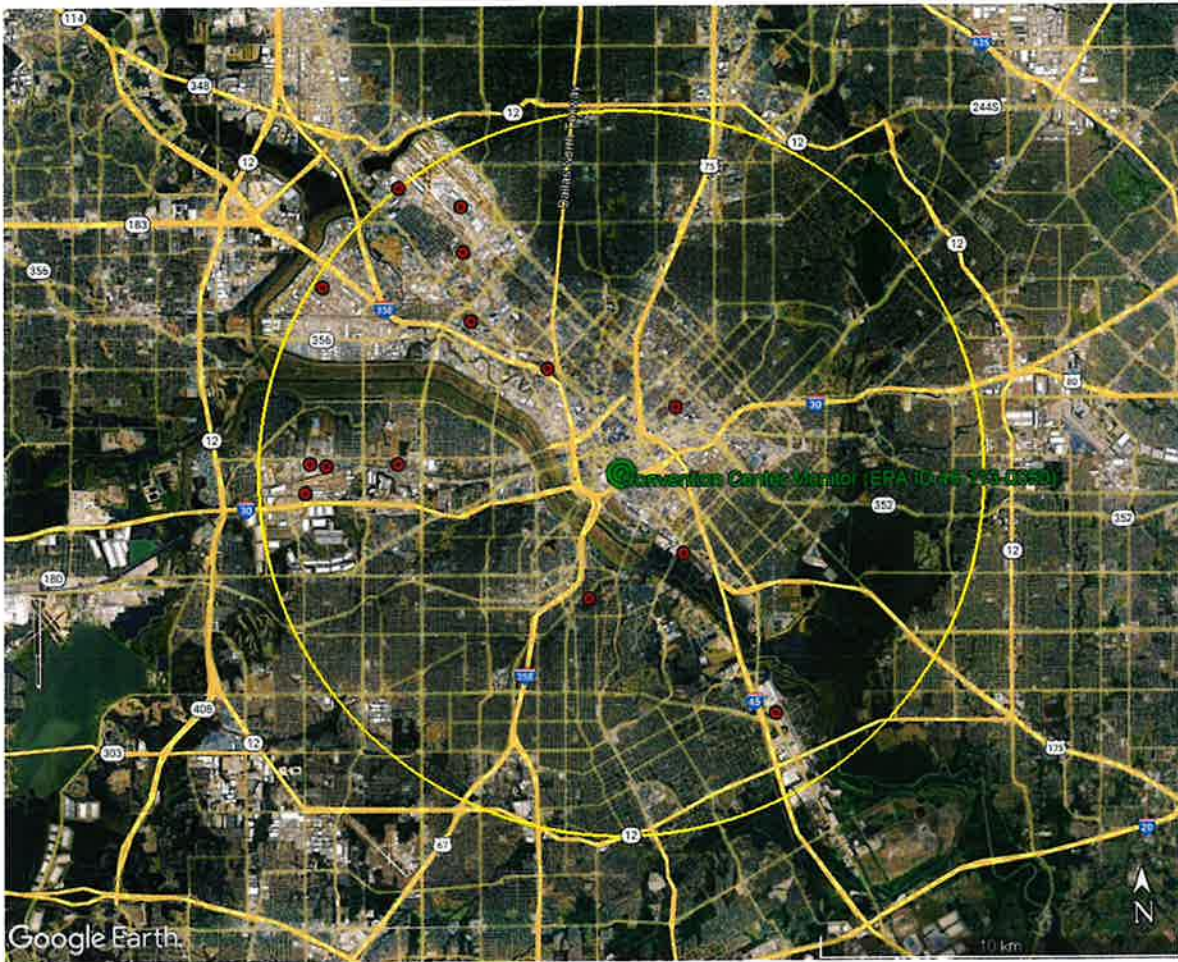
Based on the above reasons, Black Mountain believes that PM<sub>10</sub> monitored concentrations obtained from the Convention Center Monitor are a conservative representation of both off-property sources and the ambient background concentration in the vicinity of the proposed Dorchester Cement Plant site.

Table 7-14 shows the PM<sub>10</sub> data collection from 2020, 2021, and 2022 are complete (i.e., at least 75% of the sampling days for each quarter are valid) and provides summaries of the background concentrations for PM<sub>10</sub> obtained from the Convention Center Monitor.

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<sup>40</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

**Figure 7-5. PM<sub>10</sub> Sources near the Convention Center Monitor**



**Table 7-12. Emissions Inventory Data for PM<sub>10</sub> Sources within 10 km of Site and Monitor**

<b>Company</b>	<b>Site Name</b>	<b>RN</b>	<b>Distance (km)</b>	<b>Annual PM<sub>10</sub> Emissions (TPY)<sup>a</sup></b>
<b>Emission Sources within 10 km of Dorchester Cement Plant</b>				
PANDA SHERMAN POWER LLC	PANDA SHERMAN POWER STATION	RN106831423	7.99	17.32
<b>Emission Sources within 10 km of Convention Center Monitor</b>				
BAYLOR UNIVERSITY MEDICAL CENTER	BAYLOR UNIVERSITY MEDICAL CENTER	RN100654581	2.39	1.08
TAMKO BUILDING PRODUCTS INC	TAMKO BUILDING PRODUCTS DALLAS PLANT	RN100664853	7.83	13.24
WESTROCK CONVERTING COMPANY	WESTROCK CONVERTING DALLAS MILL	RN100218668	3.51	2.64
OCCIDENTAL CHEMICAL CORPORATION	OCCIDENTAL CHEMICAL DALLAS	RN100217645	2.76	37.29
BUILDING MATERIALS INVESTMENT CORPORATION	GAF MATERIALS	RN100788959	6.15	37.38
HEMPEL USA INC	HEMPEL DALLAS PLANT	RN100640580	7.52	1.78
MAGELLAN PIPELINE TERMINALS LP	DALLAS TERMINAL	RN100242015	8.56	0.00
ATRIUM COMPANIES INC	ATRIUM DOOR AND WINDOW	RN100708619	9.70	0.00
MOTIVA ENTERPRISES LLC	DALLAS TERMINAL	RN100519651	8.12	0.09
GULFSTREAM AEROSPACE CORPORATION OF TEXAS	DALLAS LOVE FIELD	RN102556313	8.60	0.54
UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER	DALLAS MEDICAL CENTER	RN100224757	5.91	5.36
SOUTHWEST AIRLINES CO	LOVE FIELD	RN102306115	10.00	1.41
OVERWRAPS PACKAGING INC	OVERWRAPS PACKAGING	RN105071427	8.70	0.09
EQUINIX LLC	EQUINIX N STEMMONS FREEWAY DALLAS	RN108987058	3.56	0.29

**Table 7-13. Comparison of PM<sub>10</sub> Emissions and Population for Site and Monitor**

<b>Location</b>	<b>County</b>	<b>Population <sup>a</sup></b>	<b>County Wide PM<sub>10</sub> Emissions <sup>b</sup> (TPY)</b>	<b>PM<sub>10</sub> Emissions within 10 km if the Site/Monitor <sup>b</sup> (TPY)</b>
Dorchester Cement Plant	Grayson	143,131	23	17.32
Convention Center Monitor	Dallas	2,600,840	473	101.2

- a. 2022 population estimate data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219> (accessed in December 2022).
- b. Emission Rates reported in the 2021 Emission Inventory were provided via email by Mr. Adam Bullock, TCEQ, to Mr. Stephen Beene, Trinity Consultants, on March 23, 2023.

**Table 7-14. PM<sub>10</sub> Concentration Summary for the Convention Center Monitor (EPA ID 48-113-0050)**

<b>Year<sup>a</sup></b>	<b>Valid Days</b>	<b>Required Days<sup>b</sup></b>	<b>H2H 24-hour Concentration <sup>c</sup> (µg/m<sup>3</sup>)</b>
2020	59	61	73
2021	61	61	47
2022	56	61	82
<b>Three Year Highest H2H Concentration (2020 - 2022)</b>			<b>82</b>

- a. Data obtained from <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>.
- b. Data completeness is met for 2020, 2021, and 2022.
- c. The H2H 24-hr concentration is reported per Appendix D of TCEQ Air Quality Modeling Guidelines (APDG 6232, revised November 2019).



## 8. MODELING RESULTS

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The modeled ground-level concentrations obtained using the approach described in Section 2 demonstrating compliance with applicable standards for each pollutant will be presented in the final modeling report. The modeling results will be provided in a tabular format.

Black Mountain will provide all of the AERMOD air dispersion modeling analysis input and output electronic data files used to TCEQ using TCEQ's FTP upload. The provided electronic files will also include the meteorological data, downwash files, and other supporting data that are used in the modeling analysis.

The electronic data files will include the following:

- ▶ All AERMOD input and output files;
- ▶ All downwash (BPIP) input and output data files;
- ▶ Meteorological files;
- ▶ AERSURFACE input and output files;
- ▶ The boundary files specifying coordinates of the fenceline;
- ▶ Air Quality Analysis report;
- ▶ Background monitor documentation; and
- ▶ Off-property inventory source documentation spreadsheet.

## 9. SECONDARY PM<sub>2.5</sub> FORMATION (REVISED)

In addition to direct emissions of PM<sub>2.5</sub>, emissions of NO<sub>x</sub> and SO<sub>2</sub> can lead to formation of PM<sub>2.5</sub> downwind where photochemical reactions can transform these pollutants into nitrate and sulfate particulates. These nitrate and sulfate particulates are called secondary PM<sub>2.5</sub>. Direct PM<sub>2.5</sub> emission from the proposed project are above the SER of 10 tpy and precursor emissions of SO<sub>2</sub> and NO<sub>x</sub> exceed the precursor SER of 40 tpy. Therefore, per EPA's DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling<sup>41</sup> and TCEQ Modeling Guidance<sup>42</sup> secondary formation of PM<sub>2.5</sub> must be address.

Since secondary PM<sub>2.5</sub> is formed from precursor emissions, it cannot be modeled using a traditional point source model such as AERMOD. As part of the most recent revision to the *Guideline*, EPA promulgated a two-tier approach for addressing single-source impacts on secondary PM<sub>2.5</sub>.<sup>43</sup>

- ▶ **Tier 1** – The first tier involves use of appropriate and technically credible relationships between emissions and ambient impacts developed from existing modeling studies deemed sufficient for evaluating a project's impact. EPA has developed Modeled Emission Rates for Precursors (MERPs) as a Tier 1 demonstration tool for PM<sub>2.5</sub>.<sup>44,45</sup>
- ▶ **Tier 2** – The second tier involves a more sophisticated case-by-case application of chemical transport modeling.

The assessment of secondary PM<sub>2.5</sub> from precursor emissions from the proposed project will be conducted using EPA's Tier 1 demonstration tool for estimating single-source secondary impacts, EPA MERPs. The term MERP describes a precursor emission rate that is expected to result in a change in ambient PM<sub>2.5</sub> that is less than a specific air quality concentration threshold. TCEQ Modeling Guidance recommends specifies the MERPs as their recommended Tier 1 approach.

In TCEQ's Modeling Guidance, modeled impacts from hypothetical industrial sources located in Texas are presented for use in a MERP analysis, as obtained from EPA's MERP guidance. One of these hypothetical modeling analyses was conducted for a source located in Parker County, Texas (identified as Source 24). Parker County is just west of the Dallas Fort-Worth metropolitan area and Grayson County where the Dorchester Cement Plant Facility is located is just north of the Dallas Fort-Worth metropolitan area, thus both counties are in the same air shed. Since it is recognized that PM<sub>2.5</sub> is a regional pollutant and both counties are in the same air shed, the hypothetical industrial source in Parker County would be representative of Grayson County. Furthermore, both Parker and Grayson Counties are located in North Texas. Thus, both counties have similar topography and weather patterns. Therefore, the empirical relationships derived from this Parker County hypothetical model will be used, because the model is representative of possible impacts from this project.

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<sup>41</sup> EPA, *DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling*, EPA-457/P-20-002, February 2020.

<sup>42</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019, Appendix R.

<sup>43</sup> Code of Federal Regulations, Title 40–Protection of Environment, Part 51, Guideline on Air Quality Models, Appendix W.

<sup>44</sup> *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program*. EPA-454/R-19-003, April 2019.

<sup>45</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019, Appendix R

For the Parker County location, EPA modeled hypothetical sources with NO<sub>x</sub> and SO<sub>2</sub> emissions at 500 tpy, 1,000 tpy, and 3,000 tpy with low and high stack heights. The 500 tpy NO<sub>x</sub> and 500 tpy SO<sub>2</sub> emission rate scenarios were selected as they are the closest options to the proposed project emissions. The high stack height category (90 m) is considered representative of the emission releases for the proposed project as the NO<sub>x</sub> and SO<sub>2</sub> emissions occur from main stack for the kiln and raw mill stack with is 108 m. Table 9-1 lists the representative PM<sub>2.5</sub> MERPs.<sup>46</sup>

**Table 9-1. Representative Secondary PM<sub>2.5</sub> MERPs**

Precursor	Hypothetical Source No.	Hypothetical Emission Rate (tpy)	Hypothetical Stack Height (L/H)	24-Hour PM <sub>2.5</sub> (TPY)	Annual PM <sub>2.5</sub> (TPY)
NO <sub>x</sub>	24 (Parker Co.)	500	H	7,692	71,586
SO <sub>2</sub>	24 (Parker Co.)	500	H	1,941	33,317

Source: TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix R.

As described in the TCEQ Modeling Guidelines, the comparison of the proposed project emission increases to these MERPs is considered together to determine whether the proposed project's air quality impact exceeds the air quality threshold. The following equation is used the estimated concentration from the secondary PM<sub>2.5</sub> impacts:

$$\text{Concentration} = \left[ \frac{\text{NO}_x \text{ Project Emissions}}{\text{NO}_x \text{ MERP}} + \frac{\text{SO}_2 \text{ Project Emissions}}{\text{SO}_2 \text{ MERP}} \right] \times \text{SIL}$$

- Table 9-2 shows the precursor emissions, MERPs and the calculated secondary PM<sub>2.5</sub> contribution.

**Table 9-2. Secondary PM<sub>2.5</sub> Analysis**

Pollutant	Precursors Emissions (tpy)	MERP <sup>a</sup>	
		Daily PM <sub>2.5</sub> (tpy)	Annual PM <sub>2.5</sub> (tpy)
NO <sub>x</sub>	369.14	7,692	71,586
SO <sub>2</sub>	213.35	1,941	33,317
MERP Critical Threshold <sup>b</sup> (µg/m <sup>3</sup> )		1.2	0.2
<b>MERP Secondary PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>		<b>0.189</b>	<b>0.002</b>

Notes:

- TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix R.
- Critical threshold corresponds to the PM<sub>2.5</sub> SIL.

The secondary impacts calculated in the table above will be added to the modeled concentration of direct PM<sub>2.5</sub>, conservatively assuming that primary and secondary impacts occur at the same time and location. This method will be used to include secondary PM<sub>2.5</sub> in the both the Significance Analysis and the Full Impact modeling.

<sup>46</sup> TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix R.

## 10. OZONE ANALYSIS (REVISED)

Ozone is formed from precursor VOC and NO<sub>x</sub> emissions. The project's VOC or NO<sub>x</sub> emissions exceed 100 tpy, therefore the federal PSD regulations require an ozone impact analysis including pre-construction ambient monitoring. The ozone analysis will be conducted using EPA's *DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling*<sup>47</sup>.

Since ozone is formed from precursor emissions, it cannot be modeled using a traditional point source model such as AERMOD. As part of the most recent revision to the EPA Guideline on Air Quality Modeling (40 CFR Part 51, Appendix W), EPA promulgated a two-tier approach for addressing single-source impacts on ozone.<sup>48</sup>

- ▶ **Tier 1** – The first tier involves use of appropriate and technically credible relationships between emissions and ambient impacts developed from existing modeling studies deemed sufficient for evaluating a project's impact. EPA has developed Modeled Emission Rates for Precursors (MERPs) as a Tier 1 demonstration tool for ozone.<sup>49,50</sup>
- ▶ **Tier 2** – The second tier involves a more sophisticated case-by-case application of chemical transport modeling.

The assessment of ozone formation from the proposed project precursor emissions was conducted using EPA's Tier 1 demonstration tool for estimating single-source secondary impacts, EPA MERPs. The term MERP describes a precursor emission rate that is expected to result in a change in ambient ozone that is less than a specific air quality concentration threshold. TCEQ Modeling Guidance specifies the MERPs as their recommended Tier 1 approach.

In TCEQ's Modeling Guidance, modeled impacts from hypothetical industrial sources located in Texas are presented for use in a MERP analysis, as obtained from EPA's MERP guidance. One of these hypothetical modeling analyses was conducted for a source located in Parker County, Texas (identified as Source 24). Parker County is just west of the Dallas Fort-Worth metropolitan area and Grayson County where the Dorchester Cement Plant Facility is located is just north of the Dallas Fort-Worth metropolitan area, thus both counties are in the same air shed. Since it is recognized that ozone is a regional pollutant and both counties are in the same air shed, the hypothetical industrial source in Parker County would be representative of Grayson County. Furthermore, both Parker and Grayson Counties are located in North Texas. Thus, both counties have similar topography and weather patterns. Therefore, the empirical relationships derived from this Parker County hypothetical model will be used, because the model is representative of possible impacts from this project.

For the Parker County location, EPA modeled hypothetical sources with NO<sub>x</sub> and VOC emissions at various emission levels with low and high stack heights. The high stack height category (90 m) is considered representative of the emission releases for the proposed project as almost all of the NO<sub>x</sub> and VOC emissions occur from the main stack for the kiln and raw mill stack which is 108 m tall. The 500 tpy NO<sub>x</sub> emission rate

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<sup>47</sup> EPA, *DRAFT Guidance for Ozone and Fine Particulate Matter Permit Modeling*, EPA-457/P-20-002, February 2020.

<sup>48</sup> Code of Federal Regulations, Title 40–Protection of Environment, Part 51, Guideline on Air Quality Models, Appendix W.

<sup>49</sup> *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program*. EPA-454/R-19-003, April 2019.

<sup>50</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019, Appendix Q



scenarios were selected as they are the closest option to the proposed project emissions. For VOC a 500 tpy high stack height scenario was not model, therefore the 1000 tpy high stack height scenario was selected. Table 10-1 lists the representative ozone MERPs.

**Table 10-1. TCEQ Worst-case Ozone MERPs**

<b>Precursor</b>	<b>Hypothetical Source No.</b>	<b>Hypothetical Emission Rate (tpy)</b>	<b>Hypothetical Stack Height (L/H)</b>	<b>8-Hour Ozone (TPY)</b>
NO <sub>x</sub>	24 (Parker Co.)	500	H	386
VOC	24 (Parker Co.)	1000	H	3,289

Source: TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix Q.

As described in the TCEQ Modeling Guidelines, the comparison of the proposed project emission increases to these MERPs is considered together to determine whether the proposed project's air quality impact exceeds the air quality threshold. The following equation is used to determine the estimated concentration from the ozone impacts:

$$Concentration = \left[ \frac{NO_x \text{ Project Emissions}}{NO_x \text{ MERP}} + \frac{VOC \text{ Project Emissions}}{VOC \text{ MERP}} \right] \times SIL$$

Table 10-2 shows the precursor emissions, MERPs and the calculated ozone contribution.

**Table 10-2. Project Ozone Analysis**

<b>Pollutant</b>	<b>Precursors Emissions (tpy)</b>	<b>8-Hour Ozone MERP (tpy)<sup>a</sup></b>
NO <sub>x</sub>	369.14	386
VOC	101.10	3,289
MERP Critical Threshold <sup>b</sup> (ppb)		1.0
<b>Project Ozone Impact (ppb)</b>		<b>0.987</b>

Notes:

- TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix Q.
- The critical threshold corresponds to the ozone SIL.

To reduce the impact on ozone concentrations in the nearby DFW ozone nonattainment area, Black Mountain proposes to control NO<sub>x</sub> beyond Best Available Control Technology (BACT) by installing an SCR system. The above analysis shows the project's ozone impact is below the SIL. Therefore, no further analysis is required.

## **11. PSD ADDITIONAL IMPACT ANALYSIS**

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The PSD additional impacts analysis provides an analysis of the project's potential impact on local soils, vegetation, and visibility in the project area. The additional impacts analysis is conducted for the pollutants subject to PSD review for the project and is presented in four parts:

1. Growth analysis
2. Soils and vegetation analysis
3. Visibility impairment analysis
4. PSD Class I area impact analysis

### **11.1 Growth Analysis**

The elements of the growth analysis include a projection of the associated industrial, commercial, and residential growth that will occur in the area of impact due to the proposed project, including the potential impact on ambient air due to this growth. Black Mountain anticipates that most of the employees of the proposed facility will be existing residents of Grayson County and nearby counties; therefore, residential growth is expected to be low. Black Mountains does not anticipate any associated industrial or commercial growth due to the proposed facility. Therefore, negligible growth-related ambient air impacts are expected.

### **11.2 Soils and Vegetation Analysis**

The U.S. EPA developed the secondary NAAQS in order to protect certain air quality-related values (i.e., soil and vegetation) that were not sufficiently protected by the primary NAAQS. The secondary NAAQS represent ambient air concentrations below which most types of soil and vegetation are unaffected by criteria pollutants. If the predicted ambient air concentrations are less than the secondary NAAQS, it can be presumed that emissions from the proposed sources will not result in harmful effects to either soil or vegetation.<sup>51</sup> If the predicted ambient air concentrations of speciated compounds (e.g. speciated PM and speciated VOCs), if any, are acceptable per the Health Effects Evaluation (Tier I, II, or III), it can be presumed that the proposed sources will not result in an adverse effect on the environment, including soils and vegetation.

### **11.3 Visibility Impairment Analysis**

The proposed Dorchester Cement Plant will be constructed in a Class II area. The proposed Dorchester Cement Plant will comply with the visibility and opacity requirements in 30 TAC Chapter 111, which satisfies visibility impairment analysis requirements for Class II areas.

### **11.4 PSD Class I Area Impact Analysis (Revised)**

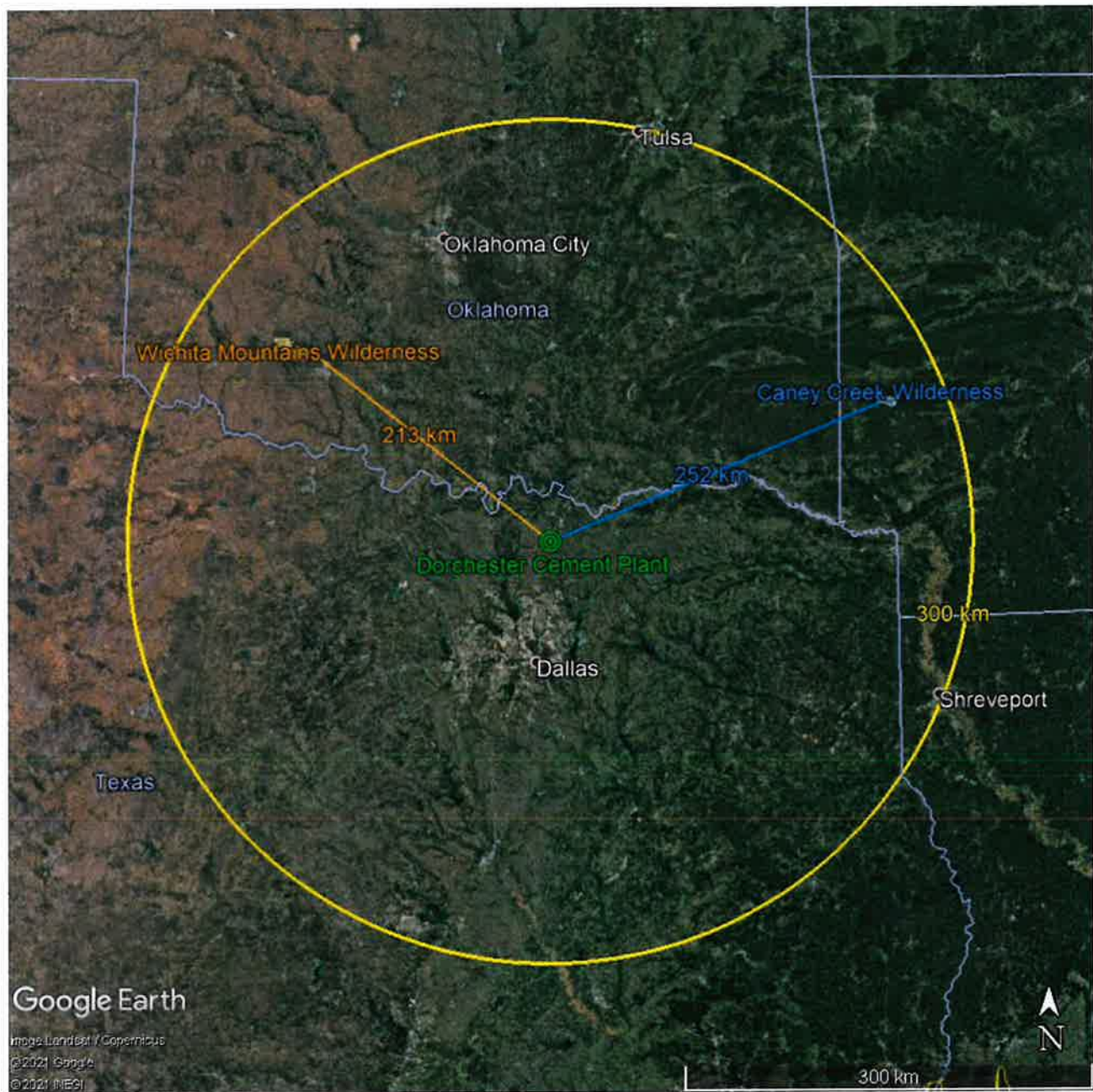
Class I areas are areas of the nation that are of special natural, scenic, recreational, or historic interest to the public, and are afforded protection under the PSD provisions of the Clean Air Act. Two principal air quality impacts are considered for Class I Areas: PSD increments for NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, and Air Quality Related Values (AQRV) including regional haze and acidic deposition.

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<sup>51</sup> U.S. EPA, Office of Air Quality Planning and Standards, New Source Review Workshop Manual, Research Triangle Park, NC, October 1990.

TCEQ requires Class I Area analyses be evaluated if a proposed PSD project is less than 100 km from a Class I Area. The U.S. EPA has historically requested that Class I Area analyses be completed if the distance between a proposed PSD project and a Class I Area is approximately 300 km or less. As shown in Figure 11-1, the Wichita Mountains Wilderness and Caney Creek Wilderness Class I area is located within 300 kilometers (km) of the Dorchester Cement Plant.

**Figure 11-1. Closest Class I Areas to the Dorchester Cement Plant**



### 11.4.1 PSD Class I AQRV Analysis

In October 2010, the *Federal Land Managers Air Quality Related Values (AQRV) Workgroup (FLAG) Phase I Report – Revised* was issued, which established a threshold ratio of emissions to distance (10 D Rule), below which AQRV review is not required. Specifically, if

$$Q \text{ (tpy)}/d \text{ (km)} < 10, \text{ no AQRV analysis is required}$$

Where:

- Q is the emissions increase of SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, and sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>), combined in tpy [the tpy value must be based on the maximum short-term (24-hour) emission rates]
- d is the nearest distance to a Class I Area in km

Table 11-1 shows the SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, and H<sub>2</sub>SO<sub>4</sub> projected annual emission rates based on the maximum 24-hour emission rates and 8,760 hours per year of operation. The proposed maximum annual emissions in the permit application are much less and will be federally enforceable via the PSD permit (to be issued by TCEQ). Table 11-2 shows the Class I areas within 300 km of the proposed Dorchester Cement Plant, the total Q from the proposed project, the distance from the Dorchester Cement Plant to the Class I area, and the result of the Q/d for each Class I area. Because the Q/d assessment result are ≤ 10 at the nearest Class I areas the Dorchester Cement Plant will have no adverse impact on AQRV. Therefore, no additional analyses for AQRV are required.

**Table 11-1. Project Emissions Summary for Q/d Analysis**

<b>Pollutant</b>	<b>Maximum 24-Hour Emission Rates (lb/hr)<sup>a</sup></b>	<b>Annual Emissions Based on Maximum 24-Hour Emissions (TPY)<sup>b</sup></b>
SO <sub>2</sub>	83.34	365.0
NO <sub>x</sub>	152.77	669.1
PM <sub>10</sub>	55.31	242.3
H <sub>2</sub> SO <sub>4</sub>	20.09	88.0
<b>Total</b>		<b>1,364.4</b>

Notes:

- Maximum 24-hour emission rates from proposed project.
- Annual emissions are based on the maximum 24-hour emissions assuming 8,760 hours per year. The proposed maximum annual emissions in the permit application are much less and will be federally enforceable via the PSD permit (to be issued by TCEQ).

**Table 11-2. Q/d for Nearest Class I Area to the Dorchester Cement Plant**

<b>Class I Area</b>	<b>Q (TPY)</b>	<b>Distance (km)</b>	<b>Q/d</b>
Wichita Mountains Wilderness	1,364.4	213	6.4
Caney Creek Wilderness	1,364.4	252	5.4

Notes:

- Emissions are based on the sum of SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, and H<sub>2</sub>SO<sub>4</sub> emissions.
- The distance is from the approximately center of the Dorchester Cement Plant to the closest Class I Area Boundary.



### 11.4.2 PSD Class I Increment Analysis

The 2017 updates to the *Guideline on Air Quality Models*<sup>52</sup> removed CALPUFF as an approved refined long range (> 50 km) transport model and added a screening method based on the application of an appropriate near-field (< 50 km) screening and/or preferred model to determine the significance of the ambient impacts at or about 50 km from the new or modifying source. EPA's *Technical Support Document (TSD) for AERMOD-Based Assessments of Long-Range Transport Impacts for Primary Pollutants*<sup>53</sup> supports the use of AERMOD to demonstrate that if the project is insignificant at 50 km it will be insignificant at distances > 50 km. Therefore, AERMOD modeling will be conducted for a 180 degree arc of receptors from 308 degrees to 98 degrees 50 km from the facility. The receptors will be spaced at 1-degree radials. Figure 11-2 shows the locations of the Wichita Mountains Wilderness and Caney Creek Wilderness Class I areas and the arc of receptors.

**Figure 11-2. AERMOD Class I Receptor Arc**



<sup>52</sup> 40 CFR 51, Appendix W, Revised, January 17, 2017

<sup>53</sup> *Technical Support Document (TSD) for AERMOD-Based Assessments of Long-Range Transport Impacts for Primary Pollutants*, United States Environmental Protection Agency, Office of Air Quality Planning and Standards, EPA-454/B-16-007, December 2016

To address secondary PM<sub>2.5</sub> formation at distances  $\geq 50$  km, distance dependent MERPs from the EPA MERPs View Qlik webpage will be evaluated. The Qlik webpage list MERPs at downwind distances up to 300 km. For the 50 km arc modeling, the lowest MERPs (most conservative) occurring at downwind distances greater than 200 km was selected. Table 11-3 lists the selected MERPs. Table 11-4 shows the PM<sub>2.5</sub> precursor emissions, MERPs, and the calculated project secondary PM<sub>2.5</sub> impact. These values will be added to the modeled primary PM<sub>2.5</sub> concentrations.

**Table 11-3. Representative Secondary Class I PM<sub>2.5</sub> MERPs**

<b>Precursor</b>	<b>Hypothetical Source No.</b>	<b>Hypothetical Emission Rate (tpy)</b>	<b>Hypothetical Stack Height (L/H)</b>	<b>Downwind Distance (km)</b>	<b>24-Hour PM<sub>2.5</sub> (TPY)</b>	<b>Annual PM<sub>2.5</sub> (TPY)</b>
NO <sub>x</sub>	24 (Parker Co.)	500	H	$\geq 200$	40,231	306,997
SO <sub>2</sub>	24 (Parker Co.)	500	H	$\geq 200$	29,373	121,521

Source: EPA's Qlik webpage (<https://www.epa.gov/scram/merps-view-qlik>)

**Table 11-4. Secondary PM<sub>2.5</sub> Analysis**

<b>Pollutant</b>	<b>Precursors Emissions (tpy)</b>	<b>MERP<sup>a</sup></b>	
		<b>Daily PM<sub>2.5</sub> (tpy)</b>	<b>Annual PM<sub>2.5</sub> (tpy)</b>
NO <sub>x</sub>	369.14	40,231	306,997
SO <sub>2</sub>	213.35	29,373	121,521
MERP Critical Threshold <sup>b</sup> (µg/m <sup>3</sup> )		1.2	0.2
<b>MERP Secondary PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>		<b>0.0197</b>	<b>0.00059</b>

## **APPENDIX A. PRELIMINARY PROJECT SOURCE PARAMETERS AND EMISSIONS**

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Table A-1. Modeled Emission Rates

EPN	Modeled Source ID	Modeled Source Description	Intermittent t (Y/N)	Hrs/Yr	Hrs/Day	Modeled Emission Rates															
						PM <sub>10</sub>					PM <sub>2.5</sub>					CO					
						Hourly PTE			Annual Modeled	Hourly PTE			Annual Modeled	Hourly PTE			Annual Modeled	Hourly PTE			Annual Modeled
						(lb/hr)	(g/s)	(lb/hr)	(g/s)	(tpy)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(tpy)	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(tpy)	(lb/hr)
21-SK-230	21SK_ON	Main Stack (Raw Mill & Kiln) - Raw Mill On	N	8760	24	41.6625	5.2494	41.663	5.2494	159.984	4.6022	41.6625	5.2494	41.663	5.2494	159.984	4.6022	1,249.88	157.4816	1,249.88	157.4816
51-SK-250	21SK_OFF	Main Stack (Raw Mill & Kiln) - Raw Mill Off	N	8760	24	41.6625	5.2494	41.663	5.2494	159.984	4.6022	41.6625	5.2494	41.663	5.2494	159.984	4.6022	1,249.88	157.4816	1,249.88	157.4816
10-BF-035	10BF_035	Cement Mill Stack	N	8760	24	3.2257	0.4064	3.226	0.4064	14.129	0.4064	3.2257	0.4064	3.226	0.4064	14.129	0.4064	1,309	0.1650	1,309	0.1650
10-BF-140	10BF_140	Baghouse - 10-BF-035	N	8760	24	1.3621	0.1716	1.362	0.1716	5.966	0.1716	1.3621	0.1716	1.362	0.1716	5.966	0.1716	---	---	---	---
12-BF-140	12BF_140	Baghouse - 10-BF-140	N	8760	24	0.2523	3.178E-02	0.252	3.178E-02	1.105	3.178E-02	0.2523	3.178E-02	0.252	3.178E-02	1.105	3.178E-02	---	---	---	---
12-BF-140	12BF_140	Baghouse - 12-BF-140	N	8760	24	0.2523	3.178E-02	0.252	3.178E-02	1.105	3.178E-02	0.2523	3.178E-02	0.252	3.178E-02	1.105	3.178E-02	---	---	---	---
11-BF-270	11BF_270	Baghouse - 11-BF-270	N	8760	24	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	---	---	---	---
11-BF-285	11BF_285	Baghouse - 11-BF-285	N	8760	24	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	---	---	---	---
12-BF-315	12BF_315	Baghouse - 12-BF-315	N	8760	24	0.7567	9.535E-02	0.757	9.535E-02	3.314	9.535E-02	0.7567	9.535E-02	0.757	9.535E-02	3.314	9.535E-02	---	---	---	---
12-BF-325	12BF_325	Baghouse - 12-BF-325	N	8760	24	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	---	---	---	---
12-BF-360	12BF_360	Baghouse - 12-BF-360	N	8760	24	0.1261	1.589E-02	0.126	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.126	1.589E-02	0.552	1.589E-02	---	---	---	---
13-BF-030	13BF_030	Baghouse - 13-BF-030	N	8760	24	0.1261	1.589E-02	0.126	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.126	1.589E-02	0.552	1.589E-02	---	---	---	---
20-BF-010	20BF_010	Baghouse - 13-BF-500	N	8760	24	0.4288	5.403E-02	0.429	5.403E-02	1.878	5.403E-02	0.4288	5.403E-02	0.429	5.403E-02	1.878	5.403E-02	---	---	---	---
20-BF-182	20BF_182	Baghouse - 20-BF-010	N	8760	24	0.3027	3.814E-02	0.303	3.814E-02	1.326	3.814E-02	0.3027	3.814E-02	0.303	3.814E-02	1.326	3.814E-02	---	---	---	---
20-BF-360	20BF_360	Baghouse - 20-BF-182	N	8760	24	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	---	---	---	---
21-BF-330	21BF_330	Baghouse - 20-BF-360	N	8760	24	7.569E-02	9.536E-03	7.57E-02	9.536E-03	0.332	9.536E-03	7.569E-02	9.536E-03	7.57E-02	9.536E-03	0.332	9.536E-03	---	---	---	---
22-BF-060	22BF_060	Baghouse - 20-BF-360	N	8760	24	0.2270	2.86E-02	0.227	2.86E-02	0.994	2.86E-02	0.2270	2.86E-02	0.227	2.86E-02	0.994	2.86E-02	---	---	---	---
22-BF-080	22BF_080	Baghouse - 22-BF-060	N	8760	24	0.1261	1.589E-02	0.126	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.126	1.589E-02	0.552	1.589E-02	---	---	---	---
22-BF-160	22BF_160	Baghouse - 22-BF-080	N	8760	24	0.3784	4.768E-02	0.378	4.768E-02	1.657	4.768E-02	0.3784	4.768E-02	0.378	4.768E-02	1.657	4.768E-02	---	---	---	---
22-BF-385	22BF_385	Baghouse - 22-BF-160	N	8760	24	0.1261	1.589E-02	0.126	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.126	1.589E-02	0.552	1.589E-02	---	---	---	---
30-BF-260	30BF_260	Baghouse - 22-BF-385	N	8760	24	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.202	2.543E-02	0.884	2.543E-02	---	---	---	---
30-BF-320	30BF_320	Baghouse - 30-BF-260	N	8760	24	0.1135	1.43E-02	0.114	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.114	1.43E-02	0.497	1.43E-02	---	---	---	---
42-BF-270	42BF_270	Baghouse - 30-BF-320	N	8760	24	0.1640	2.066E-02	0.164	2.066E-02	0.718	2.066E-02	0.1640	2.066E-02	0.164	2.066E-02	0.718	2.066E-02	---	---	---	---
41-BF-130	41BF_130	Baghouse - 42-BF-270	N	8760	24	5.044E-02	6.356E-03	5.04E-02	6.356E-03	0.221	6.356E-03	5.044E-02	6.356E-03	5.04E-02	6.356E-03	0.221	6.356E-03	---	---	---	---
44-BF-030	44BF_030	Baghouse - 41-BF-130	N	8760	24	0.6306	7.945E-02	0.631	7.945E-02	2.762	7.945E-02	0.6306	7.945E-02	0.631	7.945E-02	2.762	7.945E-02	---	---	---	---
44-BF-185	44BF_185	Baghouse - 44-BF-030	N	8760	24	0.1513	1.907E-02	0.151	1.907E-02	0.663	1.907E-02	0.1513	1.907E-02	0.151	1.907E-02	0.663	1.907E-02	---	---	---	---
50-BF-050	50BF_050	Baghouse - 44-BF-185	N	8760	24	0.1009	1.271E-02	0.101	1.271E-02	0.442	1.271E-02	0.1009	1.271E-02	0.101	1.271E-02	0.442	1.271E-02	---	---	---	---
50-BF-020	50BF_020	Baghouse - 50-BF-050	N	8760	24	8.829E-02	1.112E-02	8.83E-02	1.112E-02	0.387	1.112E-02	8.829E-02	1.112E-02	8.83E-02	1.112E-02	0.387	1.112E-02	---	---	---	---
50-BF-350	50BF_350	Baghouse - 50-BF-020	N	8760	24	0.4036	5.085E-02	0.404	5.085E-02	1.768	5.085E-02	0.4036	5.085E-02	0.404	5.085E-02	1.768	5.085E-02	---	---	---	---
51-BF-050	51BF_050	Baghouse - 50-BF-350	N	8760	24	0.3002	3.782E-02	0.302	3.782E-02	1.315	3.782E-02	0.3002	3.782E-02	0.302	3.782E-02	1.315	3.782E-02	---	---	---	---
51-BF-140	51BF_140	Baghouse - 51-BF-050	N	8760	24	0.2295	2.892E-02	0.230	2.892E-02	1.005	2.892E-02	0.2295	2.892E-02	0.230	2.892E-02	1.005	2.892E-02	---	---	---	---
51-BF-350	51BF_350	Baghouse - 51-BF-140	N	8760	24	0.1135	1.43E-02	0.114	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.114	1.43E-02	0.497	1.43E-02	---	---	---	---
51-BF-380	51BF_380	Baghouse - 51-BF-350	N	8760	24	0.1387	1.748E-02	0.139	1.748E-02	0.608	1.748E-02	0.1387	1.748E-02	0.139	1.748E-02	0.608	1.748E-02	---	---	---	---
52-BF-110	52BF_110	Baghouse - 51-BF-380	N	8760	24	0.4288	5.403E-02	0.429	5.403E-02	1.878	5.403E-02	0.4288	5.403E-02	0.429	5.403E-02	1.878	5.403E-02	---	---	---	---
53-BF-110	53BF_110	Baghouse - 52-BF-110	N	8760	24	0.4036	5.085E-02	0.404	5.085E-02	1.768	5.085E-02	0.4036	5.085E-02	0.404	5.085E-02	1.768	5.085E-02	---	---	---	---
52-BF-190	52BF_190	Baghouse - 53-BF-110	N	8760	24	0.1513	1.907E-02	0.151	1.907E-02	0.663	1.907E-02	0.1513	1.907E-02	0.151	1.907E-02	0.663	1.907E-02	---	---	---	---
53-BF-190	53BF_190	Baghouse - 52-BF-190	N	8760	24	0.1513	1.907E-02	0.151	1.907E-02	0.663	1.907E-02	0.1513	1.907E-02	0.151	1.907E-02	0.663	1.907E-02	---	---	---	---
52-BF-270	52BF_270	Baghouse - 53-BF-190	N	8760	24	0.1009	1.271E-02	0.101	1.271E-02	0.442	1.271E-02	0.1009	1.271E-02	0.101	1.271E-02	0.442	1.271E-02	---	---	---	---
53-BF-270	53BF_270	Baghouse - 52-BF-270	N	8760	24	0.1009	1.271E-02	0.101	1.271E-02	0.442	1.271E-02	0.1009	1.271E-02	0.101	1.271E-02	0.442	1.271E-02	---	---	---	---
EG-1	EG1	Emergency Generator Engine	Y	100	1	0.1417	1.785E-02	5.90E-03	7.439E-04	7.08E-03	2.038E-04	0.1417	1.785E-02	5.90E-03	7.439E-04	7.08E-03	2.038E-04	17.738	2.2350	17.738	2.2350
LSORSHD_MH	LSH_FUG	Limestone - Material Handling LS Crusher Building	N	8760	24	1.650E-02	2.079E-03	1.65E-02	2.079E-03	7.23E-02	2.079E-03	1.650E-02	2.079E-03	1.65E-02	2.079E-03	7.23E-02	2.079E-03	---	---	---	---
	ATU_FUG	Additive - Material Handling Truck Unloading	N	8760	24	0.036E-03	3.825E-04	3.04E-03	3.825E-04	1.33E-02	3.825E-04	0.036E-03	3.825E-04	3.04E-03	3.825E-01						



Table A-1. Modeled Emission Rates

EPN	Modeled Source ID	Modeled Source Description	Modeled Emission Rates											
			NO <sub>x</sub>				SO <sub>2</sub>							
			Hourly PTE (lb/hr)	1-Hr Modeled (lb/hr)	Annual Modeled (tpy)	Hourly PTE (g/s)	Hourly PTE (lb/hr)	1-Hr Modeled (lb/hr)	3-Hr Modeled (lb/hr)	24-Hr Modeled (lb/hr)	Annual Modeled (g/s)	Annual Modeled (tpy)	Annual Modeled (g/s)	Annual Modeled (tpy)
21-SK-230	21SK_ON	Main Stack (Raw Mill & Kiln) - Raw Mill On	143.7356	18.1104	368.00	10.5861	83.3250	83.325	83.33	83.33	10.4988	213.31	6.1363	6.1363
51-SK-250	21SK_OFF	Main Stack (Raw Mill & Kiln) - Raw Mill Off	143.7356	18.1104	368.00	10.5861	83.3250	83.325	83.33	83.33	10.4988	213.31	6.1363	6.1363
10-BF-035	51SK_250	Cement Mill Stack	0.159	2.003E-02	0.696	2.003E-02	9.35E-03	1.178E-03	9.353E-03	9.353E-03	1.178E-03	4.10E-02	1.178E-03	4.10E-02
10-BF-140	10BF_035	Baghouse - 10-BF-035												
12-BF-140	10BF_140	Baghouse - 10-BF-140												
11-BF-270	12BF_140	Baghouse - 12-BF-140												
11-BF-285	11BF_270	Baghouse - 11-BF-270												
12-BF-315	11BF_285	Baghouse - 11-BF-285												
12-BF-325	12BF_315	Baghouse - 12-BF-315												
12-BF-360	12BF_325	Baghouse - 12-BF-325												
13-BF-030	12BF_360	Baghouse - 12-BF-360												
13-BF-500	13BF_030	Baghouse - 13-BF-030												
20-BF-010	13BF_500	Baghouse - 13-BF-500												
20-BF-182	20BF_010	Baghouse - 20-BF-010												
20-BF-360	20BF_182	Baghouse - 20-BF-182												
21-BF-330	20BF_360	Baghouse - 20-BF-360												
22-BF-060	21BF_330	Baghouse - 20-BF-360												
22-BF-080	22BF_060	Baghouse - 22-BF-060												
22-BF-160	22BF_080	Baghouse - 22-BF-080												
30-BF-260	22BF_160	Baghouse - 22-BF-160												
30-BF-320	30BF_260	Baghouse - 22-BF-385												
41-BF-130	30BF_320	Baghouse - 30-BF-260												
44-BF-030	41BF_130	Baghouse - 30-BF-320												
44-BF-185	44BF_030	Baghouse - 42-BF-270												
50-BF-050	44BF_185	Baghouse - 41-BF-130												
50-BF-020	50BF_050	Baghouse - 44-BF-030												
51-BF-050	50BF_020	Baghouse - 44-BF-185												
51-BF-140	51BF_050	Baghouse - 50-BF-050												
51-BF-350	51BF_140	Baghouse - 50-BF-020												
51-BF-380	51BF_350	Baghouse - 51-BF-050												
52-BF-110	51BF_380	Baghouse - 51-BF-140												
52-BF-190	52BF_110	Baghouse - 51-BF-350												
52-BF-270	52BF_190	Baghouse - 51-BF-380												
53-BF-270	53BF_190	Baghouse - 52-BF-110												
53-BF-270	52BF_270	Baghouse - 52-BF-190												
53-BF-270	53BF_270	Baghouse - 52-BF-270												
EG-1	EG1	Emergency Generator Engine	8.869	1.1175	0.443	1.276E-02	4.29E-03	4.90E-05	6.174E-06	4.9E-05	5.408E-04	2.15E-04	6.174E-06	6.174E-06
LSCRSBID_MH	LSH_FUG	Limestone - Material Handling LS Crusher Building												
TRK_MH	ARU_FUG	Additive - Material Handling Truck Unloading												
RR_MH	LSL1_FUG	Additive - Material Handling Rail Unloading												
LS_STKPL	LSL2_FUG	Limestone Storage (1 of 4)												
	LSL3_FUG	Limestone Storage (2 of 4)												
	LSL4_FUG	Limestone Storage (3 of 4)												
	ASL_FUG	Limestone Storage (4 of 4)												
ADD_STKPL	ASL_FUG	Additive Storage (1 of 2)												
NH3FUG	AS2_FUG	Additive Storage (2 of 2)												
	NH3FUG	NH3 Fugitives												
	MSSFUG	ILE MSS Activities - CEMS Calibration	1.90E-03	2.393E-04	3.47E-03	9.97E-05	2.64E-04	3.329E-05	2.642E-04	3.329E-05	2.642E-04	4.82E-04	1.387E-05	4.82E-04
	MSSVACUL	ILE MSS Activities Vacuum Truck Loading												
	MSSVACUL	ILE MSS Activities Vacuum Truck Unloading												
	MSSRFAC	ILE MSS Activities - Refractory Removal												

Table A-2. Point Source Stack Parameters

EPN	Model ID	Modeled Source Description	UTM Coordinates		Base Elevation (m)	Stack Height				Stack Temp		Stack Flow				Stack Velocity				Stack Diameter		
			Zone 14			(ft)	(m)	(°F)	(°C)	(K)	(acfm)	(m³/h)	(ft³/min)	(ft/s)	(m/s)	(inch)	(ft)	(m)				
			Easting (m)	Northing (m)																		
21-SK-230	21SK_ON	Main Stack (Raw Mill & Klin) - Raw Mill On	714706.4	3713508.7	267.71	354.3	108.00	188.6	87.0	360.15	416,414	707,492	3,681	61.4	18.700	144.0	12.000	3.658				
21-SK-230	21SK_OFF	Main Stack (Raw Mill & Klin) - Raw Mill Off	714706.4	3713508.7	267.71	354.3	108.00	190.4	88.0	361.15	367,034	623,595	3,244	54.1	16.482	144.0	12.000	3.658				
51-SK-250	51SK_250	Cement Mill Stack	714390.4	3713297.6	265.01	200.0	60.96	213.8	101.0	374.15	96,064	163,214	3,397	56.6	17.256	72.0	6.000	1.829				
10-BF-035	10BF_035	Baghouse - 10-BF-035	715126.2	3713644.6	262.44	98.4	30.00	Ambient	Ambient	0.00	31,783	54,000	3,008	50.1	15.280	44.0	3.667	1.118				
10-BF-140	10BF_140	Baghouse - 10-BF-140	715130.9	3713435.9	261.61	43.3	13.20	Ambient	Ambient	0.00	5,886	10,000	2,984	49.7	15.160	19.0	1.583	0.483				
12-BF-140	12BF_140	Baghouse - 12-BF-140	714517.8	3713210.5	267.34	75.5	23.00	Ambient	Ambient	0.00	5,886	10,000	2,984	49.7	15.160	19.0	1.583	0.483				
11-BF-270	11BF_270	Baghouse - 11-BF-270	715099.8	3713392.1	261.72	35.1	10.70	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15.161	17.0	1.417	0.432				
11-BF-285	11BF_285	Baghouse - 11-BF-285	715101.5	3713509.7	262.46	78.7	24.00	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15.161	17.0	1.417	0.432				
12-BF-315	12BF_315	Baghouse - 12-BF-315	714426.7	3713432.2	265.24	110.0	33.53	Ambient	Ambient	0.00	17,657	30,000	2,974	49.6	15.109	33.0	2.750	0.838				
12-BF-325	12BF_325	Baghouse - 12-BF-325	714516.4	3713432.4	266.32	75.5	23.00	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15.161	17.0	1.417	0.432				
12-BF-360	12BF_360	Baghouse - 12-BF-360	714438.8	3713384.3	265.78	116.5	35.50	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16.239	13.0	1.083	0.330				
13-BF-030	13BF_030	Baghouse - 13-BF-030	714967.8	3713504.3	264.72	108.3	33.00	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16.239	13.0	1.083	0.330				
13-BF-500	13BF_500	Baghouse - 13-BF-500	714949.8	3713505.3	265.05	65.6	20.00	Ambient	Ambient	0.00	10,006	17,000	2,935	48.9	14.911	25.0	2.083	0.635				
20-BF-010	20BF_010	Baghouse - 20-BF-010	714775.3	3713518.3	268.12	107.3	32.70	Ambient	Ambient	0.00	7,063	12,000	2,941	49.0	14.939	21.0	1.750	0.533				
20-BF-182	20BF_182	Baghouse - 20-BF-182	714785.0	3713511.0	267.99	48.6	14.80	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15.161	17.0	1.417	0.432				
20-BF-360	20BF_360	Baghouse - 20-BF-360	714775.3	3713518.2	268.12	48.6	14.80	Ambient	Ambient	0.00	2,649	4,500	2,877	47.9	14.615	13.0	1.083	0.330				
21-BF-330	21BF_330	Baghouse - 20-BF-360	714714.2	3713503.6	267.76	109.9	33.50	Ambient	Ambient	0.00	1,766	3,000	3,237	54.0	16.446	10.0	0.833	0.254				
22-BF-060	22BF_060	Baghouse - 22-BF-060	714699.6	3713497.3	267.66	55.0	16.76	Ambient	Ambient	0.00	5,297	9,000	3,000	50.0	15.241	18.0	1.500	0.457				
22-BF-080	22BF_080	Baghouse - 22-BF-080	714699.6	3713497.3	267.66	275.6	84.00	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16.239	13.0	1.083	0.330				
22-BF-160	22BF_160	Baghouse - 22-BF-160	714699.7	3713496.8	267.66	228.3	69.60	Ambient	Ambient	0.00	8,829	15,000	3,062	51.0	15.555	23.0	1.917	0.584				
22-BF-385	22BF_385	Baghouse - 22-BF-385	714699.7	3713496.8	267.66	34.4	10.50	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16.239	13.0	1.083	0.330				
30-BF-260	30BF_260	Baghouse - 30-BF-260	714699.6	3713497.3	267.66	55.0	16.76	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15.161	17.0	1.417	0.432				
30-BF-320	30BF_320	Baghouse - 30-BF-320	714695.9	3713516.8	267.60	321.5	98.00	Ambient	Ambient	0.00	2,649	4,500	2,877	47.9	14.615	13.0	1.083	0.330				
42-BF-270	42BF_270	Baghouse - 42-BF-270	714598.0	3713511.4	265.90	34.4	10.50	Ambient	Ambient	0.00	3,826	6,500	3,118	52.0	15.837	15.0	1.250	0.381				
41-BF-130	41BF_130	Baghouse - 41-BF-130	714668.4	3713496.5	267.29	67.3	20.50	Ambient	Ambient	0.00	1,177	2,000	3,379	56.3	17.165	8.0	0.667	0.203				
44-BF-030	44BF_030	Baghouse - 44-BF-030	714504.8	3713525.4	265.05	170.0	51.82	Ambient	Ambient	0.00	14,714	25,000	2,998	50.0	15.228	30.0	2.500	0.762				
44-BF-185	44BF_185	Baghouse - 44-BF-185	714444.3	3713511.8	264.86	65.6	20.00	Ambient	Ambient	0.00	3,531	6,000	2,878	48.0	14.619	15.0	1.250	0.381				
50-BF-050	50BF_050	Baghouse - 50-BF-050	714448.1	3713313.4	266.06	140.0	42.67	Ambient	Ambient	0.00	2,354	4,000	2,994	49.9	15.208	12.0	1.000	0.305				
50-BF-020	50BF_020	Baghouse - 50-BF-020	714438.3	3713314.3	265.90	140.0	42.67	Ambient	Ambient	0.00	2,060	3,500	3,131	52.2	15.903	11.0	0.917	0.279				
50-BF-350	50BF_350	Baghouse - 50-BF-350	714426.0	3713318.1	265.71	160.0	48.77	Ambient	Ambient	0.00	9,417	16,000	2,994	49.9	15.208	24.0	2.000	0.610				
51-BF-050	51BF_050	Baghouse - 51-BF-050	714410.8	3713301.3	265.28	160.0	48.77	Ambient	Ambient	0.00	7,004	11,900	2,916	48.6	14.815	21.0	1.750	0.533				
51-BF-140	51BF_140	Baghouse - 51-BF-140	714410.7	3713308.3	265.33	160.0	48.77	Ambient	Ambient	0.00	5,356	9,100	3,033	50.6	15.410	18.0	1.500	0.457				
51-BF-350	51BF_350	Baghouse - 51-BF-350	714413.9	3713257.1	265.03	191.3	58.30	Ambient	Ambient	0.00	2,649	4,500	2,877	47.9	14.615	13.0	1.083	0.330				
51-BF-380	51BF_380	Baghouse - 51-BF-380	714401.5	3713261.1	264.93	182.1	55.50	Ambient	Ambient	0.00	3,237	5,500	3,021	50.4	15.349	14.0	1.167	0.356				
52-BF-110	52BF_110	Baghouse - 52-BF-110	714413.7	3713241.9	264.93	182.1	55.50	Ambient	Ambient	0.00	10,006	17,000	2,935	48.9	14.911	25.0	2.083	0.635				
53-BF-110	53BF_110	Baghouse - 53-BF-110	714414.0	3713235.6	264.90	182.1	55.50	Ambient	Ambient	0.00	9,417	16,000	2,994	49.9	15.208	24.0	2.000	0.610				
52-BF-190	52BF_190	Baghouse - 52-BF-190	714413.7	3713241.8	264.93	182.1	55.50	Ambient	Ambient	0.00	3,531	6,000	2,878	48.0	14.619	15.0	1.250	0.381				
53-BF-190	53BF_190	Baghouse - 53-BF-190	714414.0	3713235.6	264.90	182.1	55.50	Ambient	Ambient	0.00	3,531	6,000	2,878	48.0	14.619	15.0	1.250	0.381				
52-BF-270	52BF_270	Baghouse - 52-BF-270	714413.7	3713241.9	264.93	182.1	55.50	Ambient	Ambient	0.00	2,354	4,000	2,994	49.9	15.208	12.0	1.000	0.305				
53-BF-270	53BF_270	Baghouse - 53-BF-270	714414.0	3713235.6	264.90	182.1	55.50	Ambient	Ambient	0.00	2,354	4,000	2,994	49.9	15.208	12.0	1.000	0.305				
EG-1	EG1	Emergency Generator Engine	714645.2	3713523.4	266.64	10.0	3.05	700.0	371.1	644.26	9,000	15,291	6,458	107.6	32.809	16.0	1.333	0.406				
MSS_FUG	MSSVACLD	11E MSS Activities Vacuum Truck Loading	714660.0	3713465.0	267.36	12.0	3.66	Ambient	Ambient	0.00	6,000	10,194	7,629	127.2	38.757	12.0	1.000	0.305				

Table A-3. Volume Source Parameters

EPN	Model ID	Description	UTM Coordinates		Elevation (m)	Minimum Source Height		Maximum Source Height		Source Vertical Dim. (m)	Modeled Source Height (m)	Source Length		Source Width		Eq. Side Length of Squares (m)	Volume Source Type $\alpha_v$	Initial Lat. Dim. ( $\alpha_l$ ) <sup>1</sup> (m)	Adjacent Building Height		Volume Source Type $\alpha_v$	Initial Vert. Dim. ( $\alpha_v$ ) <sup>2</sup> (m)
			East (m)	North (m)		(ft)	(m)	(ft)	(m)			(ft)	(m)	(ft)	(m)							
LSQSHBD_MH	LSH_FUG	Limestone - Material Handling LS Crusher Building	715157.3	3713634.9	261.43	2.78	0.85	32.98	10.05	9.20	5.45	20.0	6.10	20.0	6.10	6.10	Single Volume Source	1.42			Elevated Source not on or adjacent to Building	2.14
	ADD_TRKH	Additive - Material Handling Truck Unloading	714412.3	3713428.9	265.13	1.00	0.30	15.00	4.57	4.27	2.44	15.0	4.57	15.0	4.57	4.57	Single Volume Source	1.06			Elevated Source not on or adjacent to Building	0.99
ADD_RRHH	ARU_FUG	Additive - Material Handling Rail Unloading	714512.9	3713204.6	267.19	1.00	0.30	2.00	0.61	0.31	0.46	15.0	4.57	15.0	4.57	4.57	Single Volume Source	1.06			Elevated Source not on or adjacent to Building	0.07
	LSSL_FUG	Limestone Storage (1 of 4)	714857.3	3713411.5	265.66	0.50	0.15	73.73	22.47	22.32	11.31	178.0	54.25	168.0	51.21	52.71	Multiple Adjacent Volume Sources	24.52	73.73	22.47	Elevated Source on or Adjacent to a Building	10.45
LS_STKPL	LSL2_FUG	Limestone Storage (2 of 4)	714911.8	3713412.5	264.92	0.50	0.15	73.73	22.47	22.32	11.31	178.0	54.25	168.0	51.21	52.71	Multiple Adjacent Volume Sources	24.52	73.73	22.47	Elevated Source on or Adjacent to a Building	10.45
	LSL3_FUG	Limestone Storage (3 of 4)	714966.3	3713413.5	264.06	0.50	0.15	73.73	22.47	22.32	11.31	178.0	54.25	168.0	51.21	52.71	Multiple Adjacent Volume Sources	24.52	73.73	22.47	Elevated Source on or Adjacent to a Building	10.45
ADD_STKPL	LSL4_FUG	Limestone Storage (4 of 4)	715020.8	3713414.5	262.53	0.50	0.15	76.15	23.21	23.06	11.68	178.0	54.25	168.0	51.21	52.71	Multiple Adjacent Volume Sources	24.52	76.15	23.21	Elevated Source on or Adjacent to a Building	10.80
	AS1_FUG	Additive Storage (1 of 2)	714652.0	3713410.5	268.01	0.50	0.15	76.15	23.21	23.06	11.68	203.0	61.87	180.0	54.86	58.26	Multiple Adjacent Volume Sources	27.10	76.15	23.21	Elevated Source on or Adjacent to a Building	10.80
	AS2_FUG	Additive Storage (2 of 2)	714724.0	3713411.5	268.00	0.50	0.15	76.15	23.21	23.06	11.68	203.0	61.87	180.0	54.86	58.26	Multiple Adjacent Volume Sources	27.10	76.15	23.21	Elevated Source on or Adjacent to a Building	10.80
	NH3FUG	NH3 Fugitives	714611.6	3713551.9	265.53	1.00	0.30	11.00	3.35	3.05	1.83	10.0	3.05	10.0	3.05	3.05	Single Volume Source	0.71			Elevated Source not on or adjacent to Building	0.71
MSSFUG	MSSFUG	ILE MSS Activities - CEMS Calibration	714659.2	3713519.2	266.98	1.00	0.30	11.00	3.35	3.05	1.83	10.0	3.05	10.0	3.05	3.05	Single Volume Source	0.71			Elevated Source not on or adjacent to Building	0.71
	MSSVACUL	ILE MSS Activities Vacuum Truck Unloading Fugitives	715157.3	3713634.9	261.43	2.78	0.85	32.98	10.05	9.20	5.45	20.0	6.10	20.0	6.10	6.10	Single Volume Source	1.42			Elevated Source not on or adjacent to Building	2.14
	MSSRFAC	ILE MSS Activities - Refractory Removal	714659.2	3713519.2	266.98	0.00	0.00	30.00	9.14	9.14	4.57	50.0	15.24	50.0	15.24	15.24	Single Volume Source	3.54			Single Surface-Based Volume Source	4.25

<sup>1</sup> For single volume sources, the initial lateral dimension is equal to the equivalent side length of a square/4.3. For multiple adjacent volume sources, the initial lateral dimension is equal to the equivalent side length of a square/2.15.<sup>2</sup> For an elevated volume source adjacent to a building, the initial vertical dimension is equal to the adjacent building height/2.15. For an elevated volume source not adjacent to a building, the initial vertical dimension is equal to the source vertical dimension/4.3.

For a surface-based volume source, the initial vertical dimension is equal to the source vertical dimension/2.15.

**AR-17**

**PSD Air Quality Analysis**



**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Friday, June 9, 2023 1:12 PM  
**To:** Joel Stanford  
**Cc:** Rachel Melton; Daniel Menendez; jake@highrollergroup.com; Stephen Beene  
**Subject:** AQA - BM Dorchester (Permit No. 167047)  
**Attachments:** Dorchester\_PSD\_Modeling\_Report 2023-0606.pdf;  
Dorchester\_PSD\_Modeling\_Protocol\_Revised 2023-0606.pdf

Joel,

Attached are the revised AQ Modeling Protocol and PSD AQA for BM Dorchester, as discussed on our teleconference last week. Supporting files (model I/O files, EMEW, etc.) are included in a zip file that, due to its size, is provided via the link included in this transmittal email. The link is accessible for 30 days but let me know if you need additional time to download or if there are any issues in downloading the zip file.

Thanks,  
Mike

**Michael Meister**  
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---

## Files attached to this message

Filename	Size	Checksum (SHA256)
2023-0609 Modeling Files for	256 MB	4fda20ffe798fa7b0d2d2ad82dbbbe659122805acd22be5f2bdb84c0976f5099

TCEQ.zi

p

This email or download link can not be forwarded to anyone else. Upon clicking on this link, you may be prompted to enter your email address once for verification. During the email verification process, a second email is sent to your email inbox containing the verification key to access the files.

Please click on the following link to download the attachments:

<https://files.trinityconsultants.com/message/FBOUU55Stntallb77LDqVm>

The attachments are available until: **Sunday, 9 July.**

Message ID: FBOUU55Stntallb77LDqVm

# **PSD AIR QUALITY ANALYSIS**

## **Dorchester Cement Plant**

### **Black Mountain**

#### **Prepared By:**

Michael Meister – Principal Consultant  
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June 2023

Project 214401.0054

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## 1. EXECUTIVE SUMMARY

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Black Mountain Dorchester LLC (Black Mountain) is proposing to construct and operate a greenfield portland cement plant in Dorchester, Grayson County, Texas (Dorchester Cement Plant). Texas Commission on Environmental Quality (TCEQ) has assigned Black Mountain Customer Reference Number (CN) 605952373 and the Dorchester Plant Regulated Entity Number (RN) 111368437.

Grayson County is currently classified as an attainment or unclassified area for all criteria pollutants.<sup>1</sup> The Dorchester Cement Plant is a major stationary source under the Prevention of Significant Deterioration (PSD) permitting program. In addition, the Dorchester Cement Plant is a major source with respect to the Federal Operating Permit (Title V) program.

### 1.1 Proposed Project

With this application, Black Mountain is requesting authorization to construct and operate greenfield portland cement plant. The facility will include a preheater, precalciner kiln line with a proposed clinker production rate of 1,066,560 short tons per year and associated equipment including the following emission sources.

- ▶ Natural gas fired Preheater / Precalciner kiln system with inline raw mill and Clinker Cooler (Emission Point Number [EPN] 21-SK-230);
- ▶ Raw material storage and handling equipment;
- ▶ Clinker storage and handling equipment;
- ▶ Finish Mill (EPN 51-SK-250);
- ▶ Finished Product and loadout facilities;
- ▶ Emergency generator engine; and
- ▶ Associated planned maintenance, start-up, and shutdown (MSS) emissions related to the cement manufacturing plant.

### 1.2 Modeling Report

A PSD air dispersion modeling protocol was provided to TCEQ on October 21, 2022. Comments on the modeling protocol were last received from TCEQ on January 26, 2023. This air quality analysis (AQA) report incorporates the comments provided by the TCEQ on the modeling protocol, as applicable. This air quality analysis (AQA) describes the methodology followed in conducting the Class II air dispersion modeling analysis for the proposed project to demonstrate compliance with the applicable standards. The PSD additional impacts analysis including Class I area impacts analysis is also discussed in this AQA.

This AQA is prepared in accordance with the current U.S. Environmental Protection Agency (EPA) and TCEQ Air Quality Modeling guidelines.<sup>2,3</sup>

---

<sup>1</sup> The United States Environmental Protection Agency (U.S. EPA) Green Book. Source: <https://www3.epa.gov/airquality/greenbook/anc1.html>, accessed in May 2023.

<sup>2</sup> Code of Federal Regulations, Title 40-Protection of the Environment, Part 51, Appendix W.

<sup>3</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

## 2. GENERAL AIR QUALITY DISPERSION MODELING APPROACH

This section discusses the air quality dispersion modeling methodologies used for the Class II analyses to demonstrate compliance with the applicable NAAQS and PSD Increments. The PSD additional impacts analysis, including Class I area impacts analysis, is discussed in Section 11.

PSD air quality dispersion modeling analyses are organized into two major sub-sections based on U.S. EPA modeling guidance: the Significance Analysis and the Full Impact Analysis. Per U.S. EPA guidance, the Significance Analysis considers the emissions associated only with the proposed project to determine whether they have a significant impact upon the surrounding area. The modeled ground-level concentrations of the Significance Analysis are compared to the corresponding significant impact levels (SILs) to determine whether any modeled ground-level concentrations are greater than the SIL at any receptor (defined as "significant" receptors). If the Significance Analysis reveals that modeled ground-level concentrations for a particular pollutant and averaging period exceeded the applicable SIL at any modeled receptor, a Full Impact Analysis is performed for each of those significant receptors.<sup>4</sup> The Full Impact Analysis includes a NAAQS analysis and a PSD Increment analysis, as applicable. Each analysis conducted is discussed in detail below.

### 2.1 Significance Analysis

In the Significance Analysis, project CO, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions were evaluated to determine whether they have a significant impact upon the area surrounding the facility. For deterministic standards established on a "not to be exceeded more than" some number of times per year basis, the highest modeled impacts from the Significance Analysis are the highest first highest (H1H) concentrations. For probabilistic standards based on the 98<sup>th</sup> or 99<sup>th</sup> percentile of modeled concentrations, the highest modeled impacts from the Significance Analysis are the H1H 5-year average concentrations, with the exception of the PM<sub>2.5</sub> annual SIL for the NAAQS analysis for which highest modeled impacts are determined as the maximum annual concentration averaged over 5 years.

The Significant Impact Levels for the 1-hour NO<sub>2</sub> and SO<sub>2</sub> standards have not yet been proposed. However, interim SILs of 4 ppb (~7.5 µg/m<sup>3</sup>) for NO<sub>2</sub> and 3 ppb (~7.8 µg/m<sup>3</sup>) for SO<sub>2</sub> were provided by EPA in Implementation Guidance Memos dated June 29, 2010, and August 23, 2010, respectively.<sup>5,6</sup> The predicted concentrations for 1-hour SO<sub>2</sub> and 1-hour NO<sub>2</sub> are compared to the interim SILs. Black Mountain believes that it is reasonable to use these interim SILs based on the justifications provided in these documents. For Grayson County, the 24-hour and annual NAAQS for SO<sub>2</sub> have been revoked. However, the 24-hour and annual SO<sub>2</sub> PSD increment standard remains in effect. Likewise, while the NAAQS for annual PM<sub>10</sub> has been revoked, the annual PM<sub>10</sub> PSD increment standard remains in effect.<sup>7</sup> Therefore, a comparison to the SIL for annual PM<sub>10</sub>, and 24-hour and annual SO<sub>2</sub> was performed. All pollutants subject to PSD review were modeled based on five (5) years of National Weather Service (NWS) meteorological data for all applicable averaging periods.

---

<sup>4</sup> Code of Federal Regulations, Title 40–Protection of Environment, Part 51, Appendix W.

<sup>5</sup> U.S. EPA Memorandum, Guidance Concerning the Implementation of the 1-hour NO<sub>2</sub> NAAQS for the Prevention of Significant Deterioration Program, June 29, 2010 (<https://www.epa.gov/sites/production/files/2015-07/documents/appwno2.pdf>).

<sup>6</sup> U.S. EPA Memorandum, *Guidance Concerning the Implementation of the 1-hour SO<sub>2</sub> NAAQS for the Prevention of Significant Deterioration Program*, August 23, 2010 (<https://www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf>).

<sup>7</sup> Federal Register Vol. 75, No. 202, 64865, October 20, 2010, Final Rule.

On April 17, 2018, EPA published guidance on the recommended PM<sub>2.5</sub> SILs.<sup>8</sup> This air quality analysis used the EPA recommended SILs for the PM<sub>2.5</sub> 24-hour and annual averaging periods based on the latest EPA guidance and supporting documentation and justification.<sup>9</sup>

Per recent EPA and TCEQ guidance, secondary PM<sub>2.5</sub> formation must be addressed when evaluating emissions of PM<sub>2.5</sub>.<sup>10,11</sup> For cases where project related emissions increases of NO<sub>x</sub> and/or SO<sub>2</sub>, which are precursors of secondary PM<sub>2.5</sub>, occur in conjunction with project related emissions of direct PM<sub>2.5</sub>, an evaluation of impacts from secondary formation of PM<sub>2.5</sub> from the precursor emissions must be included in the air quality analysis (AQA), even for projects where emissions increases of NO<sub>x</sub> and SO<sub>2</sub> are less than the SERs.<sup>12</sup> Since the Dorchester Cement Plant has proposed project emissions of direct PM<sub>2.5</sub>, as well as NO<sub>x</sub> and SO<sub>2</sub> emissions, the air quality analysis addressed direct PM<sub>2.5</sub> impacts and the impacts from secondary PM<sub>2.5</sub> formation were evaluated for precursor NO<sub>x</sub> and SO<sub>2</sub> emissions. Only direct PM<sub>2.5</sub> emissions were modeled in the Significance and Full Impact Analyses. Per EPA guidance, secondary PM<sub>2.5</sub> impacts were addressed using the procedures described in Section 9.

The Significance Analysis determines whether Black Mountain is required to conduct a Full Impact Analysis for a modeled pollutant and also defines the significant receptors for which such an analysis is required. According to TCEQ guidance, a significant receptor is defined as any receptor at which the project's modeled impacts are equal to or greater than the associated SIL for each applicable pollutant and averaging period. Significant receptor grids were determined for each pollutant and averaging period, as needed. The radius of impact (ROI) is the distance from the proposed Dorchester Cement Plant to the furthest significant receptor, on a pollutant-by-pollutant basis. For pollutants with more than one averaging period, the averaging period with the greatest ROI establishes the ROI for that pollutant.

If compliance is not demonstrated via the Significance Analysis, a Full Impact Analysis was conducted as explained in the following section. The SILs for pollutants subject to PSD review for the proposed project are shown in Table 2-1.

---

<sup>8</sup> [https://www.epa.gov/sites/production/files/2018-04/documents/sils\\_policy\\_guidance\\_document\\_final\\_signed\\_4-17-18.pdf](https://www.epa.gov/sites/production/files/2018-04/documents/sils_policy_guidance_document_final_signed_4-17-18.pdf).

<sup>9</sup> <https://www.epa.gov/nsr/significant-impact-levels-ozone-and-fine-particles>.

<sup>10</sup> U.S. EPA Memorandum, *Guidance for PM<sub>2.5</sub> Permit Modeling*, May 20, 2014; <https://www.epa.gov/sites/production/files/2015-07/documents/pm25guid2.pdf>

<sup>11</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019; <https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/airquality-mod-guidelines6232.pdf>

<sup>12</sup> Ibid.

**Table 2-1. Significant Impact Levels, NAAQS, and PSD Increments**

<b>Pollutant</b>	<b>Averaging Period</b>	<b>Significant Impact Level (SIL) (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>NAAQS<sup>a</sup> (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>PSD Class II Increment<sup>a</sup> (<math>\mu\text{g}/\text{m}^3</math>)</b>
NO <sub>2</sub>	1-hour	7.5	188 <sup>b</sup>	--
	Annual	1	100	25
PM <sub>2.5</sub>	24-hour	1.2	35 <sup>c</sup>	9
	Annual	0.2	12 <sup>c</sup>	4
PM <sub>10</sub>	24-hour	5	150	30
	Annual	1	--	17
SO <sub>2</sub>	1-hour	7.8	196 <sup>d</sup>	--
	3-hour	25	1,300	512
	24-hour	5	--	91
	Annual	1	--	20
CO	1-hour	2,000	40,000	--
	8-hour	500	10,000	--

- Except where noted below the short-term standards are not-to-be exceeded more than once per year and the annual standards are not-to-be exceeded (deterministic standards).
- Based on the 98<sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years (probabilistic standard).
- The 24-hour standard is based on the 98<sup>th</sup> percentile, averaged over 3 years and the annual standard is not to be exceeded more than once per year on average over 3 years (probabilistic standard).
- Based on the 99<sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years (probabilistic standard).

## 2.2 Full Impact Analysis

A Full Impact Analysis was conducted for any criteria pollutants shown to have a significant impact (i.e., modeled ground-level concentrations greater than the corresponding SILs for NAAQS and SILs for increment). The Full Impact Analysis addresses NAAQS and PSD Increment requirements, where applicable.

### 2.2.1 PSD NAAQS Analysis

The NAAQS are maximum concentration limits measured in terms of the total concentration of a pollutant in the atmosphere. For the PSD NAAQS analyses, off-property inventory emission sources located within 10 kilometers (km) of the Dorchester Cement Plant, or within the ROI if the ROI is greater than 10 km, were evaluated along with all proposed project affected sources and existing Dorchester Cement Plant sources to demonstrate compliance with the NAAQS. A current list of off-property inventory sources was obtained from the TCEQ based on the procedures described in Section 6.3 of this report.

For the full-impacts PSD NAAQS analysis, the maximum concentrations were determined using five years of NWS meteorological data and based on the form of the standard as follows:

- ▶ NO<sub>2</sub> 1-hour averaging period - the maximum 5-year average of the 98<sup>th</sup> percentile of the annual distribution of the daily maximum 1-hour predicted concentrations [or high, eighth high (H8H) predicted concentration] determined for each receptor;
- ▶ NO<sub>2</sub> annual averaging period - the maximum annual concentration across the entire 5-year meteorological data set determined from all receptors;



- ▶ SO<sub>2</sub> 1-hour averaging period - the maximum 5-year average of the 99<sup>th</sup> percentile of the annual distribution of the maximum daily 1-hour predicted concentrations [or high, fourth high (H4H) predicted concentration] determined for each receptor;
- ▶ SO<sub>2</sub> 3-hour averaging period - the NAAQS is not to be exceeded more than once per calendar year; therefore the high, second high (H2H) predicted concentration is determined from all receptors;
- ▶ PM<sub>2.5</sub> 24-hour averaging period - the maximum 5-year average of the 98<sup>th</sup> percentile of the annual distribution of the maximum 24-hour predicted concentrations (or H8H predicted concentration) determined for each receptor; and
- ▶ PM<sub>2.5</sub> annual averaging period - the highest 5-year average of the concentrations from all receptors.
- ▶ PM<sub>10</sub> 24-hour averaging period – the NAAQS is not to be exceeded more than once per year on average over 3 years; therefore, the high, sixth high (H6H) predicted concentration based on the concatenated 5-year period is determined from all receptors;
- ▶ CO 1-hour and 8-hour averaging periods - the NAAQS is not to be exceeded more than once per calendar year; therefore, the high, second high (H2H) predicted concentration is determined from all receptors.

Background concentrations from a representative ambient monitor were added to the maximum modeled ground-level concentration for comparison with the NAAQS for any criteria pollutants shown to have a significant impact. Additional information on the background monitors and background concentrations are provided in Section 7.2.

### 2.2.2 PSD Increment Analysis

A PSD Increment is the maximum increase in ambient concentrations allowed to occur above a baseline concentration for a pollutant. For the PSD Increment analysis, PSD Increment consuming emission sources in the area near the proposed facility were modeled with the proposed Dorchester Cement Plant sources to demonstrate compliance with PSD Increments.

A PSD Increment consumer is defined as (1) any new major stationary source that has been constructed since, or any existing major stationary source that has been modified after the major source baseline date, and (2) any new stationary source that has been constructed, or any existing stationary source that has been modified after the minor source baseline date.<sup>13</sup> For a given pollutant, the major source baseline date is the date after which actual emissions associated with construction at major stationary sources consume the available PSD Increment. Increases or decreases in actual emissions at major sources after the major source baseline date as a result of construction of a new source, a physical or operational change (i.e., modification) to an existing source, or shutdown of an existing source affect the available Increment, and therefore, must be included in an Increment analysis.

The U.S. EPA has established PSD increment standards for the following pollutants and averaging periods: PM<sub>10</sub> (24-hour and annual), PM<sub>2.5</sub> (24-hour and annual), SO<sub>2</sub> (3-hour, 24-hour and annual) and NO<sub>2</sub> (annual).

Black Mountain completed a full impacts PSD increment modeling analysis in accordance with procedures outlined in the TCEQ's modeling guidelines.<sup>14</sup> As a conservative estimate, the NAAQS inventory was used for the NO<sub>2</sub> and SO<sub>2</sub> PSD increment modeling. For PM<sub>10</sub> and PM<sub>2.5</sub>, the NAAQS inventory was reviewed to

<sup>13</sup> U.S. EPA, Office of Air Quality Planning and Standards, *New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Area Permitting*, DRAFT, October 1990; pp. C.35 – C.36.

<sup>14</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

identify baseline sources that do not consume increment. Section 6.3.2 discusses the methodology used to develop PSD Increment consuming and expanding inventory of existing nearby sources.

Modeled compliance with the short-term increments is based on the maximum highest second highest (H2H) modeled concentrations of the five yearly H2H values predicted at any receptor.<sup>15</sup> The annual predicted impacts are reported as the highest of the annual modeled concentrations predicted at any receptor for each year based on five years of NWS meteorological data.<sup>16</sup>

## **2.3 NO<sub>2</sub> Modeling Considerations**

EPA and TCEQ modeling guidelines provide three tiered options as regulatory default modeling options for modeling the conversion of NO<sub>x</sub> to NO<sub>2</sub>.<sup>17,18</sup> Black Mountain used the Tier 2 (Ambient Ratio Method - ARM2) approach made available in the latest EPA AERMOD model version 22112 for conversion of NO<sub>x</sub> emissions to NO<sub>2</sub> impacts. Based on limitations in AERMOD when using the ARM2 option and to ensure that the ARM2 conversion is correctly applied, when more than one scenario is required for the NO<sub>2</sub> modeling demonstration, each scenario was modeled as a separate run using AERMOD.

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<sup>15</sup> Code of Federal Regulations, Title 40—Protection of Environment, Part 51, Appendix W.

<sup>16</sup> Ibid.

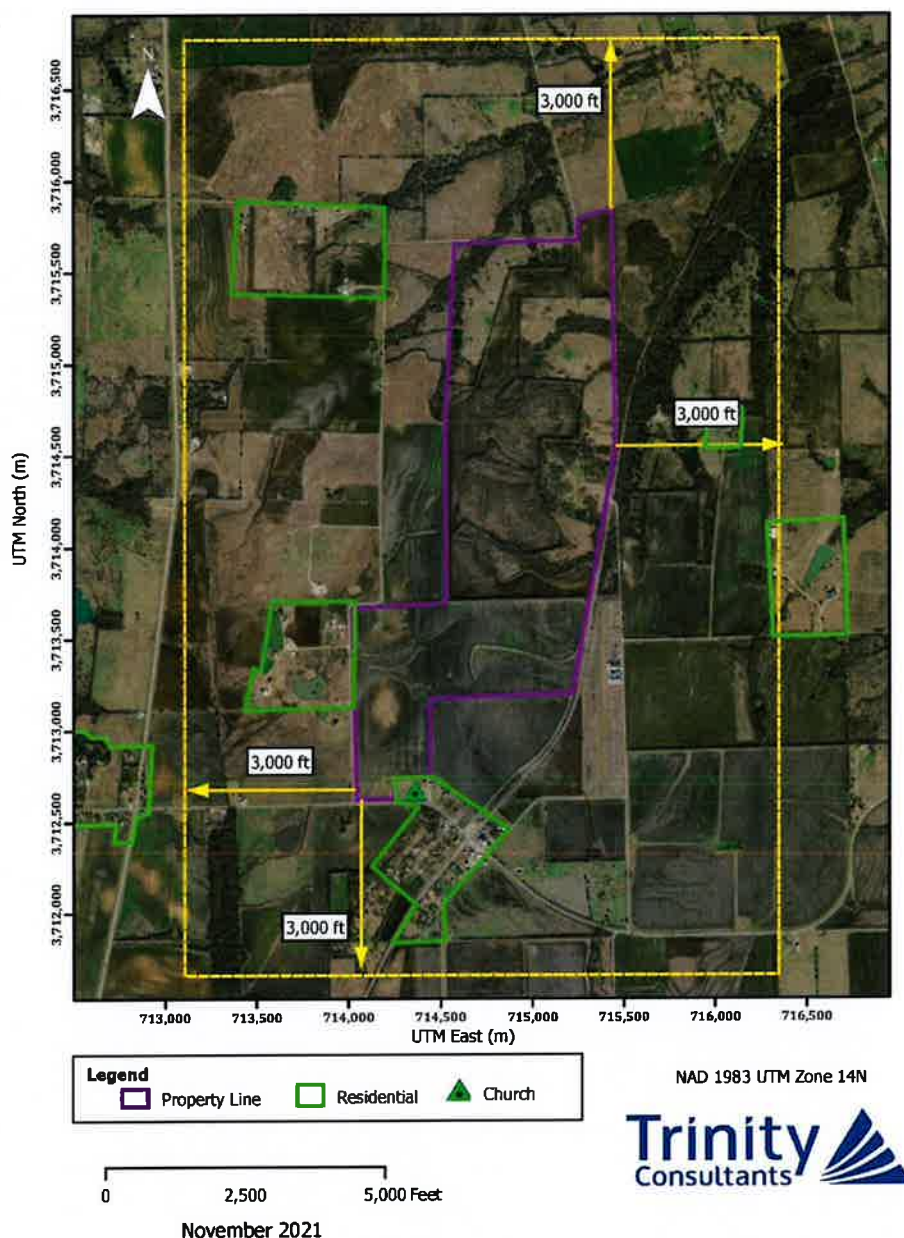
<sup>17</sup> Ibid.

<sup>18</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

### 3. AREA MAP

The Dorchester Cement Plant is located in Grayson County, Texas. Figure 3-1 shows the location of the Dorchester Cement Plant and the surrounding land use within 3,000 feet. The area map below shows the fenceline, UTM coordinates on the horizontal and vertical axis, urban areas within the AOI, and location of the nearest non-industrial receptors. The fenceline is just inside the property line and is used as the ambient air boundary.

**Figure 3-1. Dorchester Cement Plant Area Map**

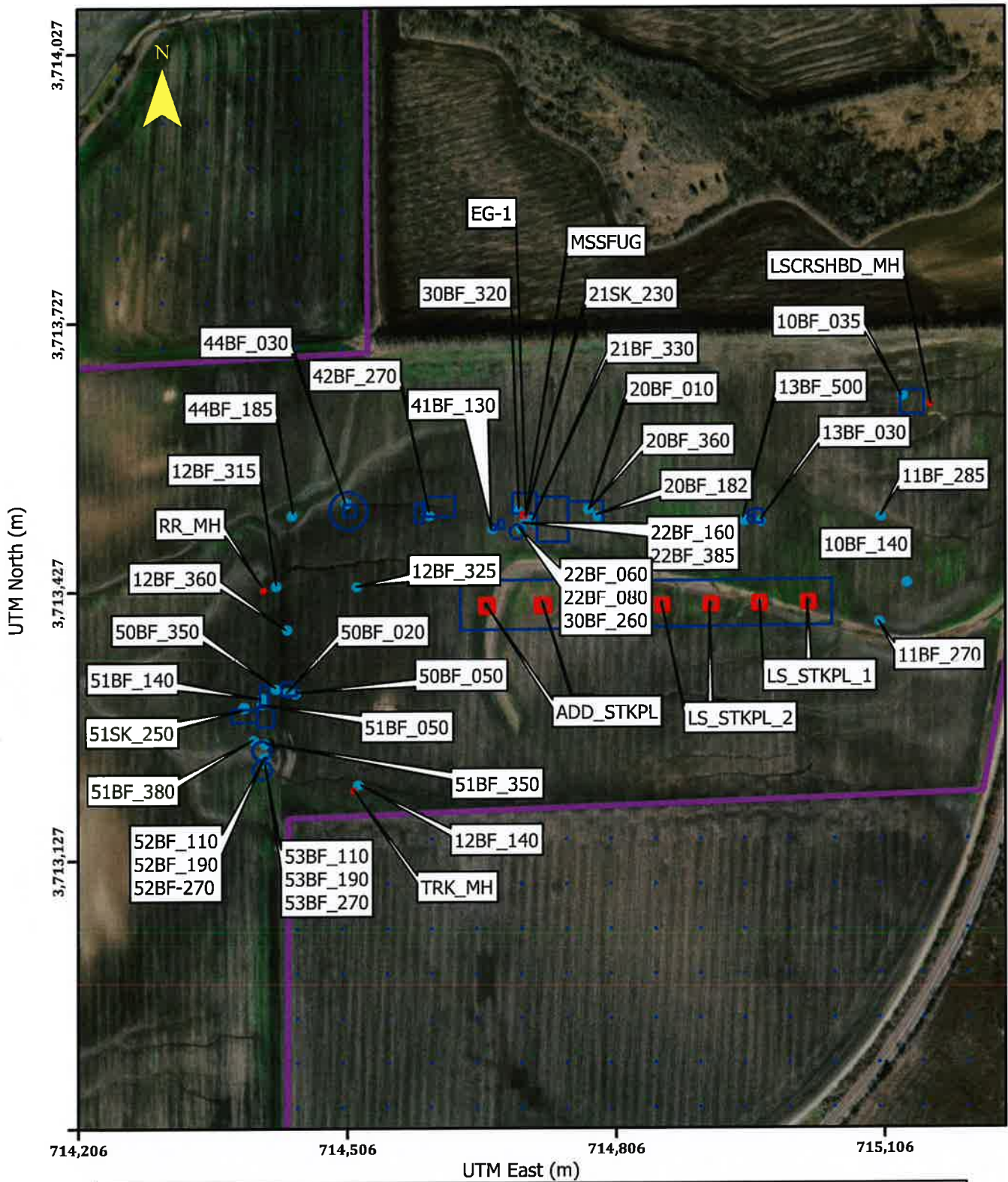


## 4. PLOT PLAN

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Figures 4-1 and 4-2 show the locations of the proposed Dorchester Cement Plant project's emissions points and downwash structures. The fenceline is just inside the property line and is used as the ambient air boundary.

Figure 4-1. Plot Plan of Emission Points



**Legend**

- Property Line
- Emission Point Source
- Emission Volume Source
- Buildings

0 500 1,000 Feet

June 2023

APP-0946

NAD 1983 UTM Zone 14N

**Trinity**  
Consultants



Figure 4-2. Plot Plan of Downwash Structures



NAD 1983 UTM Zone 14N

## 5. MODELING INPUTS

This section contains a description of the model selection, meteorological data, terrain, building wake effects, and the receptor inputs that were used in the air dispersion analysis submittal.

### 5.1 Dispersion Modeling Selection

The most current version of the AERMOD model (version 22112) was used in conducting the modeling analysis for the proposed Dorchester Cement Plant project. The modeling was performed using the regulatory default option, which includes the following:

- ▶ Stack-tip downwash; and
- ▶ A routine for processing averages when calm wind conditions occur or when meteorological data is missing.

The current version of AERMOD contains algorithms for modeling the effects of aerodynamic downwash on point source emissions due to nearby buildings and structures. In accordance with U.S. EPA requirements, direction-specific building dimensions were used for the Schulman downwash algorithms. The downwash algorithm is discussed in Section 5.4.

### 5.2 Meteorological Data

Site-specific dispersion models require a sequential hourly record of dispersion meteorology representative of the region within which the source is located. The EPA AERMOD program utilizes meteorological data preprocessed with the AERMET program. Three additional variables are considered when preprocessing the surface and meteorological data for a site. These variables are:

- ▶ Surface roughness;
- ▶ Albedo; and
- ▶ Bowen Ratio.

TCEQ has preprocessed NWS meteorological data using AERMET (version 22112) for use in AERMOD. This modeling analysis was performed using preprocessed meteorological data sets obtained from the TCEQ. The data sets used were the 2017, 2018, 2019, 2020, and 2021 preprocessed meteorological data for PSD analyses. The TCEQ-specified data set for Grayson County (location of the proposed Dorchester Cement Plant) was used, which includes surface observations obtained from Denton Municipal Airport (Surface ID DTO; NWS Station Number 3991) and upper air observations obtained from Fort Worth (Upper Air ID FWD, NWS Station Number 3990). TCEQ has processed the meteorological data set using the Albedo and Bowen Ratio representative of Grayson County.

Each TCEQ-provided data set processed with AERMET comes with three different files, each representing a different surface roughness category:

- ▶ L – low surface roughness (0.05 m is used to represent surface roughness from 0.001 m to 0.1 m)
- ▶ M – medium surface roughness (0.5 m is used to represent surface roughness from 0.1 m to 0.7 m)
- ▶ H – high surface roughness (1.0 m is used to represent surface roughness from 0.7 m to 1.5 m)

Per EPA guidance, the appropriate values for surface roughness length ( $z_0$ ) should be used in the AERMET meteorological processor to prepare the meteorological data for AERMOD.<sup>19</sup> The EPA recommended upwind distance for processing the land cover data to determine the effective  $z_0$  for input to AERMET is 1 kilometer (km) relative to the meteorological tower (measurement site). However, for this modeling analysis the TCEQ guidance of using the 1 km distance relative to the application site (i.e., Dorchester Cement Plant) is used to process the land cover data. EPA has developed a tool called AERSURFACE that can be used as an aid in determining realistic and reproducible surface characteristic values, including surface roughness.

An analysis was performed by Black Mountain using the latest version of AERSURFACE (version 20060) to confirm the appropriate surface roughness meteorological data set for the proposed project site. AERSURFACE requires the input of land cover data from U. S. Geological Survey (USGS) National Land Cover Data (NLCD), which is used to determine the land cover types for the user-specified location. In this modeling analysis, the 2016 NLCD data files were downloaded from the following website:  
<ftp://newftp.epa.gov/Air/aqmg/nlcd/2016/>.

The analyses indicate that the resulting surface roughness at the Dorchester Cement Plant estimated using AERSURFACE is 0.082 m, which corresponds to the low surface roughness category. As such, the meteorological data set processed with low surface roughness characteristics was used in the modeling analysis. An electronic copy of the AERSURFACE input and output files are provided with the modeling files.

### 5.3 Terrain

Receptor terrain elevations input to the AERMOD model were determined using National Elevation Dataset (NED) data obtained from the U.S. Geological Survey (USGS) National Map with a 1/3 arc second resolution (approximately 10-meters). The receptor elevations were calculated using the AERMOD terrain preprocessor, AERMAP (version 18081). The elevations of on-property and off-property sources included in the NAAQS and PSD Increment Analyses were determined using AERMAP.

In addition to terrain elevation, an additional parameter called the hill height scale is required for each receptor to feed AERMOD's terrain modeling algorithms. AERMOD computes the impact at a receptor as a weighted interpolation between horizontal and terrain-following states using a critical dividing streamline approach. This scheme assumes that part of the plume mass will contain enough energy to ascend and traverse over a terrain feature while the remainder will impinge and traverse around a terrain feature under certain meteorological conditions. The hill height scale is computed by the AERMAP terrain preprocessor for each receptor as a measure of the one terrain feature in the modeling domain that would have the greatest effect on plume behavior at that receptor.

The hill height scale does not represent the critical dividing streamline height itself but supplies the computational algorithms with an indication of the relative relief within the modeling domain for the determination of the critical dividing streamline height for each hour of meteorological data.

According to Section 2.1.2 of the AERMAP User's Guide, the NED array boundary for AERMAP must include all terrain features that exceed a 10 percent elevation slope from any given receptor in order to properly calculate the hill height scale at each receptor.<sup>20</sup> The domain for the hill height analysis was set to at least the minimum area required for proper handling of elevation slope.

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<sup>19</sup> EPA, AERMOD Implementation Guide, Revised August 17, 2019.

<sup>20</sup> U.S. EPA, Office of Air Quality Planning and Standards, *User's Guide for the AERMOD Terrain Preprocessor (AERMAP)*, Research Triangle Park, NC, EPA-454/B-18-004, April 2018.

## 5.4 Building Wake Effects (Downwash)

The stack emission sources for the Dorchester Cement Plant considered in this analysis were evaluated in terms of their proximity to nearby structures. The purpose of this evaluation was to determine whether stack discharges were caught in the turbulent wakes of these structures, leading to downwash of the plumes. Wind blowing around a building creates zones of turbulence that are greater than if the building was absent. These effects generally cause higher ground-level pollutant concentrations since building downwash inhibits dispersion from elevated stack discharges. AERMOD incorporates the Plume Rise Model Enhancements (PRIME) algorithms for estimating enhanced plume growth and restricted plume rise for plumes affected by building wakes.<sup>21</sup>

The U.S. EPA has promulgated stack height regulations that restrict the use of stack heights in excess of "Good Engineering Practice" (GEP) in air dispersion modeling analyses. Under these regulations, that portion of a stack in excess of the GEP height is generally not creditable when modeling to determine source impacts. This essentially prevents the use of excessively tall stacks to reduce the ground-level pollutant concentrations. The stack height not subject to the effects of downwash, called the GEP stack height, is defined as the greater of 65 meters or by the following formula:

$$H_{GEP} = H + 1.5L$$

Where:

$H_{GEP}$  = GEP stack height,

H = structure height, and

L = lesser dimension of the structure (height or projected width).

This equation is limited to stacks located within 5L of a structure. Stacks located at a distance greater than 5L are not subject to the wake effects of the structure. If there is more than one stack at a given facility, the above equation must be successively applied to each stack. If more than one structure is involved, the equations must also be successively applied to each structure. In general, the lowest GEP stack height for any source is 65 meters by default.<sup>22</sup>

Direction-specific building dimensions and the dominant downwash structure parameters used as inputs to the dispersion models were determined using the *BREEZE*® BPIPP software, developed by Trinity Consultants, Inc. This software incorporates the algorithms of the U.S. EPA-sanctioned Building Profile Input Program with PRIME enhancement (BPIP-PRIME), version 04274.<sup>23,24</sup> BPIP-PRIME is designed to incorporate the concepts and procedures expressed in the GEP Technical Support document, the Building Downwash Guidance document, and other related documents.

The output from the BPIP-PRIME downwash analysis lists the names and dimensions of the structures generating wake effects and the locations and heights of the affected emission sources (i.e., stacks). In

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<sup>21</sup> L.L. Schulman, D.G. Strimaitis, and J.S. Scire, *Development and Evaluation of the Prime Plume Rise and Building Downwash Model*, AWMA, 50:378-390, 2000.

<sup>22</sup> 40 CFR §51.100(ii)

<sup>23</sup> U.S. Environmental Protection Agency, *User's Guide to the Building Profile Input Program*, Research Triangle Park, NC, EPA-454/R-93-038, Revised April 21, 2004.

<sup>24</sup> L.L. Schulman, D.G. Strimaitis, and J.S. Scire, *Addendum to ISC3 User's Guide: The Prime Plume Rise and Building Downwash Model*, Electric Power Research Institute, Concord, MA, November 1997.



addition, the output contains a summary of the dominant structure for each emission unit (considering all wind directions) and the actual building height and projected widths for all wind directions. This information is then incorporated into the data input files for the AERMOD air dispersion model.

The height for the structures considered in the downwash analysis are provided the Electronic Modeling Evaluation Workbook (EMEW). The locations of the modeled downwash structures are provided in Section 4.

## 5.5 Receptor Design

In the air quality dispersion modeling Significance Analysis, the modeled ground-level concentrations were determined within a series of fenceline-based nested grids:

- ▶ Fenceline grid with receptors placed at 25 m intervals along the fenceline;
- ▶ Tight Cartesian grid with 25 m resolution extending approximately 250 m from the facility fenceline and at least 300 m from any project emissions source;
- ▶ Fine Cartesian receptor grid with 100 m resolution extending from tight grid to approximately 2.0 km from any project emissions source;
- ▶ Medium Cartesian receptor grid with 500 m resolution extending from the fine grid to approximately 7.5 km from any project emissions source; and
- ▶ Coarse Cartesian receptor grid with 1 km resolution extending from the medium grid to approximately 25 km from any project emissions source. This distance was sufficient to identify the significant receptor and ROI.

In the Full Impact Analysis, only the receptors with modeled impacts greater than the SIL (i.e., the significant receptors) were modeled for the particular pollutant and averaging period that is above the SIL.

## 5.6 Ambient Air

According to TCEQ modeling guidelines, “ambient air” is defined as the portion of the atmosphere external to buildings to which the public has access.<sup>25</sup> The TCEQ further recognizes that “ambient air” begins at the property line.<sup>26</sup> However, for PSD modeling, ambient air begins at the applicant’s fenceline or other physical barrier to public access.<sup>27</sup> For the purposes of this air dispersion modeling analysis, land located outside of the fenceline was considered ambient air.

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<sup>25</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

<sup>26</sup> Ibid.

<sup>27</sup> Ibid.



## **6. MODELING EMISSIONS INVENTORY**

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The following sections discuss the methodology proposed to represent the Dorchester Cement Plant emission sources and the methodology for obtaining the nearby off-property industrial emission sources that were included in the air quality dispersion modeling analysis.

### **6.1 On-Property Sources - Proposed Project**

#### **6.1.1 Modeled Emission Rates**

The PSD permit application explains the methodology for calculating the emissions in tons per year (tpy) and pounds per hour (lb/hr) for the proposed modification to the Dorchester Cement Plant. The proposed project emissions sources are listed in Appendix A.

The project sources were evaluated in the PSD air dispersion modeling analysis due to emissions of pollutants that trigger PSD review. The source parameters for all the project sources are provided in Appendix A.

#### **6.1.2 Modeled Source Parameters**

In a typical air quality dispersion modeling analysis, emission sources can be represented as point, area, line, volume, or open pit sources. The majority of the project emission sources at the Dorchester Cement Plant are represented as point sources since they discharge through stacks with no obstructions to vertical exhaust flow.

Fugitive emissions from the unloading operations, material handling and storage, and MSS operations are modeled a volume source. The volume sources size calculations are based on the unloading and storage areas. The material handling and storage operations are located in enclosed buildings.

Emission sources and corresponding source parameters used in the modeling analyses are provided in Appendix A.

### **6.2 On-Property Sources – Existing**

The Dorchester Cement Plant is a new source. Therefore, there are no existing on-property sources.

### **6.3 Off-Property Inventory Sources**

Modeling of off-property inventory sources was required for the pollutant averaging periods exceeding the SILs (NO<sub>2</sub> (1-hr), SO<sub>2</sub> (1-hr), PM<sub>10</sub> (24-hr and annual) and PM<sub>2.5</sub> (24-hr and annual). The following sections discuss the development of the off-property inventory.

#### **6.3.1 NAAQS Inventory**

A NAAQS inventory was developed for the pollutant averaging periods exceeding the SILs. To develop the NAAQS inventory, Black Mountain obtained pollutant-specific regional source data from the TCEQ's Air Permits Allowable Database (APAD) and State of Texas Air Reporting System (STARS) for sources located within 50 km of the proposed Dorchester Cement Plant. The nearby sources included in full impact modeling

are based on the guidance contained in Section 8.3.3 of Appendix W to Part 51 – “Guideline on Air Quality Models” (Guideline) which states:

*"a. In multi-source areas, determining the appropriate background concentration involves: (1) Identification and characterization of contributions from nearby sources through explicit modeling, and (2) characterization of contributions from other sources through adequately representative ambient monitoring data. A key point here is the interconnectedness of each component in that the question of which nearby sources to include in the cumulative modeling is inextricably linked to the question of what the ambient monitoring data represents within the project area.*

*b. Nearby sources: All sources in the vicinity of the source(s) under consideration for emissions limits that are not adequately represented by ambient monitoring data should be explicitly modeled. Since an ambient monitor is limited to characterizing air quality at a fixed location, sources that cause a significant concentration gradient in the vicinity of the source(s) under consideration for emissions limits are not likely to be adequately characterized by the monitored data due to the high degree of variability of the source's impact."*

The above guidance focuses on which sources should be modeled (sources in the vicinity of the project that are not adequately represented by ambient monitoring background data). Existing sources that cause a significant concentration gradient in the vicinity of the project are not likely to be adequately characterized by the monitored background data and were explicitly modeled. The number of nearby sources to be explicitly modeled in the air quality analysis is expected to be few except in unusual situations. The areas with significant concentration gradients from the project are expected occur within 10 km of the project site.

U.S. EPA has acknowledged that the procedure of including inventory sources located within 50 km of a site may in many cases result in cumulative impact assessments that are overly conservative, and that this procedure may not always be necessary to fulfill the requirements of a cumulative impact assessment.<sup>28,29</sup>

Per the U.S. EPA's 1-hour NO<sub>2</sub> modeling guidance:

*"Even accounting for some terrain influences on the location and gradients of maximum 1-hour concentrations, these considerations suggest that the emphasis on determining which nearby sources to include in the modeling analysis should focus on the area within about 10 kilometers of the project location in most cases. The routine inclusion of all sources within 50 kilometers of the project location, the nominal distance for which AERMOD is applicable, is likely to produce an overly conservative result in most cases."*

Therefore, consistent with this guidance, Black Mountain limited the inventory sources to those located within approximately 10 km of Dorchester Cement Plant if the ROI is less than or equal to 10 km, or limit the inventory sources to sources within the ROI if the ROI is greater than 10 km.

In addition, the preliminary modeling results indicate that the maximum impact occurs near the fence line. Thus, it is expected that sources located at a distance of more than 10 km from the Dorchester Cement

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<sup>28</sup> U.S. EPA Memorandum from Tyler Fox to Regional Air Division Directors, *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard*, March 1, 2011; [https://www.epa.gov/sites/production/files/2015-07/documents/appwno2\\_2.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf).

<sup>29</sup> Federal Register Vol. 82, No. 10, 5182, January 17, 2017, Final Rule; [https://www.epa.gov/sites/production/files/2020-09/documents/appw\\_17.pdf](https://www.epa.gov/sites/production/files/2020-09/documents/appw_17.pdf).

Plant would not have a significant impact in the area of the Dorchester Cement Plant, and maximum impacts from sources located at a distance beyond 10 km or the ROI (if greater than 10 km) would be unlikely to occur at the same location where impacts from on-site sources are the highest.

Therefore, given U.S. EPA's assertion that including nearby sources out to 50 km from the project location will produce overly conservative results and the utilization of a background monitor located within the modeling domain, limiting the inventory sources to those located within the 10 km or the ROI, whichever is greater, is representative of actual ambient concentrations expected in the area and is consistent with recent U.S. EPA guidance. Furthermore, use of a background monitor in the modeling domain sufficiently accounts for more distant sources.

Using the requested APAD and STARS data retrievals, a unique listing of Regulated Entities (RN) and emissions points will be created, and sources beyond 10 km or the ROI, as applicable, will be excluded. Because some of the information obtained from APAD is incomplete or not up-to-date, Black Mountain will update the APAD data within the greater of 10 km or the ROI of the Dorchester Cement Plant by reviewing the available permits and emissions inventory for the APAD sources and make updates as necessary to make the data more complete and up to date as follows:

- ▶ If any emission rates are missing (i.e., shown as zeros) or incorrect in APAD:
  - Black Mountain reviewed the available permitting files to identify missing emission rates.
  - Black Mountain reviewed the latest TCEQ provided STARS data to identify actual emission rates.
  - Should emission rates not be available through permitting files or STARS data then the emission rate will be set to zero (0).
- ▶ If either stack parameters or source location coordinates are missing (i.e. shown as zeros) in APAD:
  - Black Mountain first reviewed the latest TCEQ provided STARS data to identify the missing stack parameters and source locations.
  - If source location coordinates are not available from the STARS data, Black Mountain modeled these sources using the average of the coordinates from other sources at the same site.
  - If stack parameters are not available from the STARS data, Black Mountain used conservative default stack parameters per TCEQ guidance as shown in the tables below.<sup>30</sup>

Source Type	Stack Height (m)	Stack Exit Temperature (K)	Stack Exit Velocity (m/s)	Stack Diameter (m)
Flare	1	1,273	20	0.001
Non-Flare	1	0	0.001	0.001

Source Type	Stack Height (m)	Length (m)	Width (m)	Rotation (degree)
Fugitive	1	1.0	1.0	0

- If modeling indicates that the above default stack parameters are too conservative, more appropriate assumptions may be made. Detailed assumptions are described in Appendix B.
- ▶ When searching for accessible permitting files, the following priority of files will be utilized:
  - If modeling files are available for a site, data from the modeling files was used.

<sup>30</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019, Appendix C.

- If modeling files are not available, data from the technical review (TRV), permit letter, or maximum allowable emission rates table (MAERT) were used.
- If the TRV and MAERT are not available, or if only TRV is available but it doesn't have parameters and emissions for each source, data from permit applications was used, if readily available.
- If none of the above modeling and permitting files are available, data from STARS was used.
- ▶ When evaluating off-property sources for NAAQS or Increment:
  - Black Mountain reviewed the basis of the hourly and annual emission rates, as needed, to verify if the reported emissions are based on normal and/or MSS operations. Where possible, emission rates will be updated to reflect normal operations. This verification will be conducted using either MAERT tables or permit applications.
  - Black Mountain added sources within the ROI or 10 km, as appropriate, based on review of case-by-case NSR applications completed since 2020 and available from the TCEQ Central File Room Online, along with any readily available pending case-by-case NSR applications submitted on or before the date this modeling protocol is approved.

All details regarding refinements completed to the off-property sources are provided Appendix B and the supporting electronic files.

### **6.3.2 PSD Increment Inventories**

PSD increment modeling was conducted for PM<sub>2.5</sub> and PM<sub>10</sub>. Black Mountain used the procedures outlined in TCEQ's modeling guidance.<sup>31</sup> The full impacts increment analysis only included receptors exceeding the SIL for the particular pollutant and averaging period. The increment modeling contained refinements to the NAAQS inventory to account for baseline emissions that do not consume increment. All details regarding refinements completed to the off-property sources are provided Appendix B and the supporting electronic files.

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<sup>31</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

## 7. AIR QUALITY MONITORING DATA

The proposed Dorchester Cement Plant is located in Grayson County. Grayson County is currently designated as attainment or unclassified for all criteria pollutants.<sup>32</sup> Items related to the air quality monitoring data to be utilized in the air quality dispersion modeling analysis are discussed below.

### 7.1 Pre-Construction Monitoring

The U.S. EPA's monitoring de minimis concentrations establish the levels at which a facility needs to conduct pre-construction ambient air quality monitoring for pollutants subject to PSD review in order to evaluate the existing air quality. If the maximum modeled ground-level concentrations from the affected emissions sources in the Significance Analysis do not exceed the U.S. EPA monitoring de minimis concentrations, also referred to as the Significant Monitoring Concentrations (SMC), pre-construction monitoring may be avoided. Table 7-1 shows the applicable pre-construction monitoring de minimis concentrations.

**Table 7-1. Monitoring De Minimis Levels**

<b>Pollutant</b>	<b>Averaging Period</b>	<b>Monitoring De Minimis Level (<math>\mu\text{g}/\text{m}^3</math>)</b>
NO <sub>2</sub>	Annual	14
PM <sub>10</sub>	24-hour	10
CO	8-hour	575
SO <sub>2</sub>	24-hour	13
PM <sub>2.5</sub>	24-hour	0 <sup>a</sup>
Ozone	8-hour	-- <sup>b</sup>

Notes:

- On January 22, 2013, the U.S. Court of Appeals for the District of Columbia Circuit issued a ruling to vacate the PM<sub>2.5</sub> SMC (Sierra Club v. EPA). Furthermore, on December 9, 2013, the EPA published a final rule (78 FR73698) to revise the PM<sub>2.5</sub> SMC to 0  $\mu\text{g}/\text{m}^3$ .
- Any net emissions increase of 100 tpy or more of VOCs or NO<sub>x</sub> requires an ozone ambient impact analysis.

The Significance Analysis results show the project's PM<sub>2.5</sub> and PM<sub>10</sub> are greater than the applicable PSD monitoring de minimis concentrations listed in Table 7-1, and pre-construction monitoring data is required for these pollutants. In addition, ozone precursor NO<sub>x</sub> and VOC emissions are greater than 100 tpy. Therefore, an O<sub>3</sub> ambient analysis is required and is provided in Section 10.

Black Mountain has evaluated ambient PM<sub>2.5</sub> and PM<sub>10</sub> data from existing monitoring sites representative of Grayson County and the Dorchester Cement Plant location to satisfy the PSD pre-construction monitoring requirements for PM<sub>2.5</sub> and PM<sub>10</sub> and to determine ambient background concentrations to be used in the NAAQS analyses, as appropriate. The methodology by which representative background PM<sub>2.5</sub> and PM<sub>10</sub> monitors were selected for the Dorchester Cement Plant are discussed in Sections 7.2.3 and 7.2.4, respectively.

<sup>32</sup> The United States Environmental Protection Agency (U.S. EPA) Green Book. Source: <https://www3.epa.gov/airquality/greenbook/anc1.html>, accessed in May 2023.



## 7.2 NAAQS Analysis Monitor Background Concentrations

In the NAAQS analysis, modeled ambient air concentrations are based on emissions from on-property and off-property industrial sources. To appropriately assess compliance with NAAQS, the modeled impacts from the Dorchester Cement Plant and the NAAQS inventory sources are typically combined with ambient background concentrations, which represent the air quality concentrations due to sources that are not explicitly modeled (e.g., mobile sources, small but local stationary sources, non-regulated fugitive sources, and large but distant sources). However, the background concentration may also include industrial emission sources already accounted for in the inventory. Thus, adding the background concentration to the modeled ground-level concentrations should yield a conservative total concentration since impacts from the inventory sources are included in both the maximum modeled ground-level concentration and the background concentration. Also, PM<sub>2.5</sub> background concentrations obtained from a monitor that is representative of the site location is used in lieu of performing preconstruction monitoring for this pollutant, if appropriate. Since the CO impacts are below the SILs, background monitor concentrations for CO are not required.

Criteria used to determine whether monitoring station data is representative of the ambient air quality at the proposed site includes location of the monitor compared to the site, similarity of Land Use/Land Cover (LULC), population of the area in which the proposed monitor is located as compared to the site, and tonnage of emissions released in the area of the monitor as compared to the site. In addition, the monitoring data must be of high quality, from an approved State and Local Air Monitoring Station (SLAMS) or similar monitor subject to the quality assurance requirements in 40 CFR Part 58 Appendix A and should typically at a minimum include the three most recent complete years of quality assured data. Complete years (i.e., at least 75% of the sampling days for each quarter are valid) of concentration data from 2020, 2021, and 2022 were used to establish the background concentrations.

### 7.2.1 NO<sub>2</sub> Monitor Selection

Black Mountain selected the Denton Airport South Monitor, EPA Site Number 48-121-0034 (Denton Airport South Monitor), as the representative/conservative monitor for the Dorchester Cement Plant site for NO<sub>2</sub> background concentrations. The basis for the selection includes:

- ▶ Per TCEQ guidance, when there is no NO<sub>2</sub> monitor within the same county a monitor from an adjacent county can be used when justified.<sup>33</sup> The Denton Airport South Monitor is located in the adjacent Denton County.
- ▶ Figure 7-1 and Figure 7-2 present a visual comparison of the areas surrounding the Denton Airport South Monitor and Dorchester Cement Plant locations, respectively. The yellow circles on the aerial images indicate a 10-km radius surrounding the monitor and the Dorchester Cement Plant, and the red points represent nearby industrial sources according to TCEQ's 2021 Emission Inventory (EI) database. As illustrated in Figure 7-1, the Denton Airport South Monitor is located in a suburban area outside of Denton, Texas, with a few nearby industrial sources. The monitor captures NO<sub>2</sub> emissions from suburban, residential, commercial, and industrial activity from the Denton area. Conversely, the Dorchester Cement Plant is located in a more rural area of Grayson County, with only one industrial source reporting NO<sub>2</sub> emissions within 10 km.

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<sup>33</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

- ▶ Table 7-4 lists each industrial emission source reporting NO<sub>2</sub> emissions located within 10 km of the monitor and the site based on TCEQ EI data. The NO<sub>2</sub> emissions from industrial sources surrounding the Denton Airport South Monitor are greater than those around the Dorchester Cement Plant. In addition, there are more residential, commercial, and industrial sources within 10 km of the Denton Airport South Monitor. Therefore, the NO<sub>2</sub> concentrations from this monitor conservatively represent more residential, commercial, and industrial activity than the area of the Dorchester Cement Plant.
- ▶ Table 7-5 provides a comparison of countywide population, countywide NO<sub>2</sub> emissions from industrial sources reporting NO<sub>2</sub> emissions based on TCEQ 2021 EI data, and emissions from industrial sources reporting NO<sub>2</sub> emissions located within 10 km of the monitor and site locations. The monitor is located in an area that contains a higher population and larger NO<sub>2</sub> emissions.

Based on the above reasons, Black Mountain believes that NO<sub>2</sub> monitored concentrations obtained from the Denton Airport South Monitor are a conservative representation of both off-property sources and the ambient background concentration in the vicinity of the proposed Dorchester Cement Plant site.

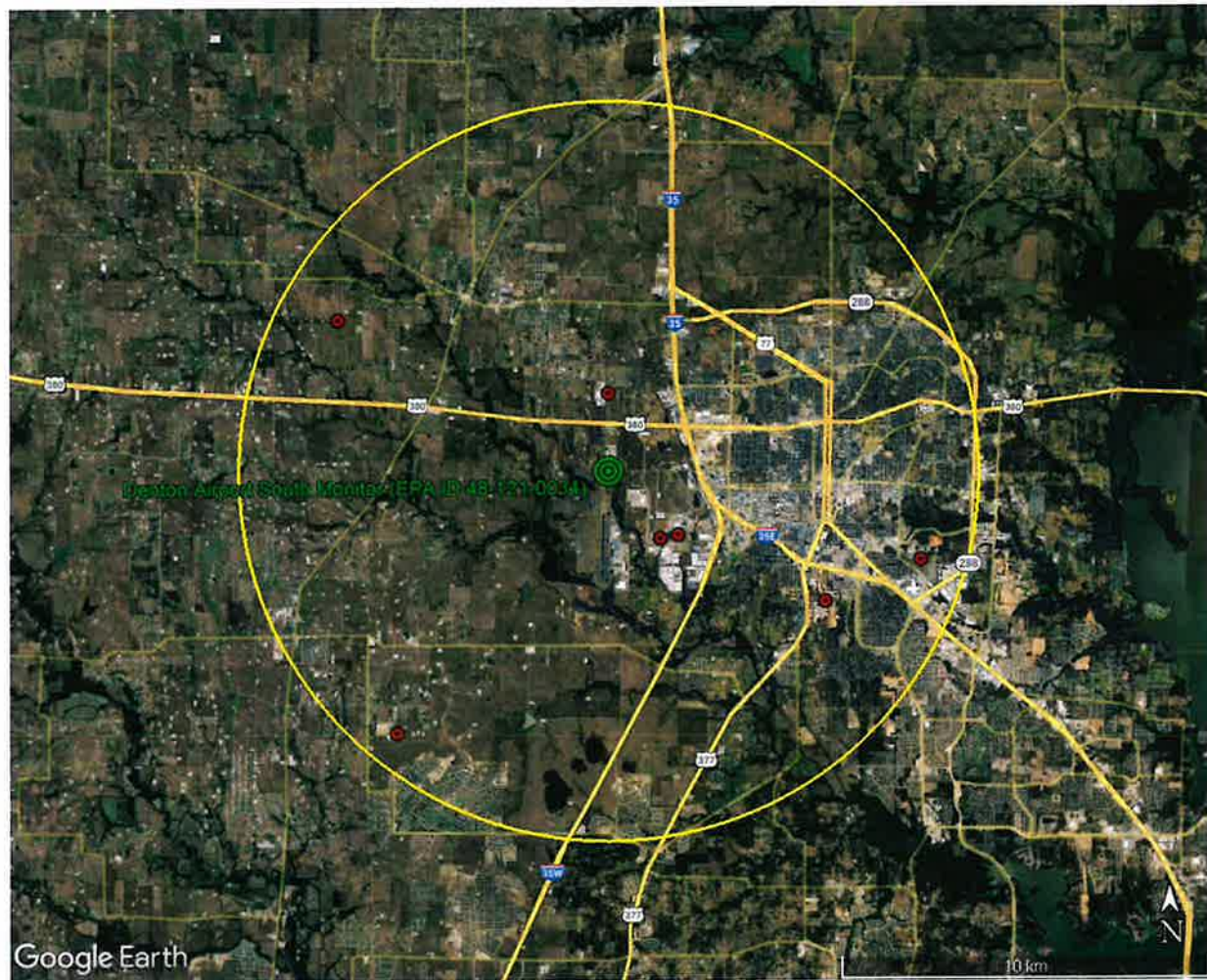
Table 7-5 shows the NO<sub>2</sub> data collected during 2020, 2021, and 2022 are complete (i.e., at least 75% of the sampling days for each quarter are valid) and provides summaries of the background concentrations for NO<sub>2</sub> obtained from the Denton Airport South Monitor. Table 7-6 shows the monitored NO<sub>2</sub> design value (98<sup>th</sup> percentile) of the annual distribution of daily maximum 1-hour values averaged across the most recent three years of monitored data.

EPA's March 1, 2011 memorandum<sup>34</sup> provides a multi-tier approach for accounting for background concentration in the full impact NAAQS analysis. In the "first tier" approach the monitored NO<sub>2</sub> design value is added to the modeled NO<sub>2</sub> design value. In the "second tier" approach the multiyear averages of the 98<sup>th</sup> percentile background concentrations by hour-of-day may be used. The full impact NO<sub>2</sub> NAAQS modeling uses the "second tier" approach. Table 7-5 lists the monitored 98<sup>th</sup> percentile design value by hour-of-day.

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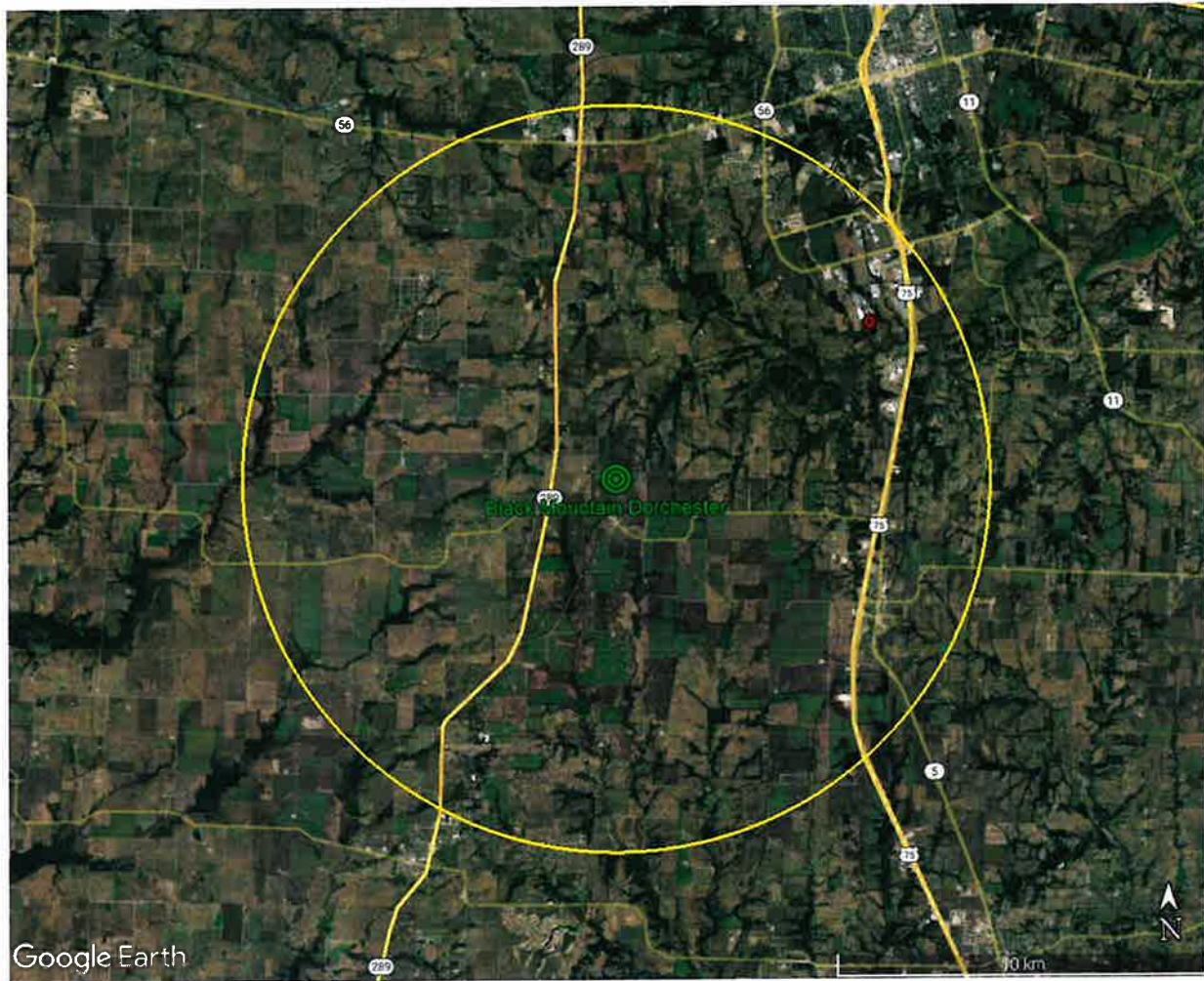
<sup>34</sup> Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO<sub>2</sub>, National Ambient Air Quality Standard, Tyler Fox Memorandum, dated March 1, 2011. U.S. Environmental Protection Agency, Research Triangle Park, NC

**Figure 7-1. NO<sub>2</sub> Sources near the Denton Airport South Monitor**





**Figure 7-2. Sources near the Dorchester Cement Plant Site**



**Table 7-2. Emissions Inventory Data for NO<sub>2</sub> Sources within 10 km of Site and Monitor**

<b>Company</b>	<b>Site Name</b>	<b>RN</b>	<b>Distance (km)</b>	<b>Annual NO<sub>2</sub> Emissions (TPY)<sup>a</sup></b>
<b>Emission Sources within 10 km of Dorchester Cement Plant</b>				
PANDA SHERMAN POWER LLC	PANDA SHERMAN POWER STATION	RN106831423	7.99	56.78
<b>Emission Sources within 10 km of Denton Airport South Monitor</b>				
ACME BRICK COMPANY	DENTON PLANT	RN102097904	6.81	19.38
CITY OF GARLAND POWER & LIGHT	SPENCER GENERATING STATION	RN100214766	8.77	3.17
PACCAR INC	PETERBILT MOTORS DENTON FACILITY	RN100211762	2.53	12.36
TETRA PAK MATERIALS LP	MATERIALS LIQUID FOOD CARTON MFG DENTON FACILITY	RN102615747	2.27	1.11
SWG PIPELINE LLC	PONDER COMPRESSOR STATION	RN106160260	9.06	18.55
TARGA MIDSTREAM SERVICES LLC	MUNSON COMPRESSOR STATION	RN106993041	8.38	10.47
BEDROCK PRODUCTION LLC	COLE B 2H SITE	RN108365305	2.14	0.08
CITY OF DENTON	225 MW DENTON ENERGY CENTER	RN106080914	1.35	19.13

**Table 7-3. Summary of NO<sub>2</sub> Emissions and Population for Site and Monitor**

<b>Location</b>	<b>County</b>	<b>Population <sup>a</sup></b>	<b>County Wide NO<sub>2</sub> Emissions <sup>b</sup> (TPY)</b>	<b>NO<sub>2</sub> Emissions within 10 km if the Site/Monitor <sup>b</sup> (TPY)</b>
Dorchester Cement Plant	Grayson	143,131	59	56.78
Denton Airport South Monitor	Denton	977,281	278	84.25

a. 2022 population estimate data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219> (accessed in December 2022)

b. Emission Rates reported in the 2021 Emission Inventory were provided via email by Mr. Adam Bullock, TCEQ, to Mr. Stephen Beene, Trinity Consultants, on March 23, 2023.



**Table 7-4. NO<sub>2</sub> Concentration Summary for the Denton Airport South Monitor (EPA ID 48-121-0034)**

	<b>2020<sup>a</sup></b>	<b>2021<sup>a</sup></b>	<b>2022<sup>a</sup></b>
Quarter 1 Percent Complete: <sup>b</sup>	98.90%	98.89%	98.89%
Quarter 2 Percent Complete: <sup>b</sup>	100.00%	98.90%	100.00%
Quarter 3 Percent Complete: <sup>b</sup>	90.22%	92.39%	92.39%
Quarter 4 Percent Complete: <sup>b</sup>	98.91%	100.00%	98.91%
98 <sup>th</sup> Percentile Daily Maximum 1-hour Concentration (ppb): <sup>c</sup>	34.6	30.0	36.4
3-Year Average 1-hr Concentration (2020-2022) (ppb): <sup>d</sup>	34.0		
3-Year Average 1-hr Concentration (2020-2022) (µg/m <sup>3</sup> ): <sup>e</sup>	63.9		
Annual Average Concentration (ppb): <sup>f,g</sup>	--	--	7
Annual Average Concentration (µg/m <sup>3</sup> ): <sup>e</sup>	--	--	13

- a. Monitor data are obtained from the TCEQ Air Monitoring website ([https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly\\_summary.pl?cams=56](https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly_summary.pl?cams=56)).
- b. Data is demonstrated to be at least 75% complete to satisfy the requirements of 40 CFR Part 50 Appendix S, Section 3.1(b) and 40 CFR Part 50 Appendix S, Section 3.2(b).
- c. The 98<sup>th</sup> percentile daily maximum 1-hour concentrations were determined using the procedures prescribed in 40 CFR Part 50 Appendix S, Section 5.2.
- d. The three-year average of the 98<sup>th</sup> percentile daily maximum 1-hour concentration is rounded as prescribed in 40 CFR Part 50 Appendix S, Section 4.2(c).
- e. The concentration is multiplied by 1.88 to convert ppb to µg/m<sup>3</sup>.
- f. The annual average concentration was determined using the procedures prescribed in 40 CFR Part 50 Appendix S, Section 5.1.
- g. The annual average concentration is rounded as prescribed in 40 CFR Part 50 Appendix S, Section 4.1(b).

Table 7-5. 1-Hour NO<sub>2</sub> Background by Hour-Of-Day for the Denton Airport South Monitor (EPA ID 48-121-0034)

Ending Hour	2020			2021			Valid Obs.	2022		3-yr Average		
	Valid Obs.	98 <sup>th</sup> % Rank	98 <sup>th</sup> % (ppb)	Valid Obs.	98 <sup>th</sup> % Rank	98 <sup>th</sup> % (ppb)		Valid Obs.	98 <sup>th</sup> % Rank	98 <sup>th</sup> % (ppb)	98 <sup>th</sup> Percentile (ppb)	98 <sup>th</sup> Percentile (µg/m <sup>3</sup> )
1	358	8	23.3	359	8	22.3	359	360	8	26.8	24.1	45.3
2	307	7	22.5	308	7	20.8	308	309	7	28.7	24.0	45.1
3	307	7	20.4	309	7	21.4	309	309	7	28.5	23.4	44.0
4	346	7	20.2	334	7	21.8	334	310	7	28.0	23.3	43.8
5	346	7	20.9	333	7	22.2	333	310	7	29.1	24.1	45.3
6	358	8	19.8	345	7	21.8	345	323	7	26.9	22.8	42.9
7	358	8	23.8	358	8	22.3	358	360	8	25.4	23.8	44.7
8	358	8	22.5	357	8	22.0	357	359	8	24.5	23.0	43.2
9	356	8	20.0	354	8	21.7	354	350	7	30.0	23.9	44.9
10	348	7	16.0	345	7	18.2	345	349	7	23.4	19.2	36.1
11	343	7	12.2	340	7	13.7	340	342	7	15.0	13.6	25.6
12	331	7	11.3	346	7	12.8	346	339	7	11.1	11.7	22.0
13	330	7	9.2	350	7	12.3	350	341	7	10.0	10.5	19.7
14	342	7	9.1	350	7	11.6	350	344	7	9.3	10.0	18.8
15	343	7	7.7	353	8	11.9	353	354	8	10.2	9.9	18.6
16	349	7	8.7	356	8	11.6	356	356	8	10.4	10.2	19.2
17	352	8	9.3	357	8	12.2	357	358	8	10.1	10.5	19.7
18	354	8	13.7	356	8	16.2	356	360	8	12.3	14.1	26.5
19	356	8	24.9	357	8	23.5	357	360	8	21.0	23.1	43.4
20	357	8	28.3	357	8	24.2	357	359	8	25.8	26.1	49.1
21	358	8	26.2	359	8	27.6	359	360	8	32.2	28.7	54.0
22	358	8	23.5	359	8	26.9	359	360	8	32.3	27.6	51.9
23	358	8	22.7	359	8	24.5	359	360	8	32.1	26.4	49.6
24	358	8	23.4	359	8	23.3	359	360	8	27.6	24.8	46.6

### 7.2.2 SO<sub>2</sub> Monitor Selection

Black Mountain selected the Midlothian OFW Monitor, EPA Site Number 48-139-0016 (Midlothian OFW Monitor), as the representative/conservative monitor for the Dorchester Cement Plant site for SO<sub>2</sub> background concentrations. The basis for the selection includes:

- ▶ There is no SO<sub>2</sub> monitor in Grayson County or an adjacent county. Per TCEQ guidance, when there is no SO<sub>2</sub> monitor within the same county or an adjacent county, then monitoring data from another county can be used when justified.<sup>35</sup>
- ▶ Figure 7-2 and Figure 7-3 present a visual comparison of the areas surrounding the Dorchester Cement Plant and the Midlothian OFW Monitor locations, respectively. The yellow circles on the aerial images indicate a 10-km radius surrounding the monitor and the Dorchester Cement Plant, and the red points represent nearby industrial sources according to TCEQ's 2021 Emission Inventory (EI) database. As illustrated in Figure 7-3, the Midlothian OFW Monitor is located in a suburban area of Midlothian, Texas, with several nearby industrial sources. The monitor captures SO<sub>2</sub> emissions from suburban, residential, commercial, and industrial activity from the Midlothian area. Conversely, the Dorchester Cement Plant is located in a more rural area of Grayson County, with only one industrial source reporting SO<sub>2</sub> emissions within 10 km.
- ▶ Table 7-6 lists each industrial emission source reporting SO<sub>2</sub> emissions located within 10 km of the monitor and the site based on TCEQ EI data. The SO<sub>2</sub> emissions from industrial sources surrounding the Midlothian Monitor are greater than those around the Dorchester Cement Plant. In addition, there are more residential, commercial, and industrial sources within 10 km of the Midlothian Monitor. Therefore, the SO<sub>2</sub> concentrations from this monitor conservatively represent more residential, commercial, and industrial activity than the area of the Dorchester Cement Plant.
- ▶ Table 7-7 provides a comparison of countywide population, countywide SO<sub>2</sub> emissions from industrial sources reporting SO<sub>2</sub> emissions based on TCEQ 2021 EI data, and emissions from industrial sources reporting SO<sub>2</sub> emissions located within 10 km of the monitor and site locations. The monitor is located in an area that contains a higher population and larger SO<sub>2</sub> emissions.

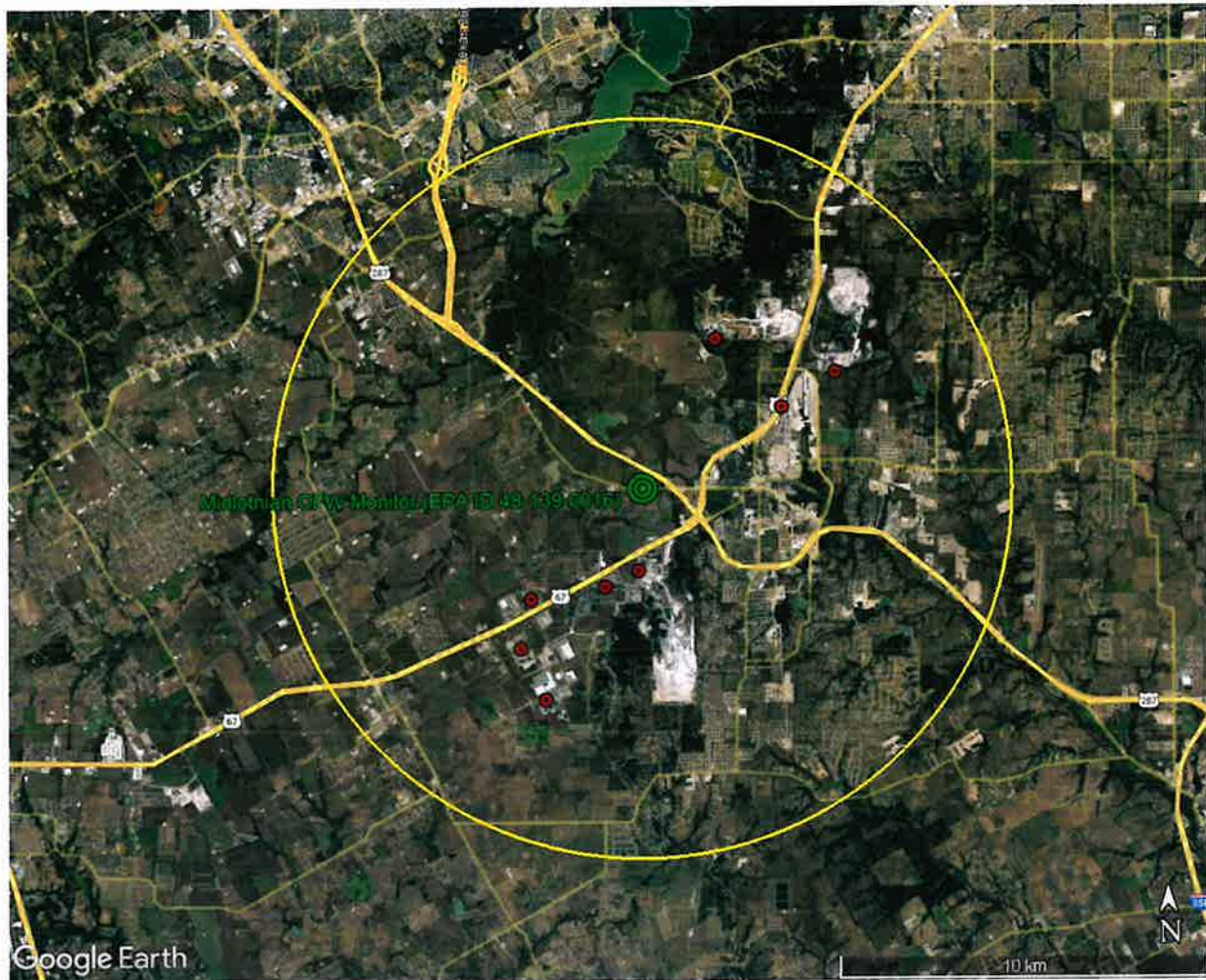
Based on the above reasons, Black Mountain believes that SO<sub>2</sub> monitored concentrations obtained from the Midlothian Monitor are a conservative representation of both off-property sources and the ambient background concentration in the vicinity of the proposed Dorchester Cement Plant site.

Table 7-8 shows the SO<sub>2</sub> data collected during 2019, 2020, and 2021 are complete (i.e., at least 75% of the sampling days for each quarter are valid) and provides summaries of the background concentrations for SO<sub>2</sub> obtained from the Midlothian Monitor. The Midlothian Monitor was shut down during 2022, therefore 2019-2021 are the most recent years of complete data.

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<sup>35</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

**Figure 7-3. SO<sub>2</sub> Sources near the Midlothian OFW Monitor**



**Table 7-6. Emissions Inventory Data for SO<sub>2</sub> Sources within 10 km of Site and Monitor**

Company	Site Name	RN	Distance (km)	Annual SO <sub>2</sub> Emissions (TPY) <sup>a</sup>
<b>Emission Sources within 10 km of Dorchester Cement Plant</b>				
PANDA SHERMAN POWER LLC	PANDA SHERMAN POWER STATION	RN106831423	7.99	5.06
<b>Emission Sources within 10 km of Midlothian OFW Monitor</b>				
CHAPARRAL STEEL MIDLOTHIAN LP	CHAPARRAL STEEL MIDLOTHIAN PLANT	RN100216472	2.79	315.14
ASH GROVE CEMENT COMPANY	MIDLOTHIAN PLANT	RN100225978	4.53	7.63
TXI OPERATIONS LP	MIDLOTHIAN PLANT	RN100217199	2.18	669.60
HOLCIM TEXAS LP	MIDLOTHIAN PLANT	RN100219286	6.12	1,898.78
MARTECH LLC	MARTECH	RN101469146	4.40	0.00
QUALICO STEEL CO INC	STRUCTURAL STEEL MFG	RN100552447	4.21	0.00
MIDLOTHIAN ENERGY LLC	MIDLOTHIAN ENERGY FACILITY	RN102596400	6.23	9.59
SHARKA LLC	SHARKA	RN110495884	5.39	0.01

**Table 7-7. Summary of SO<sub>2</sub> Emissions and Population for Site and Monitor**

Location	County	Population <sup>a</sup>	County Wide SO <sub>2</sub> Emissions <sup>b</sup> (TPY)	SO <sub>2</sub> Emissions within 10 km if the Site/Monitor <sup>b</sup> (TPY)
Dorchester Cement Plant	Grayson	143,131	6	5.06
Midlothian OFW Monitor	Ellis	212,182	2,978	2,900.74

a. 2022 population estimate data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219> (accessed in December 2022)

b. Emission Rates reported in the 2021 Emission Inventory were provided via email by Mr. Adam Bullock, TCEQ, to Mr. Stephen Beene, Trinity Consultants, on March 23, 2023.



**Table 7-8. SO<sub>2</sub> Concentration Summary for the Midlothian OFW Monitor (EPA ID 48-139-0016)**

	2019 <sup>a</sup>	2020 <sup>a</sup>	2021 <sup>a</sup>
Quarter 1 Percent Complete: <sup>b</sup>	95.56%	95.60%	95.56%
Quarter 2 Percent Complete: <sup>b</sup>	97.80%	100.00%	100.00%
Quarter 3 Percent Complete: <sup>b</sup>	76.09%	96.74%	94.57%
Quarter 4 Percent Complete: <sup>b</sup>	97.83%	100.00%	93.48%
98 <sup>th</sup> Percentile Daily Maximum 1-hour Concentration (ppb): <sup>c</sup>	4.2	5.7	8.1
3-Year Average 1-hr Concentration (2019-2021) (ppb): <sup>d</sup>	6		
3-Year Average 1-hr Concentration (2019-2021) (µg/m <sup>3</sup> ): <sup>e</sup>	16		

a. Monitor data are obtained from the TCEQ Air Monitoring website ([https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly\\_summary.pl?cams=52](https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly_summary.pl?cams=52)).

b. Data is demonstrated to be at least 75% complete to satisfy the requirements of 40 CFR Part 50 Appendix S, Section 3.1(b) and 40 CFR Part 50 Appendix S, Section 3.2(b).

c. The 98<sup>th</sup> percentile daily maximum 1-hour concentrations were determined using the procedures prescribed in 40 CFR Part 50 Appendix S, Section 5.2.

d. The three-year average of the 98<sup>th</sup> percentile daily maximum 1-hour concentration is rounded as prescribed in 40 CFR Part 50 Appendix S, Section 4.2(c).

e. The concentration is multiplied by 2.62 to convert ppb to µg/m<sup>3</sup>.

### 7.2.3 PM<sub>2.5</sub> Monitor Selection

Black Mountain selected the Denton Airport South Monitor, EPA Site Number 48-121-0034 (Denton Airport South Monitor), as the representative/conservative monitor for the Dorchester Cement Plant site for PM<sub>2.5</sub> background concentrations. The basis for the selection includes:

- ▶ Per TCEQ guidance, when there is no PM<sub>2.5</sub> monitor within the same county a monitor from an adjacent county can be used when justified.<sup>36</sup> The Denton Airport South Monitor is located in the adjacent Denton County.
- ▶ Figure 7-1 and Figure 7-2 present a visual comparison of the areas surrounding the Denton Airport South Monitor and Dorchester Cement Plant locations, respectively. The yellow circles on the aerial images indicate a 10-km radius surrounding the monitor and the Dorchester Cement Plant, and the red points represent nearby industrial sources according to TCEQ's 2021 Emission Inventory (EI) database. As illustrated in Figure 7-1, the Denton Airport South Monitor is located in a suburban area outside of Denton, Texas, with a few nearby industrial sources. The monitor captures PM<sub>2.5</sub> emissions from suburban, residential, commercial, and industrial activity from the Denton area. Conversely, the Dorchester Cement Plant is located in a more rural area of Grayson County, with only one industrial source reporting NO<sub>2</sub> emissions within 10 km.
- ▶ Table 7-9 lists each industrial emission source reporting PM<sub>2.5</sub> emissions located within 10 km of the monitor and the site based on TCEQ EI data. The PM<sub>2.5</sub> emissions from industrial sources surrounding the Denton Airport South Monitor are greater than those around the Dorchester Cement Plant. In addition, there are more residential, commercial, and industrial sources within 10 km of the Denton Airport South Monitor. Therefore, the PM<sub>2.5</sub> concentrations from this monitor conservatively represent more residential, commercial, and industrial activity than the area of the Dorchester Cement Plant.

<sup>36</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

- Table 7-10 provides a comparison of countywide population, countywide PM<sub>2.5</sub> emissions from industrial sources reporting PM<sub>2.5</sub> emissions based on TCEQ 2021 EI data, and emissions from industrial sources reporting PM<sub>2.5</sub> emissions located within 10 km of the monitor and site locations. The monitor is located in an area that contains a higher population and larger PM<sub>2.5</sub> emissions.

Based on the above reasons, Black Mountain believes that PM<sub>2.5</sub> monitored concentrations obtained from the Denton Airport South Monitor are a conservative representation of both off-property sources and the ambient background concentration in the vicinity of the proposed Dorchester Cement Plant site.

Table 7-11 shows the PM<sub>2.5</sub> data collection during 2020, 2021, and 2022 are complete (i.e., at least 75% of the sampling days for each quarter are valid) and provides summaries of the background concentrations for PM<sub>2.5</sub> obtained from the Denton Airport South Monitor.

**Table 7-9. Emissions Inventory Data for PM<sub>2.5</sub> Sources within 10 km of Site and Monitor**

<b>Company</b>	<b>Site Name</b>	<b>RN</b>	<b>Distance (km)</b>	<b>Annual PM<sub>2.5</sub> Emissions (TPY)<sup>a</sup></b>
<b>Emission Sources within 10 km of Dorchester Cement Plant</b>				
PANDA SHERMAN POWER LLC	PANDA SHERMAN POWER STATION	RN106831423	7.99	17.28
<b>Emission Sources within 10 km of Denton Airport South Monitor</b>				
ACME BRICK COMPANY	DENTON PLANT	RN102097904	6.81	0.07
CITY OF GARLAND POWER & LIGHT	SPENCER GENERATING STATION	RN100214766	8.77	0.48
PACCAR INC	PETERBILT MOTORS DENTON FACILITY	RN100211762	2.53	0.36
TETRA PAK MATERIALS LP	MATERIALS LIQUID FOOD CARTON MFG DENTON FACILITY	RN102615747	2.27	0.46
SWG PIPELINE LLC	PONDER COMPRESSOR STATION	RN106160260	9.06	1.64
TARGA MIDSTREAM SERVICES LLC	MUNSON COMPRESSOR STATION	RN106993041	8.38	1.38
BEDROCK PRODUCTION LLC	COLE B 2H SITE	RN108365305	2.14	0.00
CITY OF DENTON	225 MW DENTON ENERGY CENTER	RN106080914	1.35	13.65

**Table 7-10. Summary of PM<sub>2.5</sub> Emissions and Population for Site and Monitor**

Location	County	Population <sup>a</sup>	County Wide PM <sub>2.5</sub> Emissions <sup>b</sup> (TPY)	PM <sub>2.5</sub> Emissions within 10 km if the Site/Monitor <sup>b</sup> (TPY)
Dorchester Cement Plant	Grayson	143,131	20	17.28
Denton Airport South Monitor	Denton	977,281	97	18.04

a. 2022 population estimate data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219> (accessed in December 2022)

b. Emission Rates reported in the 2021 Emission Inventory were provided via email by Mr. Adam Bullock, TCEQ, to Mr. Stephen Beene, Trinity Consultants, on March 23, 2023.

**Table 7-11. PM<sub>2.5</sub> Concentration Summary for the Denton Airport South Monitor (EPA ID 48-121-0034)**

Year <sup>a</sup>	Quarterly Data Completeness <sup>b</sup> (%)				Quarterly Average Concentration (µg/m <sup>3</sup> )				Number of Complete Days <sup>c</sup>	98 <sup>th</sup> Percentile 24-hr Concentration <sup>d</sup> (µg/m <sup>3</sup> )	Annual Average Concentration <sup>e</sup> (µg/m <sup>3</sup> )
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
2020	100.00	100.00	93.48	100.00	5.72	7.85	9.69	6.48	360	20.14	7.44
2021	100.00	98.90	88.04	96.74	7.36	7.24	9.92	6.03	350	17.00	7.64
2022	100.00	97.80	91.30	100.00	5.05	10.40	8.44	5.91	355	23.13	7.45
<b>Three-Year Average Concentrations (2020-2022): <sup>f</sup></b>											7.5

a. All concentrations listed in the table are in µg/m<sup>3</sup>. Monitor data are obtained from the TCEQ Air Monitoring website: ([https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly\\_summary.pl?cams=56](https://www.tceq.texas.gov/cgi-bin/compliance/monops/yearly_summary.pl?cams=56))

b. Data for 2020-2022 is demonstrated to be at least 75% complete to satisfy the requirements of 40 CFR Part 50 Appendix N, Section 4.1(b) and 40 CFR Part 50 Appendix N, Section 4.2(b).

c. Day is considered complete if at least 75% of the hourly averages are available per 40 CFR Part 50 Appendix N, Section 3(c).

d. The 98<sup>th</sup> percentile 24-hr concentrations were determined using the procedures prescribed in 40 CFR Part 50 Appendix N, Section 4.5.

e. The annual average concentrations were determined using the procedures prescribed in 40 CFR Part 50 Appendix N, Section 4.4.

f. The final background monitor design values are rounded as prescribed in 40 CFR Part 50 Appendix N, Section 4.3.

#### 7.2.4 PM<sub>10</sub> Monitor Selection

Black Mountain selected the Convention Center Monitor, EPA Site Number 48-113-0050, as the representative/conservative monitor for the Dorchester Cement Plant site for PM<sub>10</sub> background concentrations. The bases for the selection include:

- ▶ Per TCEQ guidance, when there is no PM<sub>10</sub> monitor within the same county or an adjacent county, then monitoring data from another county can be used when justified.<sup>37</sup>
- ▶ Figure 7-2 and Figure 7-4 present a visual comparison of the areas surrounding the Dorchester Cement Plant and the Convention Center Monitor locations, respectively. The yellow circles on the aerial images indicate a 10-km radius surrounding the monitor and the Dorchester Cement Plant, and the red points represent nearby industrial sources according to TCEQ's 2021 Emission Inventory (EI) database. As illustrated in Figure 7-4, the Convention Center Monitor is located in an urban area of Dallas, Texas, with several nearby industrial sources. The monitor captures PM<sub>10</sub> emissions from suburban, residential, commercial, and industrial activity from the Dallas area. Conversely, the Dorchester Cement Plant is located in a more rural area of Grayson County, with only one industrial source reporting PM<sub>10</sub> emissions within 10 km.
- ▶ Table 7-12 lists each industrial emission source reporting PM<sub>10</sub> emissions located within 10 km of the monitor and the site based on TCEQ EI data. The PM<sub>10</sub> emissions from industrial sources surrounding the Convention Center Monitor are greater than those around the Dorchester Cement Plant. In addition, there are more residential, commercial, and industrial sources within 10 km of the Convention Center Monitor. Therefore, the PM<sub>10</sub> concentrations from this monitor conservatively represent more residential, commercial, and industrial activity than the area of the Dorchester Cement Plant.
- ▶ Table 7-13 provides a comparison of countywide population, countywide PM<sub>10</sub> emissions from industrial sources reporting PM<sub>10</sub> emissions based on TCEQ 2021 EI data, and emissions from industrial sources reporting PM<sub>10</sub> emissions located within 10 km of the monitor and site locations. The monitor is located in an area that contains a higher population and larger PM<sub>10</sub> emissions.

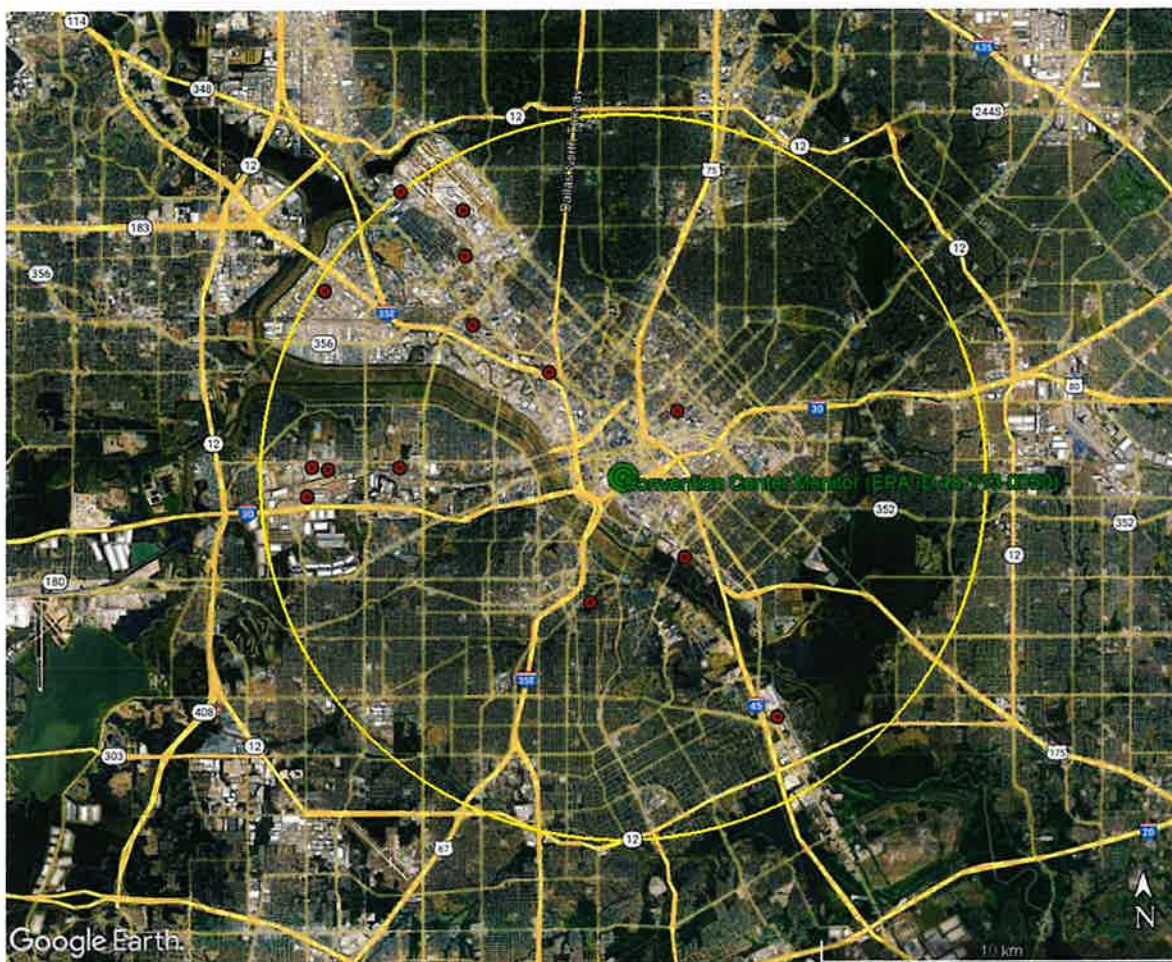
Based on the above reasons, Black Mountain believes that PM<sub>10</sub> monitored concentrations obtained from the Convention Center Monitor are a conservative representation of both off-property sources and the ambient background concentration in the vicinity of the proposed Dorchester Cement Plant site.

Table 7-14 shows the PM<sub>10</sub> data collection from 2020-2022 are complete (i.e., at least 75% of the sampling days for each quarter are valid) and provides summaries of the background concentrations for PM<sub>10</sub> obtained from the Convention Center Monitor.

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<sup>37</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019.

**Figure 7-4. PM<sub>10</sub> Sources near the Convention Center Monitor**





**Table 7-12. Emissions Inventory Data for PM<sub>10</sub> Sources within 10 km of Site and Monitor**

<b>Company</b>	<b>Site Name</b>	<b>RN</b>	<b>Distance (km)</b>	<b>Annual PM<sub>10</sub> Emissions (TPY)<sup>a</sup></b>
<b>Emission Sources within 10 km of Dorchester Cement Plant</b>				
PANDA SHERMAN POWER LLC	PANDA SHERMAN POWER STATION	RN106831423	7.99	17.32
<b>Emission Sources within 10 km of Convention Center Monitor</b>				
BAYLOR UNIVERSITY MEDICAL CENTER	BAYLOR UNIVERSITY MEDICAL CENTER	RN100654581	2.39	1.08
TAMKO BUILDING PRODUCTS INC	TAMKO BUILDING PRODUCTS DALLAS PLANT	RN100664853	7.83	13.24
WESTROCK CONVERTING COMPANY	WESTROCK CONVERTING DALLAS MILL	RN100218668	3.51	2.64
OCCIDENTAL CHEMICAL CORPORATION	OCCIDENTAL CHEMICAL DALLAS	RN100217645	2.76	37.29
BUILDING MATERIALS INVESTMENT CORPORATION	GAF MATERIALS	RN100788959	6.15	37.38
HEMPEL USA INC	HEMPEL DALLAS PLANT	RN100640580	7.52	1.78
MAGELLAN PIPELINE TERMINALS LP	DALLAS TERMINAL	RN100242015	8.56	0.00
ATRIUM COMPANIES INC	ATRIUM DOOR AND WINDOW	RN100708619	9.70	0.00
MOTIVA ENTERPRISES LLC	DALLAS TERMINAL	RN100519651	8.12	0.09
GULFSTREAM AEROSPACE CORPORATION OF TEXAS	DALLAS LOVE FIELD	RN102556313	8.60	0.54
UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER	DALLAS MEDICAL CENTER	RN100224757	5.91	5.36
SOUTHWEST AIRLINES CO	LOVE FIELD	RN102306115	10.00	1.41
OVERWRAPS PACKAGING INC	OVERWRAPS PACKAGING	RN105071427	8.70	0.09
EQUINIX LLC	EQUINIX N STEMMONS FREEWAY DALLAS	RN108987058	3.56	0.29

**Table 7-13. Comparison of PM<sub>10</sub> Emissions and Population for Site and Monitor**

<b>Location</b>	<b>County</b>	<b>Population <sup>a</sup></b>	<b>County Wide PM<sub>10</sub> Emissions <sup>b</sup> (TPY)</b>	<b>PM<sub>10</sub> Emissions within 10 km if the Site/Monitor <sup>b</sup> (TPY)</b>
Dorchester Cement Plant	Grayson	143,131	23	17.32
Convention Center Monitor	Dallas	2,600,840	473	101.2

a. 2022 population estimate data from: <https://www.census.gov/quickfacts/fact/table/US/PST045219> (accessed in December 2022).

b. Emission Rates reported in the 2021 Emission Inventory were provided via email by Mr. Adam Bullock, TCEQ, to Mr. Stephen Beene, Trinity Consultants, on March 23, 2023.

**Table 7-14. PM<sub>10</sub> Concentration Summary for the Convention Center Monitor (EPA ID 48-113-0050)**

<b>Year <sup>a</sup></b>	<b>Valid Days</b>	<b>Required Days <sup>b</sup></b>	<b>H2H 24-hour Concentration <sup>c</sup> (µg/m<sup>3</sup>)</b>
2020	59	61	73
2021	61	61	47
2022	56	61	82
<b>Three Year Highest H2H Concentration (2020 - 2022)</b>			82

a. Data obtained from <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>.

b. Data completeness is met for 2020, 2021, and 2022.

c. The H2H 24-hr concentration is reported per Appendix D of TCEQ Air Quality Modeling Guidelines (APDG 6232, revised November 2019).

## 8. MODELING RESULTS

This section discusses the air dispersion modeling results for the NAAQS and Class II PSD Analyses.

### 8.1 Significance Analysis

For the Significance Analysis, the project emissions of NO<sub>2</sub> (1-hour and annual averaging periods), SO<sub>2</sub> (1-hour, 3-hour, 24-hour and annual averaging periods), PM<sub>2.5</sub> (24-hour and annual averaging periods), CO (1-hour and 8-hour averaging periods), and PM<sub>10</sub> (24-hour and annual averaging periods) are modeled to determine the maximum ground level concentration (GLC<sub>max</sub>) for comparison to the corresponding SILs. A summary of the comparison between the resulting GLC<sub>max</sub> and the corresponding SIL for each modeled averaging period and pollutant is shown in Appendix Table C-1. Secondary PM<sub>2.5</sub> is taken into account for the PM<sub>2.5</sub> Significance Analysis, as shown in Appendix Table C-1. The determination of the secondary PM<sub>2.5</sub> impact is discussed in Section 9.

As shown in Appendix Table C-1, the modeled GLC<sub>max</sub> for NO<sub>2</sub> (annual averaging period), SO<sub>2</sub> (3-hour, 24-hour and annual averaging periods), and CO (1-hour and 8-hour averaging periods) are less than the corresponding SILs. Therefore, no additional analyses are required for these pollutant averaging periods. Appendix Table C-1 also shows the modeled GLC<sub>max</sub> for NO<sub>2</sub>, SO<sub>2</sub>, and CO are less than the corresponding SMCs. Since the SMCs for 24-hour PM<sub>2.5</sub> and PM<sub>10</sub> are exceeded, existing background monitoring data is used in lieu of collecting pre-construction ambient monitoring data as described in Section 7.1.

### 8.2 Full Impact Analysis

The results of the Significance Analysis indicate that the emissions of NO<sub>2</sub> (1-hour averaging period), SO<sub>2</sub> (1-hour averaging period), PM<sub>2.5</sub> (24-hour and annual averaging periods), and PM<sub>10</sub> (24-hour and annual averaging periods) from the proposed project result in maximum predicted concentrations that exceed the corresponding SILs. A Full Impact NAAQS Analysis is performed for NO<sub>2</sub> (1-hour averaging period), SO<sub>2</sub> (1-hour averaging period), PM<sub>2.5</sub> (24-hour and annual averaging periods), and PM<sub>10</sub> (24-hour averaging period). A PSD Increment Analysis is performed for NO<sub>2</sub> (annual averaging period), PM<sub>2.5</sub> (24-hour and annual averaging periods), and PM<sub>10</sub> (24-hour and annual averaging periods).

#### 8.2.1 Radius of Impact

The first step in the Full Impact Analysis is to determine the ROI. The Significance Analysis output files are reviewed to determine the furthest receptor from the Dorchester Cement Plant at which the modeled concentration exceeds the applicable SILs. Secondary PM<sub>2.5</sub> is considered by subtracting the secondary PM<sub>2.5</sub> impact from the SIL when determining the ROI for the modeled direct PM<sub>2.5</sub>. The ROIs are shown in the Significance Analysis results in Appendix Table C-1. The largest ROI among all averaging periods for a particular pollutant is used to establish the ROI for that particular pollutant.

#### 8.2.2 PSD NAAQS Analysis

The PSD NAAQS Analysis for NO<sub>2</sub> (1-hour), SO<sub>2</sub> (1-hour), PM<sub>2.5</sub> (24-hour and annual averaging periods), and PM<sub>10</sub> (24-hour averaging period) includes all sources at the proposed Dorchester Cement Plant that emit these pollutants as well as all applicable inventory sources. Secondary PM<sub>2.5</sub> from the project sources is considered for the PM<sub>2.5</sub> PSD NAAQS Analysis. A background concentration is added to the model impacts. The results of the PSD NAAQS Analysis are summarized in Appendix Table C-2.

As shown in Appendix Table C-2, the maximum predicted NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub> concentrations at all significant receptors are below the applicable NAAQS. Therefore, compliance with the NAAQS requirement is demonstrated, and no further analysis is required.

### **8.2.3 PSD Increment Analysis**

The PSD Increment Analysis for PM<sub>2.5</sub> (24-hour and annual averaging periods) and PM<sub>10</sub> (24-hour and annual averaging periods) includes all sources at the proposed Dorchester Cement Plant as well as the applicable increment inventory sources. Secondary PM<sub>2.5</sub> from project sources is considered for the PM<sub>2.5</sub> PSD Increment Analysis. The results of the PSD Increment Analysis are summarized in Appendix Table C-3.

As shown in Appendix Table C-3, the maximum predicted concentrations for PM<sub>2.5</sub> (24-hour and annual averaging periods) and PM<sub>10</sub> (24-hour and annual averaging periods) at all significant receptors are below the corresponding PSD Increment standards. Therefore, compliance with the PSD Increment requirement is demonstrated, and no further analysis is required.

## 9. SECONDARY PM<sub>2.5</sub> FORMATION

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In addition to direct emissions of PM<sub>2.5</sub>, emissions of NO<sub>x</sub> and SO<sub>2</sub> can lead to formation of PM<sub>2.5</sub> downwind where photochemical reactions can transform these pollutants into nitrate and sulfate particulates. These nitrate and sulfate particulates are called secondary PM<sub>2.5</sub>. Direct PM<sub>2.5</sub> emission from the proposed project are above the SER of 10 tpy and precursor emissions of SO<sub>2</sub> and NO<sub>x</sub> exceed the precursor SER of 40 tpy. Therefore, per EPA's Guidance for Ozone and Fine Particulate Matter Permit Modeling<sup>38</sup> and TCEQ Modeling Guidance<sup>39</sup> secondary formation of PM<sub>2.5</sub> must be address.

Since secondary PM<sub>2.5</sub> is formed from precursor emissions, it cannot be modeled using a traditional point source model such as AERMOD. As part of the most recent revision to the *Guideline*, EPA promulgated a two-tier approach for addressing single-source impacts on secondary PM<sub>2.5</sub>.<sup>40</sup>

- ▶ **Tier 1** – The first tier involves use of appropriate and technically credible relationships between emissions and ambient impacts developed from existing modeling studies deemed sufficient for evaluating a project's impact. EPA has developed Modeled Emission Rates for Precursors (MERPs) as a Tier 1 demonstration tool for PM<sub>2.5</sub>.<sup>41,42</sup>
- ▶ **Tier 2** – The second tier involves a more sophisticated case-by-case application of chemical transport modeling.

The assessment of secondary PM<sub>2.5</sub> from precursor emissions from the proposed project was conducted using EPA's Tier 1 demonstration tool for estimating single-source secondary impacts, EPA MERPs. The term MERP describes a precursor emission rate that is expected to result in a change in ambient PM<sub>2.5</sub> that is less than a specific air quality concentration threshold. TCEQ Modeling Guidance recommends specifies the MERPs as their recommended Tier 1 approach.

In TCEQ's Modeling Guidance, modeled impacts from hypothetical industrial sources located in Texas are presented for use in a MERP analysis, as obtained from EPA's MERP guidance. One of these hypothetical modeling analyses was conducted for a source located in Parker County, Texas (identified as Source 24). Parker County is just west of the Dallas Fort-Worth metropolitan area and Grayson County where the Dorchester Cement Plant Facility is located is just north of the Dallas Fort-Worth metropolitan area, thus both counties are in the same air shed. Since it is recognized that PM<sub>2.5</sub> is a regional pollutant and both counties are in the same air shed, the hypothetical industrial source in Parker County is representative of Grayson County. Furthermore, both Parker and Grayson Counties are located in North Texas. Thus, both counties have similar topography and weather patterns. Therefore, the empirical relationships derived from this Parker County hypothetical model were used, because the model is representative of possible impacts from this project.

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<sup>38</sup> EPA, *Guidance for Ozone and Fine Particulate Matter Permit Modeling*, EPA-454/R-22-005, July 2022.

<sup>39</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019, Appendix R.

<sup>40</sup> Code of Federal Regulations, Title 40–Protection of Environment, Part 51, Guideline on Air Quality Models, Appendix W.

<sup>41</sup> *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program*. EPA-454/R-19-003, April 2019.

<sup>42</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019, Appendix R



For the Parker County location, EPA modeled hypothetical sources with NO<sub>x</sub> and SO<sub>2</sub> emissions at 500 tpy, 1,000 tpy, and 3,000 tpy with low and high stack heights. The 500 tpy NO<sub>x</sub> and 500 tpy SO<sub>2</sub> emission rate scenarios were selected as they are the closest options to the proposed project emissions. The high stack height category (90 m) is considered representative of the emission releases for the proposed project as the NO<sub>x</sub> and SO<sub>2</sub> emissions occur from main stack for the kiln and raw mill stack with is 108 m. Table 9-1 lists the representative PM<sub>2.5</sub> MERPs.<sup>43</sup>

**Table 9-1. Representative Secondary PM<sub>2.5</sub> MERPs**

Precursor	Hypothetical Source No.	Hypothetical Emission Rate (tpy)	Hypothetical Stack Height (L/H)	24-Hour PM <sub>2.5</sub> (TPY)	Annual PM <sub>2.5</sub> (TPY)
NO <sub>x</sub>	24 (Parker Co.)	500	H	7,692	71,586
SO <sub>2</sub>	24 (Parker Co.)	500	H	1,941	33,317

Source: TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix R.

As described in the TCEQ Modeling Guidelines, the comparison of the proposed project emission increases to these MERPs is considered together to determine whether the proposed project's air quality impact exceeds the air quality threshold. The following equation is used the estimated concentration from the secondary PM<sub>2.5</sub> impacts:

$$\text{Concentration} = \left[ \frac{\text{NO}_x \text{ Project Emissions}}{\text{NO}_x \text{ MERP}} + \frac{\text{SO}_2 \text{ Project Emissions}}{\text{SO}_2 \text{ MERP}} \right] \times \text{SIL}$$

Table 9-2 shows the precursor emissions, MERPs and the calculated secondary PM<sub>2.5</sub> contribution.

**Table 9-2. Secondary PM<sub>2.5</sub> Analysis**

Pollutant	Precursors Emissions (tpy)	MERP <sup>a</sup>	
		Daily PM <sub>2.5</sub> (tpy)	Annual PM <sub>2.5</sub> (tpy)
NO <sub>x</sub>	369.14	7,692	71,586
SO <sub>2</sub>	213.35	1,941	33,317
MERP Critical Threshold <sup>b</sup> (µg/m <sup>3</sup> )		1.2	0.2
<b>MERP Secondary PM<sub>2.5</sub> <sup>c</sup> (µg/m<sup>3</sup>)</b>		<b>0.189</b>	<b>0.002</b>

Notes:

- TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix R.
- Critical threshold corresponds to the PM<sub>2.5</sub> SIL.
- Per the above equation:  
Daily (24-hr): [(369.14/7,692) + (213.35/1,941)] \* 1.2 = 0.189  
Annual: [(369.14/71,586) + (213.35/33,317)] \* 0.2 = 0.002

The secondary impacts calculated in the table above were added to the modeled concentration of direct PM<sub>2.5</sub>, conservatively assuming that primary and secondary impacts occur at the same time and location. This method was used to include secondary PM<sub>2.5</sub> in both the Significance Analysis and the Full Impact modeling.

<sup>43</sup> TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix R.

## 10. OZONE ANALYSIS

Ozone is formed from precursor VOC and NO<sub>x</sub> emissions. The project's VOC or NO<sub>x</sub> emissions exceed 100 tpy, therefore the federal PSD regulations require an ozone impact. The ozone analysis was conducted using EPA's *Guidance for Ozone and Fine Particulate Matter Permit Modeling*<sup>44</sup>.

Since ozone is formed from precursor emissions, it cannot be modeled using a traditional point source model such as AERMOD. As part of the most recent revision to the EPA Guideline on Air Quality Modeling (40 CFR Part 51, Appendix W), EPA promulgated a two-tier approach for addressing single-source impacts on ozone.<sup>45</sup>

- ▶ **Tier 1** – The first tier involves use of appropriate and technically credible relationships between emissions and ambient impacts developed from existing modeling studies deemed sufficient for evaluating a project's impact. EPA has developed Modeled Emission Rates for Precursors (MERPs) as a Tier 1 demonstration tool for ozone.<sup>46,47</sup>
- ▶ **Tier 2** – The second tier involves a more sophisticated case-by-case application of chemical transport modeling.

The assessment of ozone formation from the proposed project precursor emissions was conducted using EPA's Tier 1 demonstration tool for estimating single-source secondary impacts, EPA MERPs. The term MERP describes a precursor emission rate that is expected to result in a change in ambient ozone that is less than a specific air quality concentration threshold. TCEQ Modeling Guidance specifies the MERPs as their recommended Tier 1 approach.

In TCEQ's Modeling Guidance, modeled impacts from hypothetical industrial sources located in Texas are presented for use in a MERP analysis, as obtained from EPA's MERP guidance. One of these hypothetical modeling analyses was conducted for a source located in Parker County, Texas (identified as Source 24). Parker County is just west of the Dallas Fort-Worth metropolitan area and Grayson County where the Dorchester Cement Plant Facility is located is just north of the Dallas Fort-Worth metropolitan area, thus both counties are in the same air shed. Since it is recognized that ozone is a regional pollutant and both counties are in the same air shed, the hypothetical industrial source in Parker County would be representative of Grayson County. Furthermore, both Parker and Grayson Counties are located in North Texas. Thus, both counties have similar topography and weather patterns. Therefore, the empirical relationships derived from this Parker County hypothetical model will be used, because the model is representative of possible impacts from this project.

For the Parker County location, EPA modeled hypothetical sources with NO<sub>x</sub> and VOC emissions at various emission levels with low and high stack heights. The high stack height category (90 m) is considered representative of the emission releases for the proposed project as almost all of the NO<sub>x</sub> and VOC emissions occur from the main stack for the kiln and raw mill stack which is 108 m tall. The 500 tpy NO<sub>x</sub> emission rate scenarios were selected as they are the closest option to the proposed project emissions. For VOC a 500 tpy

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<sup>44</sup> EPA, *Guidance for Ozone and Fine Particulate Matter Permit Modeling*, EPA-454/R-22-005, July 2022.

<sup>45</sup> Code of Federal Regulations, Title 40–Protection of Environment, Part 51, Guideline on Air Quality Models, Appendix W.

<sup>46</sup> *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program*. EPA-454/R-19-003, April 2019.

<sup>47</sup> TCEQ, *Air Quality Modeling Guidelines*, APDG 6232 (Revised), November 2019, Appendix Q

high stack height scenario was not model, therefore the 1,000 tpy high stack height scenario was selected. Table 10-1 lists the representative ozone MERPs.

**Table 10-1. TCEQ Worst-case Ozone MERPs**

<b>Precursor</b>	<b>Hypothetical Source No.</b>	<b>Hypothetical Emission Rate (tpy)</b>	<b>Hypothetical Stack Height (L/H)</b>	<b>8-Hour Ozone (TPY)</b>
NO <sub>x</sub>	24 (Parker Co.)	500	H	386
VOC	24 (Parker Co.)	1000	H	3,289

Source: TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix Q.

As described in the TCEQ Modeling Guidelines, the comparison of the proposed project emission increases to these MERPs is considered together to determine whether the proposed project's air quality impact exceeds the air quality threshold. The following equation is used to determine the estimated concentration from the ozone impacts:

$$Concentration = \left[ \frac{NO_x \text{ Project Emissions}}{NO_x \text{ MERP}} + \frac{VOC \text{ Project Emissions}}{VOC \text{ MERP}} \right] \times SIL$$

Table 10-2 shows the precursor emissions, MERPs and the calculated ozone contribution.

**Table 10-2. Project Ozone Analysis**

<b>Pollutant</b>	<b>Precursors Emissions (tpy)</b>	<b>8-Hour Ozone MERP (tpy) <sup>a</sup></b>
NO <sub>x</sub>	369.14	386
VOC	101.10	3,289
MERP Critical Threshold <sup>b</sup> (ppb)		1.0
<b>Project Ozone Impact <sup>c</sup> (ppb)</b>		<b>0.987</b>

Notes:

- TCEQ, Air Quality Modeling Guidelines, APDG 6232 (Revised), November 2019, Appendix Q.
- The critical threshold corresponds to the ozone SIL.
- Per the above equation:  $[(369.14/386) + (101.10/3,289)] \times 1 = 0.987$

To reduce the impact on ozone concentrations in the nearby DFW ozone nonattainment area, Black Mountain proposes to control NO<sub>x</sub> beyond Best Available Control Technology (BACT) by installing an SCR system. The above analysis shows the project's ozone impact is below the SIL. Therefore, no further analysis is required.

## **11. PSD ADDITIONAL IMPACT ANALYSIS**

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The PSD additional impacts analysis provides an analysis of the project's potential impact on local soils, vegetation, and visibility in the project area. The additional impacts analysis is conducted for the pollutants subject to PSD review for the project and is presented in four parts:

1. Growth analysis
2. Soils and vegetation analysis
3. Visibility impairment analysis
4. PSD Class I area impact analysis

### **11.1 Growth Analysis**

The elements of the growth analysis include a projection of the associated industrial, commercial, and residential growth that will occur in the area of impact due to the proposed project, including the potential impact on ambient air due to this growth. Black Mountain anticipates that most of the employees of the proposed facility will be existing residents of Grayson County and nearby counties; therefore, residential growth is expected to be low. Black Mountain does not anticipate any associated industrial or commercial growth due to the proposed facility. Therefore, negligible growth-related ambient air impacts are expected.

### **11.2 Soils and Vegetation Analysis**

The U.S. EPA developed the secondary NAAQS in order to protect certain air quality-related values (i.e., soil and vegetation) that were not sufficiently protected by the primary NAAQS. The secondary NAAQS represents ambient air concentrations below which most types of soil and vegetation are unaffected by criteria pollutants. If the predicted ambient air concentrations are less than the secondary NAAQS, it can be presumed that emissions from the proposed sources will not result in harmful effects to either soil or vegetation.<sup>48</sup> If the predicted ambient air concentrations of speciated compounds (e.g. speciated PM and speciated VOCs), if any, are acceptable per the Health Effects Evaluation (Tier I, II, or III), it can be presumed that the proposed sources will not result in an adverse effect on the environment, including soils and vegetation.

### **11.3 Visibility Impairment Analysis**

The proposed Dorchester Cement Plant will be constructed in a Class II area. The proposed Dorchester Cement Plant will comply with the visibility and opacity requirements in 30 TAC Chapter 111, which satisfies visibility impairment analysis requirements for Class II areas.

### **11.4 PSD Class I Area Impact Analysis**

Class I areas are areas of the nation that are of special natural, scenic, recreational, or historic interest to the public, and are afforded protection under the PSD provisions of the Clean Air Act. Two principal air quality impacts are considered for Class I Areas: PSD increments for NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>, and Air Quality Related Values (AQRV) including regional haze and acidic deposition.

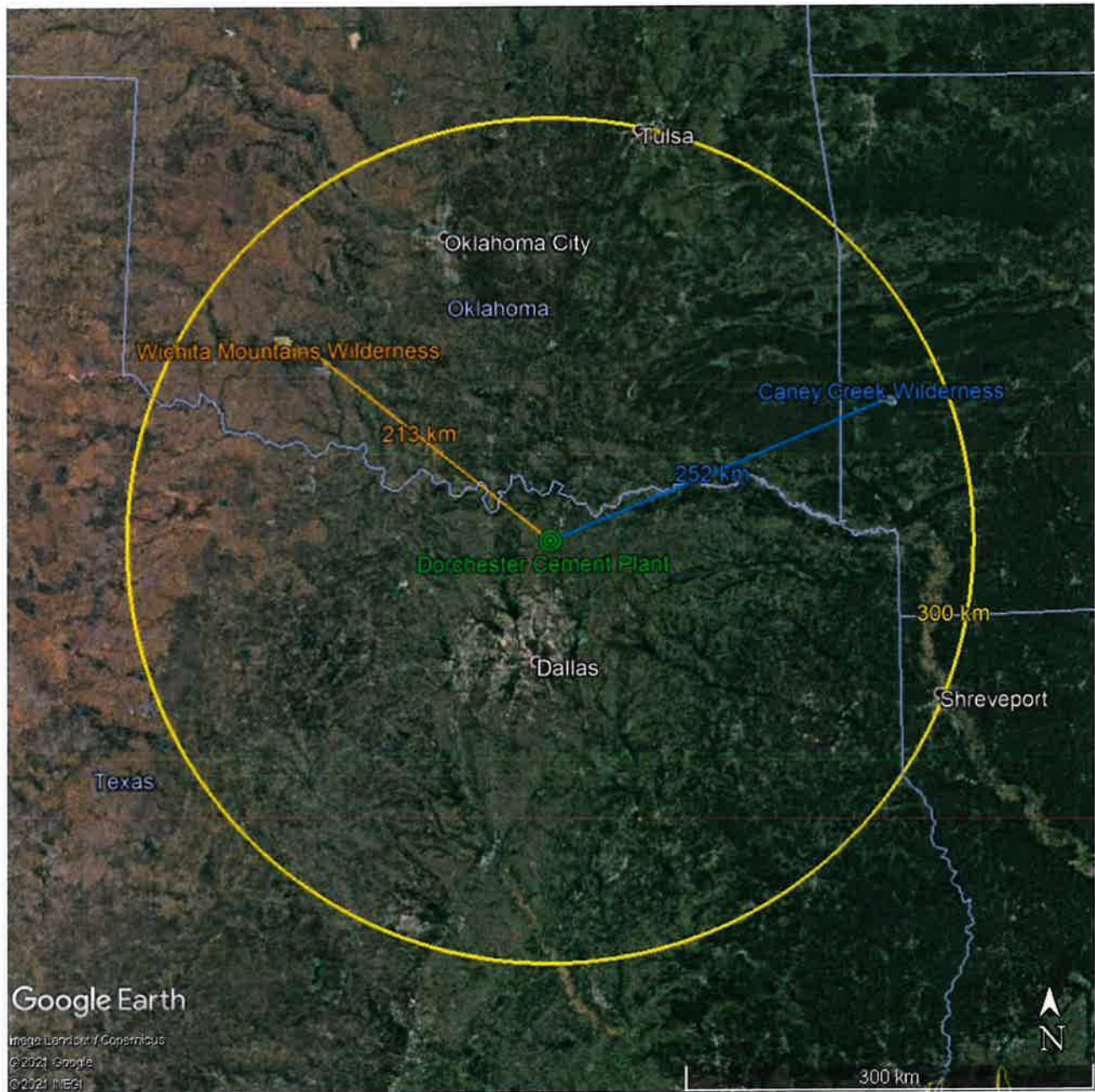
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<sup>48</sup> U.S. EPA, Office of Air Quality Planning and Standards, New Source Review Workshop Manual, Research Triangle Park, NC, October 1990.



TCEQ requires Class I Area analyses be evaluated if a proposed PSD project is less than 100 km from a Class I Area. The U.S. EPA has historically requested that Class I Area analyses be completed if the distance between a proposed PSD project and a Class I Area is approximately 300 km or less. As shown in Figure 11-1, the Wichita Mountains Wilderness and Caney Creek Wilderness Class I area is located within 300 kilometers (km) of the Dorchester Cement Plant.

**Figure 11-1. Closest Class I Areas to the Dorchester Cement Plant**





### 11.4.1 PSD Class I AQRV Analysis

In October 2010, the *Federal Land Managers Air Quality Related Values (AQRV) Workgroup (FLAG) Phase I Report – Revised* was issued, which established a threshold ratio of emissions to distance (10 D Rule), below which AQRV review is not required. Specifically, if

$$Q \text{ (tpy)}/d \text{ (km)} < 10, \text{ no AQRV analysis is required}$$

Where:

- Q is the emissions increase of SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, and sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>), combined in tpy [the tpy value must be based on the maximum short-term (24-hour) emission rates]
- d is the nearest distance to a Class I Area in km

Table 11-1 shows the SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, and H<sub>2</sub>SO<sub>4</sub> projected annual emission rates based on the maximum 24-hour emission rates and 8,760 hours per year of operation. The proposed maximum annual emissions in the permit application are much less and will be federally enforceable via the PSD permit (to be issued by TCEQ). Table 11-2 shows the Class I areas within 300 km of the proposed Dorchester Cement Plant, the total Q from the proposed project, the distance from the Dorchester Cement Plant to the Class I area, and the result of the Q/d for each Class I area. Because the Q/d assessment result are ≤ 10 at the nearest Class I areas the Dorchester Cement Plant will have no adverse impact on AQRV. Therefore, no additional analyses for AQRV are required.

**Table 11-1. Project Emissions Summary for Q/d Analysis**

<b>Pollutant</b>	<b>Maximum 24-Hour Emission Rates (lb/hr)<sup>a</sup></b>	<b>Annual Emissions Based on Maximum 24-Hour Emissions (TPY)<sup>b</sup></b>
SO <sub>2</sub>	83.34	365.0
NO <sub>x</sub>	152.77	669.1
PM <sub>10</sub>	55.31	242.3
H <sub>2</sub> SO <sub>4</sub>	20.09	88.0
<b>Total</b>		<b>1,364.4</b>

Notes:

- Maximum 24-hour emission rates from proposed project.
- Annual emissions are based on the maximum 24-hour emissions assuming 8,760 hours per year. The proposed maximum annual emissions in the permit application are much less and will be federally enforceable via the PSD permit (to be issued by TCEQ).

**Table 11-2. Q/d for Nearest Class I Areas to the Dorchester Cement Plant**

<b>Class I Area</b>	<b>Q (TPY)</b>	<b>Distance (km)</b>	<b>Q/d</b>
Wichita Mountains Wilderness	1,364.4	213	6.4
Caney Creek Wilderness	1,364.4	252	5.4

Notes:

- Emissions are based on the sum of SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, and H<sub>2</sub>SO<sub>4</sub> emissions.
- The distance is from the approximately center of the Dorchester Cement Plant to the closest Class I Area Boundary.

### 11.4.2 PSD Class I Increment Analysis

The 2017 updates to the *Guideline on Air Quality Models*<sup>49</sup> removed CALPUFF as an approved refined long range (> 50 km) transport model and added a screening method based on the application of an appropriate near-field (< 50 km) screening and/or preferred model to determine the significance of the ambient impacts at or about 50 km from the new or modifying source. EPA's *Technical Support Document (TSD) for AERMOD-Based Assessments of Long-Range Transport Impacts for Primary Pollutants*<sup>50</sup> supports the use of AERMOD to demonstrate that if the project is insignificant at 50 km it will be insignificant at distances > 50 km. Therefore, AERMOD modeling was conducted for a 180 degree arc of receptors from 308 degrees to 98 degrees 50 km from the facility. The receptors were spaced at 1-degree radials. Figure 11-2 shows the locations of the Wichita Mountains Wilderness and Caney Creek Wilderness Class I areas and the arc of receptors.

**Figure 11-2. AERMOD Class I Receptor Arc**



<sup>49</sup> 40 CFR 51, Appendix W, Revised, January 17, 2017

<sup>50</sup> *Technical Support Document (TSD) for AERMOD-Based Assessments of Long-Range Transport Impacts for Primary Pollutants*, United States Environmental Protection Agency, Office of Air Quality Planning and Standards, EPA-454/B-16-007, December 2016

To address secondary PM<sub>2.5</sub> formation at distances  $\geq 50$  km, distance dependent MERPs from the EPA MERPs View Qlik webpage were evaluated. The Qlik webpage list MERPs at downwind distances up to 300 km. For the 50 km arc modeling, the lowest MERPs (most conservative) occurring at downwind distances greater than 200 km was selected. Table 11-3 lists the selected MERPs. Table 11-4 shows the PM<sub>2.5</sub> precursor emissions, MERPs, and the calculated project secondary PM<sub>2.5</sub> impact. These values were added to the modeled primary PM<sub>2.5</sub> concentrations.

**Table 11-3. Representative Secondary Class I PM<sub>2.5</sub> MERPs**

<b>Precursor</b>	<b>Hypothetical Source No.</b>	<b>Hypothetical Emission Rate (tpy)</b>	<b>Hypothetical Stack Height (L/H)</b>	<b>Downwind Distance (km)</b>	<b>24-Hour PM<sub>2.5</sub> (TPY)</b>	<b>Annual PM<sub>2.5</sub> (TPY)</b>
NO <sub>x</sub>	24 (Parker Co.)	500	H	$\geq 200$	40,231	306,997
SO <sub>2</sub>	24 (Parker Co.)	500	H	$\geq 200$	29,373	121,521

Source: EPA's Qlik webpage (<https://www.epa.gov/scram/merps-view-qlik>)

**Table 11-4. Secondary PM<sub>2.5</sub> Analysis**

<b>Pollutant</b>	<b>Precursors Emissions (tpy)</b>	<b>MERP<sup>a</sup></b>	
		<b>Daily PM<sub>2.5</sub> (tpy)</b>	<b>Annual PM<sub>2.5</sub> (tpy)</b>
NO <sub>x</sub>	369.14	40,231	306,997
SO <sub>2</sub>	213.35	29,373	121,521
MERP Critical Threshold <sup>b</sup> (µg/m <sup>3</sup> )		1.2	0.2
<b>MERP Secondary PM<sub>2.5</sub> (µg/m<sup>3</sup>)</b>		<b>0.0197</b>	<b>0.00059</b>

As shown in Appendix Table C-4, shows the total GLC<sub>max</sub> for all pollutants and averaging periods are less than the corresponding PSD Class I SILs. Therefore, compliance with the PSD Class I Increment requirement is demonstrated, and no further analysis is required.

## **APPENDIX A. PROJECT SOURCE PARAMETERS AND EMISSIONS**

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Table A-1. Modeled Emission Rates

EPN	Modeled Source ID	Modeled Source Description	Intermittent t (Y/N)	Hrs/Yr	Hrs/Day	Modeled Emission Rates																			
						PM <sub>10</sub>			PM <sub>2.5</sub>			CO													
						Hourly PTE	24-Hr Modeled	Annual Modeled	Hourly PTE	24-Hr Modeled	Annual Modeled	Hourly PTE	24-Hr Modeled	Annual Modeled											
						(lb/hr)	(lb/hr)	(g/s)	(lb/hr)	(lb/hr)	(g/s)	(lb/hr)	(lb/hr)	(g/s)	(lb/hr)	(lb/hr)	(g/s)	(lb/hr)	(lb/hr)	(g/s)					
21-SK-230	21SK_ON	Main Stack (Raw Mill & Klin) - Raw Mill On	N	8760	24	41.6625	5.2494	159.984	4.6022	41.6625	5.2494	159.984	4.6022	41.6625	5.2494	159.984	4.6022	41.6625	5.2494	159.984	1,249.88	157.4816	1,249.88	157.4816	
51-SK-250	21SK_OFF	Main Stack (Raw Mill & Klin) - Raw Mill Off	N	8760	24	41.6625	5.2494	159.984	4.6022	41.6625	5.2494	159.984	4.6022	41.6625	5.2494	159.984	4.6022	41.6625	5.2494	159.984	1,249.88	157.4816	1,249.88	157.4816	
10-BF-035	10BF_035	Cement Mill Stack	N	8760	24	3.2257	0.4064	14.129	0.4064	3.2257	0.4064	14.129	0.4064	3.2257	0.4064	14.129	0.4064	3.2257	0.4064	14.129	1.309	0.1650	1.309	0.1650	
10-BF-140	10BF_140	Baghouse - 10-BF-035	N	8760	24	1.3621	0.1716	5.966	0.1716	1.3621	0.1716	5.966	0.1716	1.3621	0.1716	5.966	0.1716	1.3621	0.1716	5.966	0.1716	0.1716	0.1716	0.1716	0.1716
10-BF-140	10BF_140	Baghouse - 10-BF-140	N	8760	24	0.2523	3.178E-02	1.105	3.178E-02	0.2523	3.178E-02	1.105	3.178E-02	0.2523	3.178E-02	1.105	3.178E-02	0.2523	3.178E-02	1.105	3.178E-02	0.2523	3.178E-02	0.2523	3.178E-02
12-BF-140	12BF_140	Baghouse - 12-BF-140	N	8760	24	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.2018	2.543E-02
11-BF-270	11BF_270	Baghouse - 11-BF-270	N	8760	24	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.2018	2.543E-02
11-BF-285	11BF_285	Baghouse - 11-BF-285	N	8760	24	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.2018	2.543E-02
12-BF-315	12BF_315	Baghouse - 12-BF-315	N	8760	24	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.2018	2.543E-02
12-BF-325	12BF_325	Baghouse - 12-BF-325	N	8760	24	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.2018	2.543E-02
12-BF-360	12BF_360	Baghouse - 12-BF-360	N	8760	24	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.1261	1.589E-02
13-BF-030	13BF_030	Baghouse - 13-BF-030	N	8760	24	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.1261	1.589E-02
13-BF-500	13BF_500	Baghouse - 13-BF-500	N	8760	24	0.4288	5.403E-02	1.878	5.403E-02	0.4288	5.403E-02	1.878	5.403E-02	0.4288	5.403E-02	1.878	5.403E-02	0.4288	5.403E-02	1.878	5.403E-02	0.4288	5.403E-02	0.4288	5.403E-02
20-BF-010	20BF_010	Baghouse - 20-BF-010	N	8760	24	0.3027	3.814E-02	1.326	3.814E-02	0.3027	3.814E-02	1.326	3.814E-02	0.3027	3.814E-02	1.326	3.814E-02	0.3027	3.814E-02	1.326	3.814E-02	0.3027	3.814E-02	0.3027	3.814E-02
20-BF-182	20BF_182	Baghouse - 20-BF-182	N	8760	24	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.2018	2.543E-02
20-BF-360	20BF_360	Baghouse - 20-BF-360	N	8760	24	0.1135	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.1135	1.43E-02
21-BF-330	21BF_330	Baghouse - 20-BF-360	N	8760	24	7.569E-02	9.536E-03	0.332	9.536E-03	7.569E-02	9.536E-03	0.332	9.536E-03	7.569E-02	9.536E-03	0.332	9.536E-03	7.569E-02	9.536E-03	0.332	9.536E-03	7.569E-02	9.536E-03	7.569E-02	9.536E-03
22-BF-060	22BF_060	Baghouse - 22-BF-060	N	8760	24	0.2270	2.86E-02	0.994	2.86E-02	0.2270	2.86E-02	0.994	2.86E-02	0.2270	2.86E-02	0.994	2.86E-02	0.2270	2.86E-02	0.994	2.86E-02	0.2270	2.86E-02	0.2270	2.86E-02
22-BF-080	22BF_080	Baghouse - 22-BF-080	N	8760	24	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.1261	1.589E-02
22-BF-160	22BF_160	Baghouse - 22-BF-160	N	8760	24	0.3784	4.768E-02	1.657	4.768E-02	0.3784	4.768E-02	1.657	4.768E-02	0.3784	4.768E-02	1.657	4.768E-02	0.3784	4.768E-02	1.657	4.768E-02	0.3784	4.768E-02	0.3784	4.768E-02
22-BF-385	22BF_385	Baghouse - 22-BF-385	N	8760	24	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.552	1.589E-02	0.1261	1.589E-02	0.1261	1.589E-02
30-BF-260	30BF_260	Baghouse - 30-BF-260	N	8760	24	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.884	2.543E-02	0.2018	2.543E-02	0.2018	2.543E-02
30-BF-320	30BF_320	Baghouse - 30-BF-320	N	8760	24	0.1135	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.497	1.43E-02	0.1135	1.43E-02	0.1135	1.43E-02
42-BF-270	42BF_270	Baghouse - 42-BF-270	N	8760	24	0.1640	2.066E-02	0.718	2.066E-02	0.1640	2.066E-02	0.718	2.066E-02	0.1640	2.066E-02	0.718	2.066E-02	0.1640	2.066E-02	0.718	2.066E-02	0.1640	2.066E-02	0.1640	2.066E-02
41-BF-130	41BF_130	Baghouse - 41-BF-130	N	8760	24	5.044E-02	6.356E-03	0.504E-02	6.356E-03	5.044E-02	6.356E-03	0.504E-02	6.356E-03	5.044E-02	6.356E-03	0.504E-02	6.356E-03	5.044E-02	6.356E-03	0.504E-02	6.356E-03	5.044E-02	6.356E-03	5.044E-02	6.356E-03
44-BF-030	44BF_030	Baghouse - 44-BF-030	N	8760	24	0.6306	7.945E-02	2.762	7.945E-02	0.6306	7.945E-02	2.762	7.945E-02	0.6306	7.945E-02	2.762	7.945E-02	0.6306	7.945E-02	2.762	7.945E-02	0.6306	7.945E-02	0.6306	7.945E-02
44-BF-185	44BF_185	Baghouse - 44-BF-185	N	8760	24	0.1513	1.907E-02	0.663	1.907E-02	0.1513	1.907E-02	0.663	1.907E-02	0.1513	1.907E-02	0.663	1.907E-02	0.1513	1.907E-02	0.663	1.907E-02	0.1513	1.907E-02	0.1513	1.907E-02
50-BF-050	50BF_050	Baghouse - 50-BF-050	N	8760	24	0.1009	1.271E-02	0.442	1.271E-02	0.1009	1.271E-02	0.442	1.271E-02	0.1009	1.271E-02	0.442	1.271E-02	0.1009	1.271E-02	0.442	1.271E-02	0.1009	1.271E-02	0.1009	1.271E-02
50-BF-020	50BF_020	Baghouse - 50-BF-020	N	8760	24	8.829E-02	1.112E-02	0.387	1.112E-02	8.829E-02	1.112E-02	0.387	1.112E-02	8.829E-02	1.112E-02	0.387	1.112E-02	8.829E-02	1.112E-02	0.387	1.112E-02	8.829E-02	1.112E-02	8.829E-02	1.112E-02
50-BF-350	50BF_350	Baghouse - 50-BF-350	N	8760	24	0.4036	5.085E-02	1.768	5.085E-02	0.4036	5.085E-02	1.768	5.085E-02	0.4036	5.085E-02	1.768	5.085E-02	0.4036	5.085E-02	1.768	5.085E-02	0.4036	5.085E-02	0.4036	5.085E-02
51-BF-050	51BF_050	Baghouse - 51-BF-050	N	8760	24	0.3002	3.782E-02	1.315	3.782E-02	0.3002	3.782E-02	1.315	3.782E-02	0.3002	3.782E-02	1.315	3.782E-02	0.3002	3.782E-02	1.315	3.782E-02	0.3002	3.782E-02	0.3002	3.782E-02
51-BF-140	51BF_140	Baghouse - 51-BF-140	N	8760	24	0.2295	2.892E-02	1.005	2																



Table A-1. Modeled Emission Rates

EPN	Modeled Source ID	Modeled Source Description	Modeled Emission Rates															
			NO <sub>x</sub>				SO <sub>2</sub>											
			Hourly PTE (lb/hr)	(g/s)	1-Hr Modeled (lb/hr)	(g/s)	Annual Modeled (tpy)	(g/s)	Hourly PTE (lb/hr)	(g/s)	1-Hr Modeled (lb/hr)	(g/s)	3-Hr Modeled (lb/hr)	(g/s)	24-hr Modeled (lb/hr)	(g/s)	Annual Modeled (tpy)	(g/s)
21-SK-230	21SK_ON	Main Stack (Raw Mill & Kiln) - Raw Mill On	143.7356	18.1104	143.74	18.1104	368.00	10.5861	83.3250	10.4988	83.325	10.4988	83.33	10.4988	83.33	10.4988	213.31	6.1363
51-SK-250	21SK_OFF	Main Stack (Raw Mill & Kiln) - Raw Mill Off	143.7356	18.1104	143.74	18.1104	368.00	10.5861	83.3250	10.4988	83.325	10.4988	83.33	10.4988	83.33	10.4988	213.31	6.1363
10-BF-035	51SK_250	Cement Mill Stack	0.159	2.003E-02	0.159	2.003E-02	0.696	2.003E-02	9.35E-03	1.178E-03	9.35E-03	1.178E-03	9.35E-03	1.178E-03	9.35E-03	1.178E-03	4.10E-02	1.178E-03
10-BF-140	10BF_035	Baghouse - 10-BF-035																
12-BF-140	10BF_140	Baghouse - 10-BF-140																
11-BF-270	12BF_140	Baghouse - 12-BF-140																
11-BF-285	11BF_270	Baghouse - 11-BF-270																
12-BF-315	11BF_285	Baghouse - 11-BF-285																
12-BF-325	12BF_315	Baghouse - 12-BF-315																
12-BF-360	12BF_325	Baghouse - 12-BF-325																
13-BF-030	12BF_360	Baghouse - 12-BF-360																
13-BF-500	13BF_030	Baghouse - 13-BF-030																
20-BF-010	13BF_500	Baghouse - 13-BF-500																
20-BF-182	20BF_010	Baghouse - 20-BF-010																
20-BF-360	20BF_182	Baghouse - 20-BF-182																
21-BF-330	20BF_360	Baghouse - 20-BF-360																
22-BF-060	21BF_330	Baghouse - 20-BF-360																
22-BF-080	22BF_060	Baghouse - 22-BF-060																
22-BF-160	22BF_080	Baghouse - 22-BF-080																
22-BF-385	22BF_160	Baghouse - 22-BF-160																
30-BF-260	22BF_385	Baghouse - 22-BF-385																
30-BF-320	30BF_260	Baghouse - 30-BF-260																
41-BF-130	30BF_320	Baghouse - 30-BF-320																
44-BF-030	41BF_130	Baghouse - 41-BF-130																
44-BF-185	44BF_030	Baghouse - 44-BF-030																
50-BF-050	44BF_185	Baghouse - 44-BF-185																
50-BF-020	50BF_050	Baghouse - 50-BF-050																
51-BF-050	50BF_020	Baghouse - 50-BF-020																
51-BF-140	51BF_050	Baghouse - 51-BF-050																
51-BF-380	51BF_140	Baghouse - 51-BF-140																
52-BF-110	51BF_380	Baghouse - 51-BF-380																
53-BF-110	52BF_110	Baghouse - 52-BF-110																
52-BF-190	53BF_110	Baghouse - 53-BF-110																
53-BF-190	52BF_190	Baghouse - 52-BF-190																
52-BF-270	53BF_190	Baghouse - 53-BF-190																
53-BF-270	52BF_270	Baghouse - 52-BF-270																
EG-1	53BF_270	Baghouse - 53-BF-270	8.869	1.1175	0.101	1.276E-02	0.443	1.276E-02	4.29E-03	5.408E-04	4.90E-05	6.174E-06	4.292E-03	5.408E-04	4.9E-05	6.174E-06	2.15E-04	6.174E-06
LSCRSBHD_MH	EG1	Emergency Generator Engine																
	LSH_FUG	Limestone - Material Handling LS Crusher Building																
	TRK_MH	Additive - Material Handling Truck Unloading																
	RR_MH	Additive - Material Handling Rail Unloading																
	LS_STKPL	Limestone Storage (1 of 4)																
ADD_STKPL	LSS1_FUG	Limestone Storage (2 of 4)																
	LSS2_FUG	Limestone Storage (3 of 4)																
	LSS3_FUG	Limestone Storage (4 of 4)																
	AS1_FUG	Additive Storage (1 of 2)																
	NH3FUG	Additive Storage (2 of 2)																
MSSFUG	AS2_FUG	NH3 Fugitives																
	MSSFUG	ILE MSS Activities - CEMS Calibration																
	MSSVACLD	ILE MSS Activities Vacuum Truck Loading	1.90E-03	2.393E-04	1.90E-03	2.393E-04	3.47E-03	9.971E-05	2.64E-04	3.329E-05	2.64E-04	3.329E-05	2.64E-04	3.329E-05	2.64E-04	3.329E-05	4.82E-04	1.387E-05
	MSSVACUL	ILE MSS Activities Vacuum Truck Unloading																
	MSSRFAC	ILE MSS Activities - Refractory Removal																

Table A-2. Point Source Stack Parameters

Table A-2. Point Source Stack Parameters																		
EPN	Model ID	Modeled Source Description	UTM Coordinates		Base Elevation (m)	Stack Height			Stack Temp		Modeled Stack Parameter			Stack Diameter				
			Easting (m)	Northing (m)		(ft)	(m)	(°F)	(°C)	(K)	(acfm)	(m³/h)	(ft/min)	(m/s)	(inch)	(ft)	(m)	
21-SK-230	21SK_ON	Main Stack (Raw Mill & Klin) - Raw Mill On	714706.4	3713508.7	267.71	354.3	108.00	188.6	87.0	360.15	416,414	707,492	3,681	61.4	18,700	144.0	12,000	3,658
21-SK-230	21SK_OFF	Main Stack (Raw Mill & Klin) - Raw Mill Off	714706.4	3713508.7	267.71	354.3	108.00	190.4	88.0	361.15	367,034	623,595	3,244	54.1	16,482	144.0	12,000	3,658
51-SK-250	51SK_250	Cement Mill Stack	714390.4	3713297.6	265.01	200.0	60.96	213.8	101.0	374.15	96,064	163,214	3,397	56.6	17,256	72.0	6,000	1,829
10-BF-035	10BF_035	Baghouse - 10-BF-035	715126.2	3713644.6	262.44	98.4	30.00	Ambient	Ambient	0.00	31,783	54,000	3,008	50.1	15,280	44.0	3,667	1,118
10-BF-140	10BF_140	Baghouse - 10-BF-140	715130.9	3713435.9	261.61	43.3	13.20	Ambient	Ambient	0.00	5,886	10,000	2,984	49.7	15,160	19.0	1,583	0,483
12-BF-140	12BF_140	Baghouse - 12-BF-140	714517.8	3713210.5	267.34	75.5	23.00	Ambient	Ambient	0.00	5,886	10,000	2,984	49.7	15,160	19.0	1,583	0,483
11-BF-270	11BF_270	Baghouse - 11-BF-270	715099.8	3713392.1	261.72	35.1	10.70	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15,161	17.0	1,417	0,432
11-BF-285	11BF_285	Baghouse - 11-BF-285	715101.5	3713509.7	262.46	78.7	24.00	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15,161	17.0	1,417	0,432
12-BF-315	12BF_315	Baghouse - 12-BF-315	714426.7	3713433.2	265.24	110.0	33.53	Ambient	Ambient	0.00	17,657	30,000	2,974	49.6	15,109	33.0	2,750	0,838
12-BF-325	12BF_325	Baghouse - 12-BF-325	714516.4	3713432.4	266.32	75.5	23.00	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15,161	17.0	1,417	0,432
12-BF-360	12BF_360	Baghouse - 12-BF-360	714438.8	3713384.3	265.78	116.5	35.50	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16,239	13.0	1,083	0,330
13-BF-030	13BF_030	Baghouse - 13-BF-030	714967.8	3713504.3	264.72	108.3	33.00	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16,239	13.0	1,083	0,330
13-BF-500	13BF_500	Baghouse - 13-BF-500	714949.8	3713505.3	265.05	65.6	20.00	Ambient	Ambient	0.00	10,006	17,000	2,935	48.9	14,911	25.0	2,083	0,635
20-BF-010	20BF_010	Baghouse - 20-BF-010	714775.3	3713518.3	268.12	107.3	32.70	Ambient	Ambient	0.00	7,063	12,000	2,941	49.0	14,939	21.0	1,750	0,533
20-BF-182	20BF_182	Baghouse - 20-BF-182	714785.0	3713511.0	267.99	48.6	14.80	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15,161	17.0	1,417	0,432
20-BF-360	20BF_360	Baghouse - 20-BF-360	714775.3	3713518.2	268.12	48.6	14.80	Ambient	Ambient	0.00	2,649	4,500	2,877	47.9	14,615	13.0	1,083	0,330
21-BF-330	21BF_330	Baghouse - 21-BF-330	714714.2	3713503.6	267.76	109.9	33.50	Ambient	Ambient	0.00	1,766	3,000	3,237	54.0	17,446	10.0	0,833	0,254
22-BF-060	22BF_060	Baghouse - 22-BF-060	714699.6	3713497.3	267.66	275.6	84.00	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16,239	13.0	1,083	0,330
22-BF-080	22BF_080	Baghouse - 22-BF-080	714699.6	3713497.3	267.66	275.6	84.00	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16,239	13.0	1,083	0,330
22-BF-160	22BF_160	Baghouse - 22-BF-160	714699.7	3713496.8	267.66	228.3	69.60	Ambient	Ambient	0.00	8,829	15,000	3,062	51.0	15,555	23.0	1,917	0,584
22-BF-385	22BF_385	Baghouse - 22-BF-385	714699.7	3713496.8	267.66	228.3	69.60	Ambient	Ambient	0.00	2,943	5,000	3,197	53.3	16,239	13.0	1,083	0,330
30-BF-260	30BF_260	Baghouse - 30-BF-260	714699.6	3713496.8	267.66	55.0	16.76	Ambient	Ambient	0.00	4,709	8,000	2,984	49.7	15,161	17.0	1,417	0,432
30-BF-320	30BF_320	Baghouse - 30-BF-320	714699.9	3713516.8	267.60	321.5	98.00	Ambient	Ambient	0.00	2,649	4,500	2,877	47.9	14,615	13.0	1,083	0,330
42-BF-270	42BF_270	Baghouse - 42-BF-270	714598.0	3713511.4	265.90	34.4	10.50	Ambient	Ambient	0.00	3,826	6,500	3,118	52.0	15,837	15.0	1,250	0,381
44-BF-130	44BF_130	Baghouse - 44-BF-130	714668.4	3713496.5	267.29	67.3	20.50	Ambient	Ambient	0.00	1,177	2,000	3,379	56.3	17,165	8.0	0,667	0,203
44-BF-030	44BF_030	Baghouse - 44-BF-030	714504.8	3713525.4	265.05	170.0	51.82	Ambient	Ambient	0.00	14,714	25,000	2,998	50.0	15,228	30.0	2,500	0,762
44-BF-185	44BF_185	Baghouse - 44-BF-185	714448.1	3713511.8	264.86	65.6	20.00	Ambient	Ambient	0.00	3,531	6,000	2,878	48.0	14,619	15.0	1,250	0,381
50-BF-050	50BF_050	Baghouse - 50-BF-050	714448.1	3713313.4	266.06	140.0	42.67	Ambient	Ambient	0.00	2,354	4,000	2,994	49.9	15,208	12.0	1,000	0,305
50-BF-020	50BF_020	Baghouse - 50-BF-020	714438.3	3713314.3	265.90	140.0	42.67	Ambient	Ambient	0.00	2,060	3,500	3,131	52.2	15,903	11.0	0,917	0,279
50-BF-350	50BF_350	Baghouse - 50-BF-350	714426.0	3713318.1	265.71	160.0	48.77	Ambient	Ambient	0.00	9,417	16,000	2,994	49.9	15,208	24.0	2,000	0,610
51-BF-050	51BF_050	Baghouse - 51-BF-050	714410.8	3713301.3	265.28	160.0	48.77	Ambient	Ambient	0.00	7,004	11,900	2,916	48.6	14,815	21.0	1,750	0,533
51-BF-140	51BF_140	Baghouse - 51-BF-140	714410.7	3713308.3	265.33	160.0	48.77	Ambient	Ambient	0.00	5,356	9,100	3,033	50.6	15,410	18.0	1,500	0,457
51-BF-350	51BF_350	Baghouse - 51-BF-350	714413.9	3713257.1	265.03	191.3	58.30	Ambient	Ambient	0.00	2,649	4,500	2,877	47.9	14,615	13.0	1,083	0,330
51-BF-380	51BF_380	Baghouse - 51-BF-380	714401.5	3713261.1	264.93	182.1	55.50	Ambient	Ambient	0.00	3,237	5,500	3,021	50.4	15,349	14.0	1,167	0,356
52-BF-110	52BF_110	Baghouse - 52-BF-110	714413.7	3713241.9	264.93	182.1	55.50	Ambient	Ambient	0.00	10,006	17,000	2,935	48.9	14,911	25.0	2,083	0,635
53-BF-110	53BF_110	Baghouse - 53-BF-110	714414.0	3713235.6	264.90	182.1	55.50	Ambient	Ambient	0.00	9,417	16,000	2,994	49.9	15,208	24.0	2,000	0,610
52-BF-190	52BF_190	Baghouse - 52-BF-190	714413.7	3713241.8	264.93	182.1	55.50	Ambient	Ambient	0.00	3,531	6,000	2,878	48.0	14,619	15.0	1,250	0,381
53-BF-190	53BF_190	Baghouse - 53-BF-190	714414.0	3713235.6	264.90	182.1	55.50	Ambient	Ambient	0.00	3,531	6,000	2,878	48.0	14,619	15.0	1,250	0,381
52-BF-270	52BF_270	Baghouse - 52-BF-270	714413.7	3713241.9	264.93	182.1	55.50	Ambient	Ambient	0.00	2,354	4,000	2,994	49.9	15,208	12.0	1,000	0,305
53-BF-270	53BF_270	Baghouse - 53-BF-270	714414.0	3713235.6	264.90	182.1	55.50	Ambient	Ambient	0.00	2,354	4,000	2,994	49.9	15,208	12.0	1,000	0,305
EG-1	EG1	Emergency Generator Engine	714645.2	3713523.4	266.64	10.0	3.05	700.0	371.1	644.26	9,000	15,291	6,458	107.6	32,809	16.0	1,333	0,406
MSS_FUG	MSS/VACLD	TLE MSS Activities Vacuum Truck Loading	714660.0	3713465.0	267.36	12.0	3.66	Ambient	Ambient	0.00	6,000	10,194	7,629	127.2	38,757	12.0	1,000	0,305

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Table A-3. Volume Source Parameters

TABLE A-31. VOLUME SOURCE PARAMETERS																							
EPN	Model ID	Description	UTM Coordinates		Elevation (m)	Minimum Source Height		Maximum Sources Height		Sources Vertical Dim. (m)	Modeled Source Height (m)	Source Length		Source Width		Eq. Side Length of Square (m)	Volume Source Type $\alpha_v$	Initial Lat. Dim. ( $\alpha_l$ ) <sup>1</sup>		Adjacent Building Height		Volume Source Type $\alpha_z$	Initial Vert. Dim. ( $\alpha_z$ ) <sup>2</sup>
			East (m)	North (m)		(ft)	(m)	(ft)	(m)			(ft)	(m)	(ft)	(m)			(ft)	(m)				
LSCSHBD_MH	LSH_FUG	Limestone - Material Handling LS Crusher Building	715157.3	3713634.9	261.43	2.78	0.85	32.98	10.05	9.20	5.45	20.0	6.10	20.0	6.10	6.10	Single Volume Source	1.42				Elevated Source not on or adjacent to Building	2.14
	ADD_TRKHWH	Additive - Material Handling Truck Unloading	714412.3	3713428.9	265.13	1.00	0.30	15.00	4.57	4.27	2.44	15.0	4.57	15.0	4.57	4.57	Single Volume Source	1.06				Elevated Source not on or adjacent to Building	0.99
	ADD_RRHWH	Additive - Material Handling Rail Unloading	714512.9	3713204.6	267.19	1.00	0.30	2.00	0.61	0.31	0.46	15.0	4.57	15.0	4.57	4.57	Single Volume Source	1.06				Elevated Source not on or adjacent to Building	0.07
LS_STKPL	LS51_FUG	Limestone Storage (1 of 4)	714857.3	3713411.5	265.66	0.50	0.15	73.73	22.47	22.32	11.31	178.0	54.25	168.0	51.21	52.71	Multiple Adjacent Volume Sources	24.52		73.73	22.47	Elevated Source on or Adjacent to a Building	10.45
	LS52_FUG	Limestone Storage (2 of 4)	714911.8	3713412.5	264.92	0.50	0.15	73.73	22.47	22.32	11.31	178.0	54.25	168.0	51.21	52.71	Multiple Adjacent Volume Sources	24.52		73.73	22.47	Elevated Source on or Adjacent to a Building	10.45
	LS53_FUG	Limestone Storage (3 of 4)	714966.3	3713413.5	264.06	0.50	0.15	73.73	22.47	22.32	11.31	178.0	54.25	168.0	51.21	52.71	Multiple Adjacent Volume Sources	24.52		73.73	22.47	Elevated Source on or Adjacent to a Building	10.45
	LS54_FUG	Limestone Storage (4 of 4)	715020.8	3713414.5	262.53	0.50	0.15	76.15	23.21	23.06	11.68	178.0	54.25	168.0	51.21	52.71	Multiple Adjacent Volume Sources	24.52		76.15	23.21	Elevated Source on or Adjacent to a Building	10.80
ADD_STKPL	AS1_FUG	Additive Storage (1 of 2)	714662.0	3713410.5	268.01	0.50	0.15	76.15	23.21	23.06	11.68	203.0	61.87	180.0	54.86	58.26	Multiple Adjacent Volume Sources	27.10		76.15	23.21	Elevated Source on or Adjacent to a Building	10.80
	AS2_FUG	Additive Storage (2 of 2)	714724.0	3713411.5	268.00	0.50	0.15	76.15	23.21	23.06	11.68	203.0	61.87	180.0	54.86	58.26	Multiple Adjacent Volume Sources	27.10		76.15	23.21	Elevated Source on or Adjacent to a Building	10.80
NH3FUG	NH3FUG	NH3 Fugitives	714611.6	3713551.9	265.53	1.00	0.30	11.00	3.35	3.05	1.83	10.0	3.05	10.0	3.05	3.05	Single Volume Source	0.71				Elevated Source not on or adjacent to Building	0.71
	MSSRFUG	ILE MSS Activities - CEMS Calibration	714659.2	3713519.2	266.98	1.00	0.30	11.00	3.35	3.05	1.83	10.0	3.05	10.0	3.05	3.05	Single Volume Source	0.71				Elevated Source not on or adjacent to Building	0.71
MSSFUG	MSSVAQUL	ILE MSS Activities Vacuum Truck Unloading Fugitives	715157.3	3713634.9	261.43	2.78	0.85	32.98	10.05	9.20	5.45	20.0	6.10	20.0	6.10	6.10	Single Volume Source	1.42				Elevated Source not on or adjacent to Building	2.14
	MSSRFAC	ILE MSS Activities - Refractory Removal	714659.2	3713519.2	266.98	0.00	0.00	30.00	9.14	9.14	4.57	50.0	15.24	50.0	15.24	15.24	Single Volume Source	3.54				Single Surface-Based Volume Source	4.25

<sup>1</sup>For single volume sources, the initial lateral dimension is equal to the equivalent side length of a square/4.3. For multiple adjacent volume sources, the initial lateral dimension is equal to the equivalent side length of a square/2.15.<sup>2</sup>For an elevated volume source adjacent to a building, the initial vertical dimension is equal to the adjacent building height/2.15. For an elevated volume source not adjacent to a building, the initial vertical dimension is equal to the source vertical dimension/4.3.

For a surface-based volume source, the initial vertical dimension is equal to the source vertical dimension/2.15.

## **APPENDIX B. OFF PROPERTY INVENTORY**

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Table B-1. Off-Property Inventory Review Summary

RN	Company/Site Name	Distance From Project <sup>1,2</sup>	Summary of Permit Review
RN100217223	SUNNY DELIGHT BEVERAGES	9 km	Emissions from the site are only authorized by PBR and the site is not listed in APAD or the 2019 STARS data. Emissions accounted for in the background.
RN100603737	AIR LIQUIDE ELECTRONICS	7.5 km	The MAERT dated December 1, 2008 does not list any permitted source of NO <sub>x</sub> , SO <sub>2</sub> , or PM <sub>10</sub> /PM <sub>2.5</sub> emissions.
RN100671619	CERTAINTED PLANT	8 km	See Permit Search
RN100739929	GLOBITECH	9 km	See Permit Search
RN100858299	FINISAR SHERMAN	7.5 km	Emissions from the site are only authorized by PBR and the site is not listed in APAD or the 2019 STARS data. Emissions accounted for in the background.
RN100954346	QUALITY GRAIN ELEVATOR	1.2 km	See Permit Search. Emissions were updated based on a review of TCEQ records.
RN101469237	KAISER ALUMINUM FABRICATED PRODUCTS	9 km	See Permit Search
RN103064853	TEXAS INSTRUMENTS SHERMAN	7.5 km	See Permit Search
RN106831423	PANDA SHERMAN POWER STATION	8.00 km	See Permit Search
RN100959089	BRAMER SUPPLY INC	11.6 km	A review of TCEQ records and Google Earth shows that this site has been shut down.

1. Project Radius of Impacts measured from UTM coordinates: 714706.4 m Easting, 3713508.7 m Northing, Zone 14.

1-hour NO<sub>2</sub> = 8.28 km  
 1-hour SO<sub>2</sub> = 4.04 km  
 24-hour PM<sub>2.5</sub> NAAQS = 6.00 km  
 24-hour PM<sub>2.5</sub> PSD Inc. = 9.58 km  
 Annual PM<sub>2.5</sub> = 6.46 km  
 24-hour PM<sub>10</sub> = 1.78 km  
 Annual PM<sub>10</sub> = 1.70 km

2. The next closest source based on the APAD data is over 12.5 km from the proposed site.





Table B-2. Off-property Modeling Inventory Permit Search

Table B-2. Off-Property Modeling Inventory Permit Search																										
EPN	PERMIT	RN	RN+EPN	SITE	COMPANY	EPN Description	TYPE	EPN	UTM SOURCE	UTM EAST (m)	UTM NORTH (m)	Release Height (m)	Diameter (m)	Est. Vel (m/sec)	Temp (Deg F)	Exhaust Horizontal Dimension (ft)	Exhaust Vertical Dimension (ft)	Capad or Observed Discharge (gpm)	ISO PTE Hourly Annual (TPY)	NOx PTE Hourly Annual (TPY)	PM10 PTE Hourly Annual (TPY)	PM2.5 PTE Hourly Annual (TPY)				
B21	S261	RN10364653	RN10364653E21	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	21,000 MUFFIN/Bader	Point	B21	14	721241.1	3715415.9	67.25	2.00	7.00	185.00	-	-	-	0.03	0.66	1.50	3.37	0.30	1.31	0.20	0.70
B22	S261	RN10364653	RN10364653E22	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	21,000 MUFFIN/Bader	Point	B22	14	721241.1	3715405.9	67.25	2.00	7.00	185.00	-	-	-	0.03	0.66	1.50	3.37	0.30	1.31	0.30	0.70
B23	S261	RN10364653	RN10364653E23	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	21,000 MUFFIN/Bader	Point	B23	14	721241.1	3715406.0	67.25	2.00	7.00	185.00	-	-	-	0.03	0.66	1.50	3.37	0.30	1.31	0.30	0.70
B24	S261	RN10364653	RN10364653E24	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 MUFFIN/Bader	Point	B24	14	721233.7	3715407.7	67.25	1.17	7.00	185.00	-	-	-	0.01	0.01	0.36	0.80	0.07	0.31	0.07	0.17
B25	S261	RN10364653	RN10364653E25	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 MUFFIN/Bader	Point	B25	14	721233.7	3715466.1	67.25	1.17	7.00	185.00	-	-	-	0.01	0.01	0.36	0.80	0.07	0.31	0.07	0.17
B26	S261	RN10364653	RN10364653E26	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 MUFFIN/Bader	Point	B26	14	721233.7	3715404.5	67.25	1.17	7.00	185.00	-	-	-	0.01	0.01	0.36	0.80	0.07	0.31	0.07	0.17
B27	S261	RN10364653	RN10364653E27	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 MUFFIN/Bader	Point	B27	14	721233.7	3715403.0	67.25	1.17	7.00	185.00	-	-	-	0.01	0.01	0.36	0.80	0.07	0.31	0.07	0.17
B28	S261	RN10364653	RN10364653E28	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 MUFFIN/Bader	Point	B28	14	721233.7	3715401.5	67.25	1.17	7.00	185.00	-	-	-	0.01	0.01	0.36	0.80	0.07	0.31	0.07	0.17
V01B	S261	RN10364653	RN10364653V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	14	721233.7	3715408.0	67.25	1.17	7.00	185.00	-	-	-	0.01	0.01	0.36	0.80	0.07	0.31	0.07	0.17
V02B	S261	RN10364653	RN10364653V02B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V02B	14	721233.7	3715408.0	67.25	1.17	7.00	185.00	-	-	-	0.01	0.01	0.36	0.80	0.07	0.31	0.07	0.17
V03B	S261	RN10364653	RN10364653V03B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V03B	14	721238.9	3715471.3	66.50	1.17	58.00	720.00	-	-	-	0.00	0.01	0.78	3.44	0.02	0.10	0.02	0.10
V04B	S261	RN10364653	RN10364653V04B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V04B	14	721238.9	3715471.3	66.50	1.17	58.00	720.00	-	-	-	0.00	0.01	0.78	3.44	0.02	0.10	0.02	0.10
C011	S261	RN10364653	RN10364653C011	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Ammonia Stack	Point	C011	14	721238.3	3715471.3	66.50	3.67	35.00	75.00	-	-	-	0.05	0.20	0.05	0.20	0.05	0.12	0.05	0.12
C012	S261	RN10364653	RN10364653C012	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Ammonia Stack	Point	C012	14	721238.8	3716012.2	65.00	3.67	35.00	75.00	-	-	-	0.05	0.20	0.05	0.20	0.05	0.12	0.05	0.12
C013	S261	RN10364653	RN10364653C013	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Ammonia Stack	Point	C013	14	721237.0	3716012.2	65.00	3.67	25.00	75.00	-	-	-	0.05	0.20	0.05	0.20	0.05	0.12	0.05	0.12
C014	S261	RN10364653	RN10364653C014	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Ammonia Stack	Point	C014	14	721237.3	3716012.2	65.00	3.67	25.00	75.00	-	-	-	0.05	0.20	0.05	0.20	0.05	0.12	0.05	0.12
C021	S261	RN10364653	RN10364653C021	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Ammonia Stack	Point	C021	14	721238.2	3715406.0	65.00	3.67	35.00	75.00	-	-	-	0.05	0.20	0.05	0.20	0.05	0.12	0.05	0.12
C022	S261	RN10364653	RN10364653C022	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Ammonia Stack	Point	C022	14	721238.5	3715406.0	65.00	3.67	35.00	75.00	-	-	-	0.05	0.20	0.05	0.20	0.05	0.12	0.05	0.12
C023	S261	RN10364653	RN10364653C023	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Ammonia Stack	Point	C023	14	721237.8	3715406.0	65.00	3.67	35.00	75.00	-	-	-	0.05	0.20	0.05	0.20	0.05	0.12	0.05	0.12
C024	S261	RN10364653	RN10364653C024	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Ammonia Stack	Point	C024	14	721238.2	3715406.0	65.00	3.67	35.00	75.00	-	-	-	0.05	0.20	0.05	0.20	0.05	0.12	0.05	0.12
A011	S261	RN10364653	RN10364653A011	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A011	14	721238.9	3716012.2	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A012	S261	RN10364653	RN10364653A012	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A012	14	721238.3	3716012.2	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A013	S261	RN10364653	RN10364653A013	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A013	14	721231.5	3716012.2	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A014	S261	RN10364653	RN10364653A014	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A014	14	721228.9	3716012.2	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A015	S261	RN10364653	RN10364653A015	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A015	14	721238.2	3716012.2	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A016	S261	RN10364653	RN10364653A016	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A016	14	721235.5	3716012.2	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A017	S261	RN10364653	RN10364653A017	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A017	14	721234.8	3716012.2	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A018	S261	RN10364653	RN10364653A018	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A018	14	721235.6	3716012.2	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A021	S261	RN10364653	RN10364653A021	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A021	14	721231.8	3715406.0	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A022	S261	RN10364653	RN10364653A022	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A022	14	721239.1	3715406.0	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A023	S261	RN10364653	RN10364653A023	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A023	14	721231.8	3715406.0	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A024	S261	RN10364653	RN10364653A024	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A024	14	721232.9	3715406.0	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A025	S261	RN10364653	RN10364653A025	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A025	14	721232.0	3715406.0	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A026	S261	RN10364653	RN10364653A026	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A026	14	721238.4	3715406.0	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A027	S261	RN10364653	RN10364653A027	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A027	14	721234.8	3715406.0	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
A028	S261	RN10364653	RN10364653A028	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Add Stack	Point	A028	14	721235.0	3715406.0	65.00	4.00	46.67	75.00	-	-	-	0.11	0.47	0.11	0.47	0.11	0.47	0.11	0.47
CT011	S261	RN10364653	RN10364653CT011	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SMI Cooling Tower - Cell 1	Point	CT011	14	721235.0	3716048.8	50.00	19.00	34.44	Ambient	-	-	-	0.02	0.11	0.00	0.11	0.00	0.00	0.00	0.00
CT012	S261	RN10364653	RN10364653CT012	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SMI Cooling Tower - Cell 2	Point	CT012	14	721227.5	3716048.8	50.00	19.00	34.44	Ambient	-	-	-	0.02	0.11	0.00	0.11	0.00	0.00	0.00	0.00
CT013	S261	RN10364653	RN10364653CT013	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SMI Cooling Tower - Cell 3	Point	CT013	14	721227.5	3716048.8	50.00	19.00	34.44	Ambient	-	-	-	0.02	0.11	0.00	0.11	0.00	0.00	0.00	0.00

Table B-2. Off-Property Modeling Inventory Permit Search

Table B-2. On-property Modeling Inventory Permit Search																										
EPN	PERMIT	RN	RN-EPN	SITE	COMPANY	EPN Description	TYPE	EPN	UTM ZONE	UTM EAST (m)	UTM NORTH (m)	Release Height (ft)	Diameter (in)	Exit Temp (°F)	Initial Horizontal Dimension (ft)	Total Horizontal Dimension (ft)	Capped or Horizontal Discharge?	SO <sub>2</sub> PTE (lb/yr)	NO <sub>x</sub> PTE (TPY)	PM <sub>10</sub> PTE (lb/yr)	PM <sub>2.5</sub> PTE (lb/yr)	Annual (TPY)	Hourly (24-hr) (lb/hr)			
CT104	S261	RN103064653	RN103064653CT104	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH1 Cooling Tower - Cell 4	Point	CT104	14	721281.7	3716048.8	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT105	S261	RN103064653	RN103064653CT105	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH1 Cooling Tower - Cell 5	Point	CT105	14	721286.6	3716048.8	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT106	S261	RN103064653	RN103064653CT106	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH1 Cooling Tower - Cell 6	Point	CT106	14	721297.3	3716048.8	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT107	S261	RN103064653	RN103064653CT107	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH1 Cooling Tower - Cell 7	Point	CT107	14	721285.5	3716029.5	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT108	S261	RN103064653	RN103064653CT108	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH1 Cooling Tower - Cell 8	Point	CT108	14	721272.5	3716029.5	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT109	S261	RN103064653	RN103064653CT109	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH1 Cooling Tower - Cell 9	Point	CT109	14	721281.7	3716029.5	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT110	S261	RN103064653	RN103064653CT110	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH1 Cooling Tower - Cell 10	Point	CT110	14	721288.6	3716029.5	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT111	S261	RN103064653	RN103064653CT111	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH1 Cooling Tower - Cell 11	Point	CT111	14	721297.3	3716029.5	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT201	S261	RN103064653	RN103064653CT201	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 1	Point	CT201	14	721285.5	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT202	S261	RN103064653	RN103064653CT202	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 2	Point	CT202	14	721272.5	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT203	S261	RN103064653	RN103064653CT203	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 3	Point	CT203	14	721281.7	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT204	S261	RN103064653	RN103064653CT204	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 4	Point	CT204	14	721288.6	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT205	S261	RN103064653	RN103064653CT205	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 5	Point	CT205	14	721297.3	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT206	S261	RN103064653	RN103064653CT206	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 6	Point	CT206	14	721285.5	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT207	S261	RN103064653	RN103064653CT207	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 7	Point	CT207	14	721285.5	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT208	S261	RN103064653	RN103064653CT208	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 8	Point	CT208	14	721272.5	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT209	S261	RN103064653	RN103064653CT209	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 9	Point	CT209	14	721281.7	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT210	S261	RN103064653	RN103064653CT210	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 10	Point	CT210	14	721288.6	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
CT211	S261	RN103064653	RN103064653CT211	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SH2 Cooling Tower - Cell 11	Point	CT211	14	721297.3	3715413.7	50.00	19.00	34.44	Ambient	—	—	—	—	—	—	—	0.02	0.11	0.00	0.00
4-02	S261	RN103064653	RN103064653-02	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	WB-H - Boiler 1	Point	4-02	14	721281.0	3716465.0	26.00	2.00	1.25	220.00	—	—	Capped	0.02	0.03	2.15	2.12	0.18	0.78	0.18	0.78
4-03	S261	RN103064653	RN103064653-03	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	WB-S - Boiler 2	Point	4-03	14	721281.0	3716465.0	26.00	1.70	1.68	220.00	—	—	Capped	0.02	0.03	2.15	2.12	0.18	0.78	0.18	0.78
EB-H	S261	RN103064653	RN103064653EB-H	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	EB-H - Boiler 3	Point	EB-H	14	722271.0	3716603.0	26.00	2.00	2.50	200.00	—	—	Capped	0.02	0.04	2.81	2.77	0.23	0.93	0.23	1.03
EB-S	S261	RN103064653	RN103064653EB-S	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	EB-S - Boiler 4	Point	EB-S	14	722271.0	3716580.0	26.00	2.00	2.50	200.00	—	—	Capped	0.02	0.04	2.81	2.77	0.23	0.93	0.23	1.03
1-21	S261	RN103064653	RN103064653-21	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Rotary Concentrator/Thermal Oxidizer	Point	1-21	14	722127.0	3716580.0	60.00	6.00	106.10	75.00	—	—	—	0.00	0.01	0.60	2.63	0.02	0.10	0.02	0.10
1-71	S261	RN103064653	RN103064653-71	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	BB Diesel Generator	Point	1-71	14	722250.1	3716582.0	50.00	0.03	131.66	575.00	—	—	—	0.01	0.08	8.78	0.44	0.27	0.01	0.27	0.01
WB06	S261	RN103064653	RN103064653WB06	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	WB Diesel Generator	Point	WB06	14	721501.9	3716516.9	20.40	0.50	133.85	575.00	—	—	Horizontal	0.01	0.09	8.78	0.44	0.27	0.01	0.27	0.01
3-40	S261	RN103064653	RN103064653-40	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SB Diesel Generator	Point	3-40	14	721586.0	3716411.0	9.00	0.67	131.36	575.00	—	—	—	0.01	0.06	9.82	0.49	0.30	0.02	0.30	0.02
1-72	S261	RN103064653	RN103064653-72	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	SB Scrubber and Diesel Generator	Point	1-72	14	722138.0	3716541.0	12.50	0.50	133.85	575.00	—	—	—	0.01	0.06	9.75	0.49	0.30	0.02	0.30	0.02
1-70	S261	RN103064653	RN103064653-70	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	Diesel Fire Pump	Point	1-70	14	722334.0	3716584.5	12.80	0.40	437.68	575.00	—	—	Horizontal	0.00	0.00	8.64	0.44	0.63	0.03	0.63	0.03



Table B-2. Off-Property Modeling Inventory Permit Search

Table B-2. Off-Property Modeling Inventory Permit Search																				
EPN	PMO#ET	IN	RI+EPN	SITE	COMPANY	EPN Description	TYPE	EPN	ISO Eff Annual (#/hr)	ISO Eff Annual (#/hr)	ISO Eff Annual (#/hr)	ISO Eff Annual (#/hr)	ISO Eff Annual (#/hr)	PMO Diff Annual (#/hr)	PMO Diff Annual (#/hr)	PMO Diff Annual (#/hr)	PMO Diff Annual (#/hr)	PMO Diff Annual (#/hr)	PMO Diff Annual (#/hr)	PMO Diff Annual (#/hr)
B21	S261	RI10364563	RI10364563B21	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	21,000 HETU/h/Bar	Point	B21	0.03	0.06	New Source	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B22	S261	RI10364563	RI10364563B22	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	21,000 HETU/h/Bar	Point	B22	0.03	0.06	New Source	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B23	S261	RI10364563	RI10364563B23	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	21,000 HETU/h/Bar	Point	B23	0.03	0.06	New Source	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B24	S261	RI10364563	RI10364563B24	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 HETU/h/Bar	Point	B24	0.01	0.01	New Source	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B25	S261	RI10364563	RI10364563B25	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 HETU/h/Bar	Point	B25	0.01	0.01	New Source	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B26	S261	RI10364563	RI10364563B26	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 HETU/h/Bar	Point	B26	0.01	0.01	New Source	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B27	S261	RI10364563	RI10364563B27	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 HETU/h/Bar	Point	B27	0.01	0.01	New Source	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B28	S261	RI10364563	RI10364563B28	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 HETU/h/Bar	Point	B28	0.01	0.01	New Source	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B29	S261	RI10364563	RI10364563B29	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	5,000 HETU/h/Bar	Point	B29	0.01	0.01	New Source	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00	0.00	New Source	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
V01B	S261	RI10364563	RI10364563V01B	TEXAS INSTRUMENTS SHERMAN	TEXAS INSTRUMENTS INCORPORATED	RCTO Stack	Point	V01B	0.00											





[illegible]



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Table B-3. *contemporary Modeling Inventory*[illegible]

[illegible]





## APPENDIX C. MODELING RESULTS

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Table C-1. PSD Class II SIL Analysis Results

Pollutant	Averaging Period	Modeled Year	Description	Modeled GLCmax (µg/m³)		Secondary PM <sub>2.5</sub> Concentration <sup>1</sup> (µg/m³)	Total Concentration <sup>2</sup> (µg/m³)	Significant Impacts Level (SIL) <sup>3</sup> (µg/m³)	Below SIL?	ROI <sup>4</sup> (km)	Significant Monitoring Concentrations (SMC) <sup>3</sup> (µg/m³)	Below SMC?
				RM_ON	RM_OFF							
NO <sub>2</sub> <sup>5</sup>	1-hr	2017-21	Project Only (H1H averaged over 5 years)	16.50	18.89	--	18.89	7.5	No	8.28	--	--
	Annual	2017	Project Only (H1H)	0.349	0.386	--	0.39	1	Yes	--	14	Yes
		2018	Project Only (H1H)	0.350	0.385	--	0.38	1	Yes	--	14	Yes
		2019	Project Only (H1H)	0.385	0.427	--	0.43	1	Yes	--	14	Yes
		2020	Project Only (H1H)	0.343	0.382	--	0.38	1	Yes	--	14	Yes
		2021	Project Only (H1H)	0.357	0.393	--	0.39	1	Yes	--	14	Yes
CO	1-hr	2017-21	Project Only (H1H across 5 years)	769.2	769.2	--	769.17	2,000	Yes	--	--	--
	8-hr	2017-21	Project Only (H1H across 5 years)	275.9	275.9	--	275.90	500	Yes	--	575	Yes
SO <sub>2</sub>	1-hr	2017-21	Project Only (H1H averaged over 5 years)	10.60	12.14	--	12.14	7.8	No	4.04	--	--
	3-hr	2017-21	Project Only (H1H across 5 years)	10.22	11.64	--	11.64	25	Yes	--	--	--
	24-hr	2017-21	Project Only (H1H across 5 years)	4.03	4.48	--	4.48	5	Yes	--	13	Yes
	Annual	2017	Project Only (H1H)	0.21	0.24	--	0.24	1	Yes	--	--	--
		2018	Project Only (H1H)	0.21	0.23	--	0.23	1	Yes	--	--	--
		2019	Project Only (H1H)	0.24	0.26	--	0.26	1	Yes	--	--	--
		2020	Project Only (H1H)	0.21	0.23	--	0.23	1	Yes	--	--	--
	2021	Project Only (H1H)	0.21	0.24	--	0.24	1	Yes	--	--	--	
PM <sub>2.5</sub> (NAAQS)	24-hr	2017-21	Project Only (H1H averaged over 5 years)	7.207	7.209	0.189	7.40	1.2	No	6.00	0	No
PM <sub>2.5</sub> (PSD Inc.)	Annual	2017-21	Project Only (H1H across 5 years)	2.453	2.454	0.002	2.46	0.2	No	6.00	--	--
	24-hr	2017-21	Project Only (H1H across 5 years)	8.687	8.691	0.189	8.88	1.2	No	9.58	--	--
	Annual	2017	Project Only (H1H)	2.360	2.361	0.002	2.36	0.2	No	5.34	--	--
		2018	Project Only (H1H)	2.434	2.435	0.002	2.44	0.2	No	5.81	--	--
		2019	Project Only (H1H)	2.448	2.449	0.002	2.45	0.2	No	6.46	--	--
		2020	Project Only (H1H)	2.411	2.413	0.002	2.42	0.2	No	5.54	--	--
PM <sub>10</sub>	24-hr	2021	Project Only (H1H)	2.686	2.688	0.002	2.69	0.2	No	6.00	--	--
		2017-21	Project Only (H1H across 5 years)	10.079	10.079	--	10.08	5	No	1.78	10	No
	Annual	2017	Project Only (H1H)	2.514	2.515	--	2.52	1	No	1.43	--	--
		2018	Project Only (H1H)	2.587	2.588	--	2.59	1	No	1.52	--	--
		2019	Project Only (H1H)	2.591	2.592	--	2.59	1	No	1.70	--	--
		2020	Project Only (H1H)	2.559	2.561	--	2.56	1	No	1.52	--	--
2021	Project Only (H1H)	2.886	2.888	--	2.89	1	No	1.65	--	--		

<sup>1</sup> Secondary PM<sub>2.5</sub> concentrations are estimated using TCEQ's Air Quality Modeling Guidelines (APDQ 6232), Appendix D, which is based on EPA's Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program. EPA-454/R-19-003, April 2019.

<sup>2</sup> Total concentration is the sum of the modeled concentration and secondary PM<sub>2.5</sub> concentration, as applicable.

<sup>3</sup> Air Quality Modeling Guidelines, Table B-1, APDQ 6232, November 2019.

<sup>4</sup> Radius of Impact (ROI) is measured from UTM coordinates: 714706.4 m Easting, 3713508.7 m Northing, Zone 14.

<sup>5</sup> AERMOD's Ambient Ratio Method 2 (ARM2) Option is used to output NO<sub>2</sub> impacts from modeled NO<sub>x</sub> emissions.

Table C-2. NAAQS Analysis Results

Pollutant <sup>1</sup>	Averaging Period <sup>1</sup>	Modeled Year	Modeled Source Group	Description	Modeled GLC <sub>max</sub> (µg/m <sup>3</sup> )	Secondary PM <sub>2.5</sub> Concentration <sup>2</sup> (µg/m <sup>3</sup> )	Background Concentration <sup>3</sup> (µg/m <sup>3</sup> )	Combined Maximum Impact <sup>4</sup> (µg/m <sup>3</sup> )	NAAQS (µg/m <sup>3</sup> )	Below NAAQS?
NO <sub>2</sub> <sup>5</sup>	1-hr	2017-21	ALL	Project plus Inventory Sources (H8H averaged of 5-years)	40.5	--	46.4	86.9	188	Yes
SO <sub>2</sub>	1-hr	2017-21	ALL	Project plus Inventory Sources (H4H averaged of 5-years)	10.72	--	15.7	26.4	196	Yes
PM <sub>2.5</sub>	24-hr	2017-21	ALL	Project plus Inventory Sources (H8H averaged of 5-years)	5.73	0.189	20.0	25.9	35	Yes
	Annual	2017-21	ALL	Project plus Inventory Sources (averaged of 5-years)	2.60	0.002	7.5	10.1	12	Yes
PM <sub>10</sub>	24-hr	2017-21	ALL	Project plus Inventory Sources (H1H across 5-years)	10.27	--	82.0	92.3	150	Yes

<sup>1</sup> A NAAQS analysis is only required for pollutants and averaging periods with impacts in the Significant Analysis that are greater than or equal to the corresponding SIL.

<sup>2</sup> Secondary PM<sub>2.5</sub> concentrations are estimated using TCEQ's Air Quality Modeling Guidelines (APDQ 6232), Appendix D, which is based on EPA's *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program*. EPA-454/R-19-003, April 2019.

<sup>3</sup> The background concentrations are based on conservative ambient monitoring data for 2020, 2021, and 2022 for NO<sub>2</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>, and 2019, 2020, and 2021 for SO<sub>2</sub>. SO<sub>2</sub> data are obtained from the Midlothian OFW Monitor (EPA ID: 48-139-0016). PM<sub>2.5</sub> data are obtained from the Denton Airport South (EPA ID 48-121-0034). PM<sub>10</sub> data are obtained from the Convention Center Monitor (EPA ID 48-113-0050). NO<sub>2</sub> data are obtained from Denton Airport South Monitor (EPA ID 48-121-0034). The listed background NO<sub>2</sub> concentration is based on the 98<sup>th</sup> percentile design values by hour-of-day. The calculation details are listed below:

	Modeled GLC <sub>max</sub> (µg/m <sup>3</sup> )	Background Concentration (µg/m <sup>3</sup> )	Combined Maximum Impact (µg/m <sup>3</sup> )	Date (YYYYMMDDHH)
Year 1 - 2017	29.6	51.9	81.5	17052922
Year 2 - 2018	31.6	46.6	78.2	18082224
Year 3 - 2019	46.8	45.3	92.1	19011801
Year 4 - 2020	48.6	42.9	91.5	20070706
Year 5 - 2021	45.8	45.3	91.1	21012301
5-Year Average (2017-2021)	40.5	46.4	86.9	

<sup>4</sup> The combined maximum impact includes impacts from modeled sources (including secondary PM<sub>2.5</sub>, as appropriate) plus the background concentration.

<sup>5</sup> AERMOD's Ambient Ratio Method 2 (ARM2) Option is used to output NO<sub>2</sub> impacts from modeled NO<sub>x</sub> emissions.

Table C-3. PSD Class II Increment Analysis Results

Pollutant	Averaging Period	Modeled Year	Modeled Source Group	Description	Modeled GLC <sub>max</sub> (µg/m <sup>3</sup> )	Secondary PM <sub>2.5</sub> Concentration <sup>1</sup> (µg/m <sup>3</sup> )	Total Concentration <sup>2</sup> (µg/m <sup>3</sup> )	PSD Class II Increment <sup>3</sup> (µg/m <sup>3</sup> )	Below Increment?
PM <sub>2.5</sub>	24-hr	2017	ALL	Project plus PSD Increment Inventory Sources (H2H)	6.65	0.189	6.84	9	Yes
		2018	ALL	Project plus PSD Increment Inventory Sources (H2H)	7.87	0.189	8.06	9	Yes
		2019	ALL	Project plus PSD Increment Inventory Sources (H2H)	6.54	0.189	6.73	9	Yes
		2020	ALL	Project plus PSD Increment Inventory Sources (H2H)	8.48	0.189	8.67	9	Yes
		2021	ALL	Project plus PSD Increment Inventory Sources (H2H)	8.53	0.189	8.72	9	Yes
	Annual	2017	ALL	Project plus PSD Increment Inventory Sources	2.41	0.002	2.42	4	Yes
		2018	ALL	Project plus PSD Increment Inventory Sources	2.49	0.002	2.49	4	Yes
		2019	ALL	Project plus PSD Increment Inventory Sources	2.50	0.002	2.50	4	Yes
		2020	ALL	Project plus PSD Increment Inventory Sources	2.47	0.002	2.48	4	Yes
		2021	ALL	Project plus PSD Increment Inventory Sources	2.74	0.002	2.74	4	Yes
PM <sub>10</sub>	24-hr	2017	ALL	Project plus Inventory Sources (H2H)	21.36	--	21.36	30	Yes
		2018	ALL	Project plus Inventory Sources (H2H)	27.96	--	27.96	30	Yes
		2019	ALL	Project plus Inventory Sources (H2H)	24.40	--	24.40	30	Yes
		2020	ALL	Project plus Inventory Sources (H2H)	28.71	--	28.71	30	Yes
		2021	ALL	Project plus Inventory Sources (H2H)	26.13	--	26.13	30	Yes
	Annual	2017	ALL	Project plus Inventory Sources	2.58	--	2.58	17	Yes
		2018	ALL	Project plus Inventory Sources	2.65	--	2.65	17	Yes
		2019	ALL	Project plus Inventory Sources	2.65	--	2.65	17	Yes
		2020	ALL	Project plus Inventory Sources	2.63	--	2.63	17	Yes
		2021	ALL	Project plus Inventory Sources	2.89	--	2.89	17	Yes

<sup>1</sup> Secondary PM<sub>2.5</sub> concentrations are estimated using TCEQ's Air Quality Modeling Guidelines (APDG 6232), Appendix D, which is based on EPA's Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program. EPA-454/R-19-003, April 2019.

<sup>2</sup> Total concentration is the sum of the modeled concentration and secondary PM<sub>2.5</sub> concentration, as applicable.

<sup>3</sup> Air Quality Modeling Guidelines, Table B-1, APDG 6232, November 2019.

<sup>4</sup> AERMOD's Ambient Ratio Method 2 (ARM2) Option is used to output NO<sub>2</sub> impacts from modeled NO<sub>x</sub> emissions.



Table C-4. PSD Class I SIL Analysis Results

Pollutant	Averaging Period	Modeled Year	Modeled Source Group	Description	Modeled GLC <sub>max</sub> (µg/m <sup>3</sup> )	Secondary PM <sub>2.5</sub> Concentration <sup>1</sup> (µg/m <sup>3</sup> )	Total Concentration <sup>2</sup> (µg/m <sup>3</sup> )	Significant Impacts Level (SIL) <sup>3</sup> (µg/m <sup>3</sup> )	Below SIL?
NO <sub>2</sub> <sup>4</sup>	Annual	2017	RM_ON	Project Only (H1H)	0.01909	--	0.02	0.1	Yes
		2018	RM_ON	Project Only (H1H)	0.01963	--	0.02	0.1	Yes
		2019	RM_ON	Project Only (H1H)	0.01881	--	0.02	0.1	Yes
		2020	RM_ON	Project Only (H1H)	0.01736	--	0.02	0.1	Yes
		2021	RM_ON	Project Only (H1H)	0.01965	--	0.02	0.1	Yes
NO <sub>2</sub> <sup>4</sup>	Annual	2017	RM_OFF	Project Only (H1H)	0.01959	--	0.02	0.1	Yes
		2018	RM_OFF	Project Only (H1H)	0.02012	--	0.02	0.1	Yes
		2019	RM_OFF	Project Only (H1H)	0.01933	--	0.02	0.1	Yes
		2020	RM_OFF	Project Only (H1H)	0.01772	--	0.02	0.1	Yes
		2021	RM_OFF	Project Only (H1H)	0.02015	--	0.02	0.1	Yes
SO <sub>2</sub>	3-hr	2017-2021	RM_OFF	Project Only (H1H)	0.64670	--	0.65	1.0	Yes
	24-hr	2017-2021	RM_OFF	Project Only (H1H)	0.18102	--	0.18	0.2	Yes
	Annual	2017	RM_OFF	Project Only (H1H)	0.01255	--	0.01	0.1	Yes
		2018	RM_OFF	Project Only (H1H)	0.01289	--	0.01	0.1	Yes
		2019	RM_OFF	Project Only (H1H)	0.01236	--	0.01	0.1	Yes
PM <sub>2.5</sub>	Annual	2020	RM_OFF	Project Only (H1H)	0.01135	--	0.01	0.1	Yes
		2021	RM_OFF	Project Only (H1H)	0.01289	--	0.01	0.1	Yes
		2017-2021	RM_OFF	Project Only (H1H across 5 years)	0.16625	0.020	0.19	0.27	Yes
		2017	RM_OFF	Project Only (H1H)	0.01639	0.001	0.02	0.05	Yes
		2018	RM_OFF	Project Only (H1H)	0.01707	0.001	0.02	0.05	Yes
PM <sub>10</sub>	Annual	2019	RM_OFF	Project Only (H1H)	0.01806	0.001	0.02	0.05	Yes
		2020	RM_OFF	Project Only (H1H)	0.01589	0.001	0.02	0.05	Yes
		2021	RM_OFF	Project Only (H1H)	0.01836	0.001	0.02	0.05	Yes
		2017-2021	RM_OFF	Project Only (H1H across 5 years)	0.16781	--	0.17	0.3	Yes
		2017	RM_OFF	Project Only (H1H)	0.01650	--	0.02	0.2	Yes
PM <sub>10</sub>	Annual	2018	RM_OFF	Project Only (H1H)	0.01718	--	0.02	0.2	Yes
		2019	RM_OFF	Project Only (H1H)	0.01820	--	0.02	0.2	Yes
		2020	RM_OFF	Project Only (H1H)	0.01602	--	0.02	0.2	Yes
		2021	RM_OFF	Project Only (H1H)	0.01850	--	0.02	0.2	Yes

<sup>1</sup> Secondary PM<sub>2.5</sub> concentrations are estimated using TCEQ's Air Quality Modeling Guidelines (APDG 6232), Appendix D, which is based on EPA's Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program. EPA-454/R-19-003, April 2019.

<sup>2</sup> Total concentration is the sum of the modeled concentration and secondary PM<sub>2.5</sub> concentration, as applicable.

<sup>3</sup> Air Quality Modeling Guidelines, Table B-1, APDG 6232, November 2019.

<sup>4</sup> AERMOD's Ambient Ratio Method 2 (ARM2) Option is used to output NO<sub>2</sub> impacts from modeled NO<sub>x</sub> emissions.

## **APPENDIX D. ASSOCIATED ELECTRONIC FILES**

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**Table D-1. AERMOD Input and Output Data File Descriptions (Class II SIL)**

<b>Pollutants and Averaging Periods</b>	<b>File Name</b>	<b>File Description</b>	<b>Receptor Grid</b>	<b>Associated Files</b>
NO <sub>2</sub> (1-hr)	NS1721H09a NS1721H09b	Significance Analysis	Fenceline, Tight, Fine, Medium, and Coarse grids	Input File (*.ami) Output File (*.aml) Plot File (*.plt)
NO <sub>2</sub> (annual)	NS17H06a NS18H06a NS19H06a NS20H06a NS21H06a NS17H06b NS18H06b NS19H06b NS20H06b NS21H06b			
CO (1-hr and 8-hr)	CS1721HE05			
SO <sub>2</sub> (1-hr)	SS1721H07			
SO <sub>2</sub> (3-hr and 24-hr)	SS1721TD07			
SO <sub>2</sub> (Annual)	SS17A06 SS18A06 SS19A06 SS20A06 SS21A06			
PM <sub>2.5</sub> (24-hr; NAAQS form)	P2SN1721D04			
PM <sub>2.5</sub> (annual; NAAQS form)	P2S1721A05			
PM <sub>2.5</sub> (24-hr; Increment form)	P2SI1721D04			
PM <sub>2.5</sub> (annual; Increment form)	P2S17A05 P2S18A05 P2S19A05 P2S20A05 P2S21A05			
PM <sub>10</sub> (24-hr)	P1S1721D05			
PM <sub>10</sub> (annual)	P1S17A05 P1S18A05 P1S19A05 P1S20A05 P1S21A05			

**Table D-2. AERMOD Input and Output Data File Descriptions (NAAQS and Class II Increment)**

Pollutants and Averaging Periods	File Name	File Description	Receptor Grid	Associated Files
NO <sub>2</sub> (1-hr)	NN1721H04	NAAQS Analysis	Significant Receptors	Input File (*.ami) Output File (*.aml) Plot File (*.plt)
SO <sub>2</sub> (1-hr)	SN1721H03			
PM <sub>2.5</sub> (24-hr)	P2N1721D05			
PM <sub>2.5</sub> (annual)	P2N1721A06			
PM <sub>10</sub> (24-hr)	P1N1721D02			
PM <sub>2.5</sub> (24-hr)	P2I17D05 P2I18D05 P2I19D05 P2I20D05 P2I21D05	PSD Class II Increment Analysis	Significant Receptors	
PM <sub>2.5</sub> (annual)	P2I17A04 P2I18A04 P2I19A04 P2I20A04 P2I21A04			
PM <sub>10</sub> (24-hr)	P1I17D06 P1I18D06 P1I19D06 P1I20D06 P1I21D06			
PM <sub>10</sub> (annual)	P1I17A05 P1I18A05 P1I19A05 P1I20A05 P1I21A05			

**Table D-3. PSD Class I AERMOD Input and Output Data File Descriptions**

<b>Pollutants and Averaging Periods</b>	<b>File Name</b>	<b>File Description</b>	<b>Receptor Grid</b>	<b>Associated Files</b>
NO <sub>2</sub> (annual)	NCI17A04a NCI18A04a NCI19A04a NCI20A04a NCI21A04a NCI17A04b NCI18A04b NCI19A04b NCI20A04b NCI21A04b	PSD Class I Significance Analysis	50-km downwind receptor arc	Input File (*ami) Output File (*aml) Plot File (*plt)
SO <sub>2</sub> (3-hr and 24-hr)	SCI1418TD05			
SO <sub>2</sub> (Annual)	SCI14A05 SCI15A05 SCI16A05 SCI17A05 SCI18A05			
PM <sub>2.5</sub> (24-hr; Increment form)	P2CI1721D04			
PM <sub>2.5</sub> (annual; Increment form)	P2CI17A04 P2CI18A04 P2CI19A04 P2CI20A04 P2CI21A04			
PM <sub>10</sub> (24-hr)	P1CI1721D04			
PM <sub>10</sub> (annual)	P1CI17A04 P1CI18A04 P1CI19A04 P1CI20A04 P1CI21A04			



**Table D-4. Meteorological Data Files**

<b>File Name</b>	<b>Description</b>
GRAYSON_DTOFWD1721L.SFC	2017-2021 Surface meteorological file
GRAYSON_DTOFWD1721L.PFL	2017-2021 Upper air meteorological file
GRAYSON_DTOFWD17L.SFC	2017 Surface meteorological file
GRAYSON_DTOFWD17L.PFL	2017 Upper air meteorological file
GRAYSON_DTOFWD18L.SFC	2018 Surface meteorological file
GRAYSON_DTOFWD18L.PFL	2018 Upper air meteorological file
GRAYSON_DTOFWD19L.SFC	2019 Surface meteorological file
GRAYSON_DTOFWD19L.PFL	2019 Upper air meteorological file
GRAYSON_DTOFWD20L.SFC	2020 Surface meteorological file
GRAYSON_DTOFWD20L.PFL	2020 Upper air meteorological file
GRAYSON_DTOFWD21L.SFC	2021 Surface meteorological file
GRAYSON_DTOFWD21L.PFL	2021 Upper air meteorological file

**Table D-5. Other Files**

<b>File Description</b>	<b>File Name</b>
Fenceline boundary file	Fenceline.blm
BPIPPRM (Downwash)	"BPIP" folder
AERSURFACE log and output files	"AERSURFACE" folder
Plot Plan and Area Map	"Maps_Plots" folder
Monitor Background Documentation	Blk_Mtn_Monitor_Concentrations_for_TCEQ_2023-0605.xlsx
Off-site Inventory Documentation	"Inventory" folder

**APP-18**

**Draft Permit Special Conditions and Maximum Allowable Emissions Rate  
(MAERT) Table and Supporting Documentation**

**From:** Joel Stanford  
**Sent:** Thursday, July 13, 2023 11:19 PM  
**To:** Michael Meister  
**Subject:** Draft Permit - Black Mountain Dorchester - NSR#167047, Project #335160  
**Attachments:** C21-DraftLTR-BM Dorchester - Project 335160.docx; MAERT-BM Dorchester - Project 335160.docx; CND-BM Dorchester - Project 335160.docx

Hi Mike,

Attached are first drafts for this project. They are extensive, and given the nature and complexity of this project I've specified 21 days as the timeline. A few notes...

The application references a sulfur compound scrubber, but no details of this were provided anywhere in the application. Please provide all relevant information for control efficiencies, nature of the scrubber, and proposed monitoring. Table 13 should be filled out with available information. Please also clarify whether this scrubber exhausts through the main kiln stack.

<https://www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/Tables/10181tbl.pdf>

Additionally, and relatedly the raw mill bypass system is somewhat confusing and vaguely laid out in terms of the EPNs involved. I have not included anything relating to this on the MAERT or in the Conditions, though CAM associated Conditions currently forbid a control bypass. It sounds like the gas and particulate (raw materials) mixture is sent to bagfilters before the filtered gas is sent to the scrubber for removal of sulfur compounds. The raw materials are then sent back into the process and the gases which went through the scrubber exhaust back into the kiln environment for eventual release out of the kiln stack. This, then, sounds less like a control bypass and more like sending excess emissions to a control while bypassing the mill. Please confirm if this understanding is correct. It is quite possible that Conditions which are added for the Scrubber can address this aspect of the process.

As noted in the CNDs please provide more details on the nature of the partial enclosure represented in the application.

Finally, the application document still contains at least one reference to the old SNCR proposal as opposed to the new SCR proposal. Please make sure all references are updated. An example of this is on page 49. Additionally, I've specified 0.005 outlet grain loading for all regulated PM species, rather than the mixed outlet grain loading proposed in the application. Given that any filter which can hit 0.005 at PM2.5 can easily do so at PM and PM10 this should not be an issue.

Thanks,

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

Mail Code: MC-163, PO Box 13087

Austin, Texas 78711-3087



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Kelly Keel, *Interim Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

July 14, 2023

MR JACOB BENDER  
CHIEF FINANCIAL OFFICER  
BM DORCHESTER LLC  
1008 SOUTHVIEW CIR  
CENTER TX 75935-4537

Re: Permit Application  
Permit Numbers: 167047, GHGPSDTX212, and PSDTX1602  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bender:

I have attached a draft copy of the proposed conditions and maximum allowable emission rates table (MAERT) for your review. When issued the permit will contain these conditions and MAERT. Please submit your comments within 15 days from the date of this notification. This letter is to advise you that a contested case hearing has been requested concerning your permit application. Therefore, these permit conditions could be revised as a result of the contested case process. If you have comments concerning the conditions and fail to submit those comments within 21 days from the date of this notification, TCEQ will prepare the permit for public notice.

Thank you for your cooperation in this matter. If you have any questions, please call me at (512) 239-0270, or write to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin TX 78711-3087.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Stanford".

Joel Stanford  
Mechanical/Coatings New Source Review Permits Section  
Air Permits Division  
Texas Commission on Environmental Quality

Enclosure

cc: Air Section Manager, Region 4 - Dallas/Fort Worth

Project Number: 335160

### **Special Conditions**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

#### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

#### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be ultra-low sulfur diesel fuel with a maximum sulfur content of not more than 0.0015 percent by weight and shall not consist of a blend containing waste oils or solvents. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

#### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart Y – Coal Preparation Plants;
  - D. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - E. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and



C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

**Opacity/Visible Emission Limitations**

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

**Operational Limitations, Work Practices, and Plant Design**

10. Emission rates are based on and the facilities shall be limited to maximum kiln clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	Short Term Limit – 30 day Rolling Average	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	1.0 lb/ton of clinker	0.69 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmv at 7% O <sub>2</sub>	24 ppmv at 7% O <sub>2</sub>
HAP	12 ppmvd at 7% O <sub>2</sub>	12 ppmvd at 7% O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	0.11 lb/ton of clinker
HCl	3 ppmvd at 7% O <sub>2</sub>	0.02 lb/ton of clinker
NH <sub>3</sub>	35 ppmv at 7% O <sub>2</sub>	0.09 lb/ton of clinker
Hg	0.000021* lb/ton of clinker	0.000021 lb/ton of clinker
Pb	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

**Table 2: Finish Mill Air Heater**

Emissions from the Finish Mill Air Heater (EPN 51-SK-250) shall not exceed the following during any rolling 12-month period.

Pollutant	Emission Standard
NO <sub>x</sub>	001 lb/MMBtu based on the higher heating value of the fuel.
CO	50 ppmvd corrected to 3% O <sub>2</sub>

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §63.6640(f). The following additional requirements apply:
  - A. The engine shall be equipped with a non-resettable hour meter.
  - B. The engine shall satisfy the Tier 4 exhaust emission standards specified at 40 CFR § 1039.101.
  - C. Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.
13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 3: Fabric Filter Dust Collector Maximum Outlet Grain Loading Values**

EPN	Source Name	Maximum Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.005
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005

EPN	Source Name	Maximum Outlet Grain Loading (gr/dscf)
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

**RESERVED FOR SCRUBBER**

14. Crushed limestone stockpiles shall be stored in an enclosed storage building.
15. Raw material truck and rail loading operations (EPNs RR\_MH and TRK\_MH) shall utilize partial enclosure defined as consisting of two sides and the use of strip curtains over the front and rear of the enclosure.
16. Raw material conveyers shall be fully enclosed.
17. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
18. A street sweeper and other mobile equipment shall pick up debris from the plant roads and dump inside an enclosed structure. The structure shall be enclosed on three sides with the entrance covered by a heavy strip curtain to reduce dump emissions. A front-end loader shall pick up the dust and debris from this structure and load it onto trucks for disposal. The contents of the truck shall be controlled, as necessary, to minimize emissions during transit.
19. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
20. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

**Commented [JS1]:** Applicant: Please define the partial enclosure represented in the application.

**Cement Kiln Selective Catalytic Reduction**

21. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Except where provided otherwise in paragraph D of this Special Condition, emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system.
  - B. Aqueous ammonia shall be used in the SCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

- E. The ammonia (NH<sub>3</sub>) concentration in the Cement Kiln exhaust stack shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for NH<sub>3</sub> slip is only required on days when the SCR unit is in operation.
- (1) Install, calibrate, maintain, and operate, as specified under Special Condition No. 41, a CEMS to measure and record the concentration of NH<sub>3</sub>. The NH<sub>3</sub> concentration shall be corrected and reported in accordance with Special Condition No. 41.
  - (2) Use a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the 5 to 10 parts per million (ppm) range. The frequency of sorbent/stain tube testing shall be performed daily for the first 60 days of operation, after which the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of NH<sub>3</sub> from being introduced in the SCR unit and when operation of the SCR unit has been proven successful with regard to controlling NH<sub>3</sub> slip. Daily sorbent or stain tube testing shall resume when the catalyst is within 30 days of its useful life expectancy. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.  
  
If sorbent or stain tube testing indicates an NH<sub>3</sub> slip concentration which exceed 5 ppm at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or the EPA Conditional Test Method (CTM) 27 on a quarterly basis, in addition to the weekly sorbent or stain tube testing. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced; or if the quarterly testing indicates NH<sub>3</sub> slip is 4 ppm or less, the Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 5 ppm NH<sub>3</sub> slip or greater. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.
  - (3) Install, calibrate, maintain, and operate, as specified under Special Condition No. 41, a second NO<sub>x</sub> CEMS upstream of the control device (in addition to the NO<sub>x</sub> CEMS required under this Special Condition). Perform the measurements and calculations associated with the mass balance method specified in 30 TAC § 117.8130(1), using NO<sub>x</sub> CEMS data to determine the NO<sub>x</sub> concentration differential across the control device.
  - (4) Install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS and the other exhaust stream would be routed through a NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> slip concentration shall be calculated according to the method specified in 30 TAC § 117.8130(2). These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.
  - (5) Any other method used for measuring NH<sub>3</sub> slip shall require prior approval from the Texas Commission on Environmental Quality (TCEQ) Regional Director.
- F. The NO<sub>x</sub> and CO emission limits of this permit shall not apply during non-routine operation of the Cement Kiln.



**Planned Maintenance, Startup, and Shutdown**

22. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
23. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:
  - A. A planned startup of the kiln is defined as the period starting when the kiln's induced draft fan is turned on and fuel is fired in the main burner and ending when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Planned startups of the cement kiln shall be limited to 300 hours per year.
  - B. A planned shutdown of the kiln is defined as the period starting when feed to the kiln is halted and ending when continuous kiln rotation ceases. A planned shutdown of the kiln is limited to 48 hours in a single duration.
24. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
  - A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
25. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
  - A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### Ammonia Handling

Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO

26. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per shift.
  - B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take at least one of the following actions:
    - (1) Isolate the leak.
    - (2) Commence repair or replacement of the leaking component.
    - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.
- Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### Initial Demonstration of Compliance

27. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, VOC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, and Pb. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for Kiln #2 shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and CO. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling

Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### Sampling Requirements

29. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.
30. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
  - A. Date for pretest meeting;
  - B. Date sampling will occur;
  - C. Points or sources to be sampled;
  - D. Name of firm conducting sampling;
  - E. Type of sampling equipment to be used; and
  - F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.
31. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
32. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
33. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
34. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent

35. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
36. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
- One copy to the TCEQ Regional Office with jurisdiction.
  - One copy to the TCEQ Office of Air, Air Permits Division in Austin.
  - One copy to each appropriate local air pollution control program with jurisdiction.
37. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
38. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:
- One copy to the TCEQ Regional Office with jurisdiction.
  - One copy to the TCEQ Office of Air, Air Permits Division in Austin.

**Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

39. The holder of this permit shall install, calibrate, and maintain continuous opacity monitoring systems (COMS) for monitoring opacity at the Cement Kiln Baghouse Stack (EPN 21-SK-230) and the Finish Mill Baghouse Stack (EPN 51-SK-250). Continuous monitoring and recordkeeping of opacity shall be performed in accordance with the following:
- A. The (each) COMS shall meet the design and performance specification, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in Performance Specification No. 1, 40 CFR Part 60, Appendix B.
  - B. The (each) COMS shall be installed, operated, and maintained in accordance with the requirements of 40 CFR § 63.1350(f)(4)(i).
  - C. The (each) COMS shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR Part 60, Appendix B or as specified by the TCEQ if not specified in Appendix B.
  - D. The (each) opacity monitor shall complete a minimum of one cycle of data recording for each successive ten-second period. Six-minute averages shall be computed from at least 36 data points over a six-minute period. Data recorded during periods of COMS breakdowns, repairs, calibration checks, and zero span adjustments shall not be included in the computed data averages.

- E. The holder of this permit shall submit to the appropriate TCEQ Regional Office, on a six-month basis, an excess emissions and monitoring systems performance report for the COMS measured opacity consistent with the requirements of 40 CFR § 60.7(c) and (d).
40. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
41. Each CEMS required under this permit shall satisfy the following requirements
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
    - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
    - (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.
  - C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of ppmvd, lb/MMBtu, and/or lb/hr.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.



- F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
42. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap or CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.
43. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with these Special Conditions.
- B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
- (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 65 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
- (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 65 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 65 ppm NH<sub>3</sub> stack concentration or greater.
- C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
- D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through a NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
- E. The permit holder may establish a correlation between the maximum NH<sub>3</sub> stack concentration limit and maximum NH<sub>3</sub> injection rate or other surrogate parameter that may be monitored to

- determine compliance with NH<sub>3</sub> stack concentration BACT requirements. These results shall be recorded and used to determine compliance with Special Condition No. 11.
- F. Other alternative methods used for measuring NH<sub>3</sub> stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
44. The holder of this permit shall perform monthly inspections to verify proper operation of the capture systems for the Cement Kiln Baghouse (EPN 21-SK-230) and the Finish Mill Baghouse (EPN 51-SK-250) to verify there are no holes, cracks, and/or other conditions that would reduce the collection efficiency of the emission capture systems as represented. If the results of the inspections indicate that a capture system is not operating properly, the permit holder shall promptly take necessary corrective actions.
45. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week;
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer;
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation;
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
46. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but

not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:

- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
  - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
47. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
48. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
49. The control devices shall not have a bypass.

**RESERVED FOR SCRUBBER MONITORING**

**Recordkeeping Requirements**

50. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification, a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, and Hg emissions from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;
  - C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed

- on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
- D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. The holder of this permit shall maintain a raw data file of parametric monitoring measurements, including performance testing measurements, all calibration checks and adjustments and maintenance performed on the instrument(s). This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - F. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - G. Any excess emissions and monitoring systems performance reports for the COMS measured opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - H. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - I. Records of pressure drop readings for each baghouse;
  - J. Malfunctions of any air pollution abatement systems;
  - K. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - L. Records of visible emission/opacity observations and any corrective actions taken;
  - M. Hours of operation of the Emergency Generator (EPN EG-1);
  - N. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 22-25 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
51. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### Reporting Requirements

52. The holder of this permit shall submit a copy of semiannual COMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.

- B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.
  - D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a COMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the COMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the COMS, exceed the limitations in Special Condition No. 8.
53. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.



**Greenhouse Gases Special Conditions**

54. Emissions from Kiln #2 exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2</sub>	0.92 ton/ton clinker annual basis
CH <sub>4</sub>	0.001 Kg/MMBtu annual basis
N <sub>2</sub> O	0.0001 kg/MMBtu annual basis
CO <sub>2e</sub>	0.92 lb/ton clinker 30 day rolling average

55. Initial determination of compliance as specified in Special Condition No. 27 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 27, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

56. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of ±15 percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. Kiln #2 CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.

- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

**Greenhouse Gases Recordkeeping Requirements**

57. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.
58. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
- B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
- C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
- (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
  - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
  - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2</sub> and CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

**Inherently Low Emitting (ILE) Maintenance Activities**

Planned Maintenance Activity	Pollutant					
	VOC	NOx	CO	PM	SO2	CO2
Vacuum truck solids unloading				x		
CEMS calibration	x	x	x		x	x
Refractory maintenance operations				x		
Miscellaneous particulate filter maintenance				x		
Kiln particulate filter maintenance				x		
Equipment heating	x	x	x	x	x	x

Date:

# Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 167047 and PSDTX1602

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	NO <sub>x</sub>	143.74	368.00
		SO <sub>2</sub>	83.33	213.31
		H <sub>2</sub> SO <sub>4</sub>	152.76	58.66
		HCl	2.38	10.41
		CO	1249.88	1599.84
		PM	41.66	159.98
		PM <sub>10</sub>	41.66	159.98
		PM <sub>2.5</sub>	41.66	159.98
		Pb	0.01	0.04
		Hg	<0.01	0.01
		VOC	25.24	100.49
		NH <sub>3</sub>	12.95	56.72
51-SK-250	Finish Mill Baghouse Stack	NO <sub>x</sub>	0.16	0.70
		SO <sub>2</sub>	<0.01	0.04
		CO	1.31	5.74
		PM	3.23	14.13
		PM <sub>10</sub>	3.23	14.13
		PM <sub>2.5</sub>	3.23	14.13
		VOC	0.09	0.38
10-BF-035	Crusher Building Baghouse Stack	PM	1.36	5.97
		PM <sub>10</sub>	1.36	5.97
		PM <sub>2.5</sub>	1.36	5.97
10-BF-140	Material Transfer (LS to Storage) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.25	1.11
12-BF-140	Additive Unloading (Rail) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11
		PM <sub>2.5</sub>	0.25	1.11
11-BF-270	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
11-BF-285	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-315	Truck Unloading Baghouse Stack	PM	0.76	3.31
		PM <sub>10</sub>	0.76	3.31
		PM <sub>2.5</sub>	0.76	3.31
12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-030	Raw Mill Feed (Top of Bin Baghouse) Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-500	Raw Mill Feed Bin Building Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
20-BF-010	Raw Mill Building Baghouse Stack	PM	0.30	1.33
		PM <sub>10</sub>	0.30	1.33



## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.30	1.33
20-BF-182	Raw Mill Building Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
20-BF-360	Raw Mill Building Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
21-BF-330	Top of CKD Bin Baghouse Stack	PM	0.08	0.33
		PM <sub>10</sub>	0.08	0.33
		PM <sub>2.5</sub>	0.08	0.33
22-BF-060	Bottom of Raw Meal Silo Baghouse Stack	PM	0.23	0.99
		PM <sub>10</sub>	0.23	0.99
		PM <sub>2.5</sub>	0.23	0.99
22-BF-080	Preheater Tower Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
22-BF-160	Top of Raw Meal Silo Baghouse Stack	PM	0.38	1.66
		PM <sub>10</sub>	0.38	1.66
		PM <sub>2.5</sub>	0.38	1.66
22-BF-385	Top of Surge Bin (RM Silo) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
30-BF-260	Bottom of Preheater Tower Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
30-BF-320	Top of Preheater Tower Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.11	0.50
42-BF-270	Cooler Discharge Baghouse Stack	PM	0.16	0.72
		PM <sub>10</sub>	0.16	0.72
		PM <sub>2.5</sub>	0.16	0.72
41-BF-130	Top of Bin (Bypass Dust) Baghouse Stack	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22
44-BF-030	Top of Clinker Silo Baghouse Stack	PM	0.63	2.76
		PM <sub>10</sub>	0.63	2.76
		PM <sub>2.5</sub>	0.63	2.76
44-BF-185	Transfer Tower (Clinker Strg. And Handling) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
50-BF-050	Top of Clinker Feed Bin Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
50-BF-020	Top of Gypsum Feed Bin Baghouse Stack	PM	0.09	0.39
		PM <sub>10</sub>	0.09	0.39
		PM <sub>2.5</sub>	0.09	0.39
50-BF-350	Cement Feed Bin Extraction Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
51-BF-050	Cement Mill Building Baghouse Stack	PM	0.30	1.32
		PM <sub>10</sub>	0.30	1.32
		PM <sub>2.5</sub>	0.30	1.32
51-BF-140	Cement Mill Building Baghouse Stack	PM	0.23	1.01
		PM <sub>10</sub>	0.23	1.01

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.23	1.01
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse Stack	PM	0.14	0.61
		PM <sub>10</sub>	0.14	0.61
		PM <sub>2.5</sub>	0.14	0.61
52-BF-110	Top of Cement Silo 1 Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
53-BF-110	Top of Cement Silo 2 Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
52-BF-270	Loadout System (CM Silo-1) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
53-BF-270	Loadout System (CM Silo-2) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
LSCRSBBD_MH	Limestone - Material Handling LS Crusher Building (5)	PM	0.04	0.15
		PM <sub>10</sub>	0.02	0.07
		PM <sub>2.5</sub>	<0.01	0.01
TRK_MH	Additive - Material Handling Truck Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
RR_MH	Additive - Material Handling Rail Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
LS_STKPL	Limestone Stockpile 1 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
LS_STKPL	Limestone Stockpile 2 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
ADD_STKPL	Gypsum Stockpile (5)	PM	0.03	0.11
		PM <sub>10</sub>	0.01	0.06
		PM <sub>2.5</sub>	0.002	0.01
ADD_STKPL	High Grade Limestone Stockpile (5)	PM	0.05	0.20
		PM <sub>10</sub>	0.02	0.10
		PM <sub>2.5</sub>	<0.01	0.02
ADD_STKPL	Sand Stockpile (5)	PM	0.02	0.09
		PM <sub>10</sub>	0.01	0.05
		PM <sub>2.5</sub>	<0.01	0.01
EG-1	Emergency Generator Engine	VOC	8.87	0.44
		NO <sub>x</sub>	<0.01	<0.01
		CO	17.74	0.89

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM	0.14	0.01
		PM <sub>10</sub>	0.14	0.01
		PM <sub>2.5</sub>	0.14	0.01
		SO <sub>2</sub>	4.58	0.23
NH3FUG	NH3 Fugitives (5)	NH <sub>3</sub>	0.06	0.28
MSSFUG	ILE MSS Activities	NO <sub>x</sub>	<0.01	<0.01
		SO <sub>2</sub>	<0.01	<0.01
		CO	<0.01	<0.01
		PM	0.81	0.77
		PM <sub>10</sub>	0.66	0.76
		PM <sub>2.5</sub>	0.28	0.38
		VOC	<0.01	<0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
SO<sub>2</sub> - sulfur dioxide  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
HCl - hydrogen chloride  
H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
Pb - Lead  
Hg - Mercury  
NH<sub>3</sub> - ammonia  
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.  
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: DRAFT



# Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX212

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities authorized by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	CO <sub>2e</sub>	-	981,402.53
51-SK-250	Finish Mill Baghouse Stack	CO <sub>2e</sub>	-	8,210.12
EG-1	Emergency Generator Engine	CO <sub>2e</sub>	-	42.25
MSSFUG	ILE MSS Activities	CO <sub>2e</sub>	-	0.11

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO<sub>2e</sub> - carbon dioxide equivalents based on the following Global Warming Potentials (GWP) found in Table A-1 of Subpart A 40 CFR Part 98 (78 FR 71904) for each pollutant: CO<sub>2</sub> (1), N<sub>2</sub>O (298), CH<sub>4</sub>(25)
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.

Date: DRAFT

**AR-19**

**TCEQ Air Quality Analysis Audit and Supporting Documentation**

**From:** Rachel Melton  
**Sent:** Monday, July 17, 2023 4:25 PM  
**To:** Joel Stanford  
**Cc:** Daniel Jamieson  
**Subject:** RE: Modeling Request for Project Number: 335160  
**Attachments:** Modeling Audit - 167047 BM DORCHESTER LLC (Initial, 335160).docx

Good afternoon Joel,

The modeling audit for 167047 BM DORCHESTER LLC (Initial, 335160) is complete and the modeling audit memo is attached. The memo can also be found in WCC, Content ID: 6608294

Please let me know if you have any questions.

Thank You,  
Rachel

Rachel Melton  
Texas Commission on Environmental Quality  
Office of Air - Air Permits Division  
Air Dispersion Modeling Team  
512-239-1512  
[Rachel.Melton@tceq.texas.gov](mailto:Rachel.Melton@tceq.texas.gov)

How are we doing? Fill out our online customer satisfaction survey at  
[www.tceq.texas.gov/customersurvey](http://www.tceq.texas.gov/customersurvey)

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**From:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Sent:** Friday, June 9, 2023 3:51 PM  
**To:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Cc:** Rachel Melton <[Rachel.Melton@Tceq.Texas.Gov](mailto:Rachel.Melton@Tceq.Texas.Gov)>; Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>; Matthew Kovar <[matthew.kovar@tceq.texas.gov](mailto:matthew.kovar@tceq.texas.gov)>; Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Subject:** Modeling Request for Project Number: 335160

CHAD DUMAS,

Your request for a Modeling Audit has been assigned as follows:

- Modeler Assigned: **RACHEL MELTON, DANIEL JAMIESON**
- Company Name: **BM DORCHESTER LLC**
- Permit Number: **167047**

- Regulated Entity Number: **RN111368437**
- Proposed Due Date: **Tuesday, August 8, 2023**
- County: **GRAYSON**
- NSR Project Number: **335160**
- Modeling Project Number: **8631**
- Requester Comments:
- Modeler Comments:

Expedited Project

Management Rush

Please make contact with the applicant's modeler by: 6/23/2023

Permit backlog date: 11/8/2022

# TCEQ Interoffice Memorandum

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To: Joel Stanford  
Mechanical/Coatings Section

Thru: Chad Dumas, Team Leader  
Air Dispersion Modeling Team (ADMT)

From: Rachel Melton and Daniel Jamieson  
ADMT

Date: July 17, 2023

Subject: **Air Quality Analysis Audit – BM Dorchester LLC (RN111368437)**

## 1. Project Identification Information

Permit Application Number: 167047  
NSR Project Number: 335160  
ADMT Project Number: 8631  
County: Grayson  
Published Map: <\\tceq4avmgisdata\GISWRK\APD\MODEL PROJECTS\8631\8631.pdf>

Air Quality Analysis: Submitted by Trinity Consultants, June 2023, on behalf of BM Dorchester LLC. Additional information was provided July 2023.

## 2. Report Summary

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

### A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results indicate that 1-hr SO<sub>2</sub>, 24-hr and annual PM<sub>10</sub>, 24-hr and annual PM<sub>2.5</sub> (NAAQS), 24-hr and annual PM<sub>2.5</sub> (Increment), and 1-hr NO<sub>2</sub> exceed the respective de minimis concentrations and require a full impacts analysis. The De Minimis analysis modeling results for 3-hr, 24-hr and annual SO<sub>2</sub>, annual NO<sub>2</sub>, and 1-hr and 8-hr CO indicate that the project is below the respective de minimis concentrations and no further analysis is required.

The justification for selecting the EPA's interim 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> De Minimis levels is based on the assumptions underlying EPA's development of the 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> De Minimis levels. As explained in EPA guidance memoranda<sup>1,2</sup>, the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> NAAQS.

The PM<sub>2.5</sub> and ozone De Minimis levels are the EPA recommended De Minimis levels. The use of the EPA recommended De Minimis levels is sufficient to conclude that a proposed source will not cause or contribute to a violation of an ozone and PM<sub>2.5</sub> NAAQS or PM<sub>2.5</sub> PSD increments based on the analyses documented in EPA guidance and policy memoranda<sup>3</sup>.

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<sup>1</sup> [www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf](http://www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf)

<sup>2</sup> [www.tceq.texas.gov/assets/public/permitting/air/memos/guidance\\_1hr\\_no2naaqs.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf)

<sup>3</sup> [www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html](http://www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html)

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While the De Minimis levels for both the NAAQS and increment are identical for PM<sub>2.5</sub> in the table below, the procedures to determine significance (that is, predicted concentrations to compare to the De Minimis levels) are different. This difference occurs because the NAAQS for PM<sub>2.5</sub> are statistically-based, but the corresponding increments are exceedance-based.

**Table 1. Modeling Results for PSD De Minimis Analysis  
in Micrograms Per Cubic Meter (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	12	7.8
SO <sub>2</sub>	3-hr	12	25
SO <sub>2</sub>	24-hr	4.5	5
SO <sub>2</sub>	Annual	0.3	1
PM <sub>10</sub>	24-hr	10	5
PM <sub>10</sub>	Annual	3	1
PM <sub>2.5</sub> (NAAQS)	24-hr	7.2	1.2
PM <sub>2.5</sub> (NAAQS)	Annual	2.5	0.2
PM <sub>2.5</sub> (Increment)	24-hr	8.7	1.2
PM <sub>2.5</sub> (Increment)	Annual	2.7	0.2
NO <sub>2</sub>	1-hr	19	7.5
NO <sub>2</sub>	Annual	0.4	1
CO	1-hr	769	2000
CO	8-hr	276	500

The GLCmax for 1-hr SO<sub>2</sub>, 1-hr NO<sub>2</sub> and 24-hr and annual PM<sub>2.5</sub> (NAAQS) are based on the highest five-year averages of the maximum predicted concentrations determined for each receptor. The GLCmax for all other pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

Intermittent guidance was relied on for the 1-hr SO<sub>2</sub> and 1-hr NO<sub>2</sub> PSD De Minimis analyses.

To evaluate secondary PM<sub>2.5</sub> impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and



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peak secondary pollutants impacts from a source. Using data associated with the 500 tpy Parker County source, the applicant estimated 24-hr and annual secondary PM<sub>2.5</sub> concentrations of 0.18949 µg/m<sup>3</sup> and 0.00231 µg/m<sup>3</sup>, respectively. Since the combined direct and secondary 24-hr and annual PM<sub>2.5</sub> impacts are above the De minimis levels, a full impacts analysis is required.

**Table 2. Modeling Results for Ozone PSD De Minimis Analysis in Parts per Billion (ppb)**

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O <sub>3</sub>	8-hr	0.99	1

The applicant performed an O<sub>3</sub> analysis as part of the PSD AQA. The applicant evaluated project emissions of O<sub>3</sub> precursor emissions (NO<sub>x</sub> and VOC) based on a Tier 1 demonstration approach consistent with the EPA's GAQM referred to as MERPs. Using data associated with the 500 tpy and 1000 tpy Parker County source, the applicant estimated an 8-hr O<sub>3</sub> concentration of 0.98706 ppb. When the estimates of ozone concentrations from the project emissions are added together, the results are less than the De Minimis level.

### B. Air Quality Monitoring

The De Minimis analysis modeling results indicate that 24-hr PM<sub>10</sub> exceeds the respective monitoring significance level and requires the gathering of ambient monitoring information.

The De Minimis analysis modeling results indicate that 24-hr SO<sub>2</sub>, annual NO<sub>2</sub>, and 8-hr CO are below their respective monitoring significance level.

**Table 3. Modeling Results for PSD Monitoring Significance Levels**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Significance (µg/m <sup>3</sup> )
SO <sub>2</sub>	24-hr	4.5	13
PM <sub>10</sub>	24-hr	10.1	10
NO <sub>2</sub>	Annual	0.4	14
CO	8-hr	276	575

The GLCmax for all pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

The applicant evaluated ambient PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data to satisfy the requirements for the pre-application air quality analysis.

A background concentration for PM<sub>10</sub> was obtained from the EPA AIRS monitor 481130050 located at 717 South Akard St. Dallas, Dallas County. The high, second high monitored concentration from 2020-2022 was used for the 24-hr value (82 µg/m<sup>3</sup>). The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the

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monitor site relative to the project site. The background concentration was also used in the NAAQS analysis.

Background concentrations for PM<sub>2.5</sub> were obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The applicant calculated the three-year average (2020-2022) of the 98th percentile of the annual distribution of the 24-hr concentrations for the 24-hr value (20 µg/m<sup>3</sup>). The applicant used a three-year average (2020-2022) of the annual concentrations for the annual value (7.5 µg/m<sup>3</sup>). The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site. The background concentrations were also used in the NAAQS analysis.

Since the project has a net emissions increase of 100 tons per year (tpy) or more of volatile organic compounds or nitrogen oxides, the applicant evaluated ambient O<sub>3</sub> monitoring data to satisfy requirements in 40 CFR 52.21 (i)(5)(i)(f).

The applicant identified the Pilot Point ozone monitor (EPA AQS 481211032) as a conservative monitor for the proposed project site location. The applicant further noted how the Pilot Point monitor is located within the Dallas-Fort Worth (DFW) ozone non-attainment area and summarized the 2020-2022 ozone design value for the monitor without further refinement. The ADMT has reviewed the ozone monitoring data for further refinement and this review is discussed below.

Initially, during the modeling protocol development, the applicant had proposed using the Greenville ozone monitor (EPA AQS 482311006) for the proposed project site location. The ADMT had commented that the proposed project site location is likely to be located downwind of the DFW ozone non-attainment area more often than the selected Greenville monitor, based on wind data, and it is likely that the Greenville monitor would not be representative of the proposed project site location for all wind directions and should not be exclusively used in the pre-application analysis.

The ADMT reviewed monitoring data from two additional ozone monitors to identify ozone concentrations during times when the proposed project site location could have been located downwind of the DFW ozone non-attainment area – the above-mentioned Pilot Point monitor and the Frisco monitor (EPA AQS 480850005). Collectively, the information from these two monitors, along with the Greenville monitor, gives a complete analysis for the proposed project site location.

The Pilot Point ozone monitor is located to the southwest of the proposed project site location. A sector was defined with an origin at the Pilot Point monitor and that covered the extent of the modeled receptor grid surrounding the proposed project site location. The sector was then used to identify wind directions favorable for transport towards the proposed project site location (220–265 degrees). Ozone data were reviewed during these wind directions for years 2020-2022 and the highest fourth highest daily maximum hourly value from all three years was 64 ppb. This would be a conservative metric for the ozone design value; the ozone design value is based on a three-year average of the fourth highest daily maximum rolling 8-hr average.

The Frisco ozone monitor is located to the south-southwest of the proposed project site location. Similar to the Pilot Point ozone monitor described above, a sector was defined with an origin at the Frisco monitor and that covered the extent of the modeled receptor grid surrounding the proposed project site location. The sector was then used to identify wind directions favorable for transport towards the proposed project site location (178–215 degrees). Ozone data were reviewed during these wind directions for years 2020-2022 and the highest fourth highest daily maximum rolling 8-hr average value from all three years

## TCEQ Interoffice Memorandum

was 69 ppb. This would be a conservative metric for the ozone design value; the ozone design value is based on a three-year average of the fourth highest daily maximum rolling 8-hr average.

The Greenville ozone monitor has an ozone design value of 63 ppb for the years 2020-2022.

### C. National Ambient Air Quality Standard (NAAQS) Analysis

The De Minimis analysis modeling results indicate 1-hr SO<sub>2</sub>, 24-hr and annual PM<sub>10</sub>, 24-hr and annual PM<sub>2.5</sub> and 1-hr NO<sub>2</sub> exceed the respective de minimis concentration and require a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentrations will not result in an exceedance of the NAAQS.

**Table 4. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLCmax] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	11	16	27	196
PM <sub>10</sub>	24-hr	10	82	92	150
PM <sub>2.5</sub>	24-hr	6	20	26	35
PM <sub>2.5</sub>	Annual	2.6	7.5	10.1	12
NO <sub>2</sub>	1-hr	87	see discussion below	87	188

The 1-hr SO<sub>2</sub> GLCmax is the highest five-year average of the 99<sup>th</sup> percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor.

The 24-hr PM<sub>10</sub> GLCmax is the maximum predicted concentration over five years of meteorological data.

The 24-hr PM<sub>2.5</sub> GLCmax is the highest five-year average of the 98<sup>th</sup> percentile of the annual distribution of predicted 24-hr concentrations determined for each receptor.

The annual PM<sub>2.5</sub> GLCmax is the maximum five-year average of the annual concentrations determined for each receptor.

The 1-hr NO<sub>2</sub> GLCmax is the highest five-year average of the 98<sup>th</sup> percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor.

A background concentration for SO<sub>2</sub> was obtained from the EPA AIRS monitor 481390016 located at 2725 Old Fort Worth Rd., Midlothian, Ellis County. A three-year average (2019-2021) of the 99<sup>th</sup> percentile of the annual distribution of daily maximum 1-hr concentrations was used for the 1-hr value. The applicant reviewed more recent monitoring data from EPA AIRS monitor 482570005 and determined the outcome of the analysis would not change. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

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A background concentration for NO<sub>2</sub> was obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The applicant determined the 98<sup>th</sup> percentile of the annual distribution of the maximum 1-hr concentrations for each hour of the day (using data from 2020-2022), consistent with EPA guidance. These background values were then used in the model (as hourly background scalars) with the BACKGRND keyword to be combined with model predictions, giving a total predicted concentration. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

As stated above, to evaluate secondary PM<sub>2.5</sub> impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with the 500 tpy Parker County source, the applicant estimated 24-hr and annual secondary PM<sub>2.5</sub> concentrations of 0.18949 µg/m<sup>3</sup> and 0.00231 µg/m<sup>3</sup>, respectively. When these estimates are added to the GLCmax listed in Table 4 above, the results are less than the NAAQS.

### D. Increment Analysis

The De Minimis analysis modeling results indicate that 24-hr and annual PM<sub>10</sub> and 24-hr and annual PM<sub>2.5</sub> exceed the respective de minimis concentrations and require a PSD increment analysis.

**Table 5. Results for PSD Increment Analysis**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Increment (µg/m <sup>3</sup> )
PM <sub>10</sub>	24-hr	29	30
PM <sub>10</sub>	Annual	3	17
PM <sub>2.5</sub>	24-hr	8.7	9
PM <sub>2.5</sub>	Annual	2.7	4

The GLCmax for 24-hr PM<sub>2.5</sub> and 24-hr PM<sub>10</sub> is the maximum high, second high (H2H) predicted concentration across five years of meteorological data. The GLCmax for annual PM<sub>10</sub> and PM<sub>2.5</sub> is the maximum predicted concentration over five years of meteorological data.

The GLCmax for 24-hr and annual PM<sub>2.5</sub> reported in the table above represent the total predicted concentrations associated with modeling the direct PM<sub>2.5</sub> emissions and the contributions associated with secondary PM<sub>2.5</sub> formation (discussed above in the NAAQS Analysis section).

### E. Additional Impacts Analysis

The applicant performed an Additional Impacts Analysis as part of the PSD AQA. The applicant conducted a growth analysis and determined that population will not significantly increase as a result of the proposed project. The applicant conducted a soils and vegetation analysis and determined that all evaluated criteria pollutant concentrations are below their respective secondary NAAQS. The applicant meets the Class II visibility analysis requirement by complying with the opacity requirements of 30 TAC Chapter 111.

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The Additional Impacts Analyses are reasonable and possible adverse impacts from this project are not expected.

The ADMT evaluated predicted concentrations from the proposed project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Wichita Mountains Wilderness, is located approximately 225 kilometers (km) from the proposed site.

The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration of 7 µg/m<sup>3</sup> occurred approximately 243 meters from the property line towards the west. The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration occurring at the edge of the receptor grid, 10.6 km from the proposed sources, in the direction of the Wichita Mountains Wilderness Class I area is 0.526 µg/m<sup>3</sup>. The Wichita Mountains Wilderness Class I area is an additional 214.4 km from the edge of the receptor grid. Therefore, emissions of H<sub>2</sub>SO<sub>4</sub> from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

The predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times, are all less than de minimis levels at a distance of 7.3 km from the proposed sources in the direction the Wichita Mountains Wilderness Class I area. The Wichita Mountains Wilderness Class I area is an additional 217.7 km from the location where the predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

### F. Minor Source NSR and Air Toxics Analysis

**Table 6. Site-wide Modeling Results for State Property Line**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	12	1021
H <sub>2</sub> SO <sub>4</sub>	1-hr	22	50
H <sub>2</sub> SO <sub>4</sub>	24-hr	7	15

**Table 7. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLCmax] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
Pb	3-mo	0.0001	0.02	0.0201	0.15

The 3-mo Pb GLCmax is based on the maximum monthly predicted concentration over a one-year period.

A background concentration for Pb was obtained from the EPA AIRS monitor 480850029 located at 7202 Stonebrook Parkway, Frisco, Collin County. The highest 3-month rolling average from 2020-2022 was used for the 3-month value. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

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**Table 8. Minor NSR Site-wide Modeling Results for Health Effects**

Pollutant	CAS#	Averaging Time	GLCmax (µg/m³)	GLCmax Location	ESL (µg/m³)
ammonia	7664-14-7	1-hr	17	Eastern Property Line	180
hydrogen chloride	7647-01-0	1-hr	0.3	--	190
hydrogen chloride	7647-01-0	Annual	0.01	--	7.9
mercury	7439-97-6	1-hr	0.0004	--	0.25
portland cement	65997-15-1	1-hr	53	Southern Property Line	50
portland cement	65997-15-1	Annual	1	15m N	5
silica, crystalline (quartz)	14808-60-7	1-hr	2	Northern Property Line	14
silica, crystalline (quartz)	14808-60-7	Annual	0.07	Southern Property Line	0.27

**Table 9. Minor NSR Hours of Exceedance for Health Effects**

Pollutant	Averaging Time	1 X ESL GLCni
portland cement	1-hr	1

The GLCmax locations are listed in Table 8 above by their approximate distance and direction from the property line of the project site. The GLCmax also represents the GLCni. The GLCmax locations for hydrogen chloride and mercury are not available since the applicant relied on generic modeling (see discussion below).

### 3. Model Used and Modeling Techniques

AERMOD (Version 22112) was used in a refined screening mode.

For the Pb NAAQS analysis, H<sub>2</sub>SO<sub>4</sub> State Property Line analyses, and mercury and hydrogen chloride health effects analyses, a unitized emission rate of 1 lb/hr was used to predict a generic short-term and long-term impact for each source. The generic impact was multiplied by the proposed pollutant specific emission rates to calculate a maximum predicted concentration for each source. The maximum predicted concentration for each source was summed to get a total predicted concentration for each pollutant.

The applicant evaluated two scenarios representing the two operating modes of EPN 21-SK-230 that affect the modeled parameters. EPN 21-SK-230 represents the shared stack for the natural gas fired preheater / precalciner kiln system with inline raw mill and clinker cooler. Modeling scenario 21SK\_ON represents the stack parameters for the raw mill on and modeling scenario 21SK\_OFF represents the raw mill off. Results from the worst-case source (21SK\_OFF) are reported in the tables above and included in the full Increment analyses, full NAAQS analyses, and sitewide health effects analyses.



# TCEQ Interoffice Memorandum

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The applicant conducted the 1-hr and annual NO<sub>2</sub> NAAQS analyses using the ARM2 model option following EPA guidance.

## **A. Land Use**

Low roughness and elevated terrain were used in the modeling analysis. These selections are consistent with the AERSURFACE analysis, topographic map, DEMs, and aerial photography. The selection of low roughness is reasonable.

## **B. Meteorological Data**

Surface Station and ID: Denton, TX (Station #: 3991)  
Upper Air Station and ID: Fort Worth, TX (Station #: 3990)  
Meteorological Dataset: 2017-2021 for all PSD analyses, 2020 for all minor analyses  
Profile Base Elevation: 195.7 meters

## **C. Receptor Grid**

The grid modeled was sufficient in density and spatial coverage to capture representative maximum ground-level concentrations and exceedances.

## **D. Building Wake Effects (Downwash)**

Input data to Building Profile Input Program Prime (Version 04274) are consistent with the plot plan and modeling report.

## **4. Modeling Emissions Inventory**

The modeled emission point, area and volume source parameters and rates were consistent with the modeling report. The source characterizations used to represent the sources were appropriate.

For the 1-hr SO<sub>2</sub> and 1-hr NO<sub>2</sub> de Minimis and NAAQS analyses, emissions from the emergency generator engine (EPN EG-1) were modeled with an annual average emission rate, consistent with EPA guidance for evaluating intermittent emissions. Emissions from the emergency generator engine were represented to occur for no more than 100 hours per year.

For the 24-hr PM<sub>10</sub> and 24-hr PM<sub>2.5</sub> analyses, the maximum hourly emission rate for the emergency generator engine (EPN EG-1) was divided by 24 to account for one hour of operation within a 24-hr period.

For the 24-hr PM<sub>10</sub> and 24-hr PM<sub>2.5</sub> analyses, the maximum hourly emission rate for model ID: MSSVACLD was modeled with an average rate. Emissions from model ID: MSSVACLD were represented to occur for 8 hours per day.

For the 24-hr PM<sub>10</sub> and 24-hr PM<sub>2.5</sub> analyses, the maximum hourly emission rate for model ID: MSSVACUL was modeled with an average rate. Emissions from model ID: MSSVACUL were represented to occur for 1 hour per day.

For the 24-hr PM<sub>10</sub> and 24-hr PM<sub>2.5</sub> analyses, the maximum hourly emission rate for model ID: MSSRFAC was modeled with an average rate. Emissions from model ID: MSSRFAC were represented to occur for 12 hours per day.

Except as mentioned above, maximum allowable hourly emission rates were used for the short-term averaging time analyses, and annual average emission rates were used for the annual averaging time analyses.

**AR-20**  
**Application Supplement**

**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Friday, October 20, 2023 5:09 PM  
**To:** Joel Stanford  
**Cc:** jake@highrollergroup.com; R6AirPermitsTX@epa.gov; RFCAIR4  
**Subject:** Application Supplement - Black Mountain Dorchester - NSR#167047, Project #335160  
**Attachments:** Rev Dorchester Supplement (2023-1020).pdf; PI-1 Workbook\_Suppl (2023-1020).xlsx

Joel,

Attached please find a supplemental filing to the above-referenced application. The supplement updates the control technology description and the controlled NOx emissions from the kiln based on revised vendor data.

If you have questions, comments, or wish to discuss, please do not hesitate to contact me.

Regards,  
Mike

**Michael Meister**  
Principal Consultant

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October 20, 2023

Mr. Joel Stanford  
Air Permits Division  
Texas Commission on Environmental Quality  
12100 Park 35 Circle, MC 161  
Building C, Third Floor  
Austin, TX 78753  
[Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov)

*RE: Prevention of Significant Deterioration (PSD) Permit Application Supplement  
Permit Numbers: 167047, GHGPSDTX212 and PSDTX1602  
BM Dorchester LLC - Dorchester Plant  
Dorchester, Grayson County, Texas  
Customer Reference Number: CN605952373  
Regulated Entity Reference Number: RN111368437*

Dear Mr. Stanford:

BM Dorchester LLC (Black Mountain) is submitting a revised permit application supplement for the PSD Project No. 335160 submitted to the Texas Commission on Environmental Quality (TCEQ) on November 8, 2021. The only change from the May 26, 2023 supplement described below is the hourly oxides of nitrogen (NO<sub>x</sub>) emission rate from the kiln and adding flexibility for the proposed NO<sub>x</sub> control technology depending on the final vendor selected.

The supplemental application components affected by the changes are summarized as follows:

- ▶ Process Description and Process Flow Diagram (Pages 2-1 through 2-3)
- ▶ Emissions Calculations (Page 5-1)
- ▶ TCEQ Forms – See revised TCEQ Forms Table 1F and Table 2F - NO<sub>x</sub>;
- ▶ BACT Analysis – Update BACT for kiln NO<sub>x</sub> BACT (Pages 9-2 and 9-3); and
- ▶ Appendix C. Detailed Emissions Calculations – Detailed revised calculations for kiln and associated summary tables

This supplemental application includes an updated Unit Types – Emission Rates tab and BACT tab in the TCEQ PI-1 workbook for the kiln NO<sub>x</sub> emissions.

#### **HEADQUARTERS**

12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203

-----  
If you have any questions or comments about the information presented in this letter, please do not hesitate to call me at 361-883-1668 or via email at [mmeister@trinityconsultants.com](mailto:mmeister@trinityconsultants.com).

Sincerely,

TRINITY CONSULTANTS

A handwritten signature in black ink that reads "Michael Meister". The signature is written in a cursive style with a long, sweeping underline.

Mr. Michael Meister  
Principal Consultant

cc: TCEQ Region 4, Dallas/Fort Worth  
U.S. Environmental Protection Agency (U.S. EPA) Region 6 ([R6AirPermitsTX@epa.gov](mailto:R6AirPermitsTX@epa.gov))  
Mr. Jake Bender, BM Dorchester LLC (electronic)

# **TCEQ AIR QUALITY NEW SOURCE REVIEW PERMIT APPLICATION (SUPPLEMENT)**

**BM Dorchester LLC / Black Mountain Dorchester Plant**

**Prepared By:**

Michael Meister – Principal Consultant  
Kate Gross – Managing Consultant  
Stephen Beene – Senior Consultant

**TRINITY CONSULTANTS**

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Suite 2100  
Dallas, TX 75251  
(972) 661-8100

October 2023

Project 214401.0054





## **2. PROCESS DESCRIPTION AND PROCESS FLOW DIAGRAMS**

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The proposed Dorchester Plant will be located in Dorchester, Grayson County, Texas. The plant covers approximately 660 acres along Farm to Market (FM) 902 and Dorchester Road. An area map and plot plan of the proposed Dorchester Plant are provided in Appendix A.

A majority of the limestone used in the portland cement production process is drawn from an on-site quarry. The limestone is crushed and blended on-site, then fed into the kiln system to be calcined. Portland cement clinker then exits the kiln and is cooled. The clinker is then mixed with other materials, such as gypsum, and milled into a fine powder (cement) before being shipped offsite by truck or rail. Best management practices will be employed to minimize emissions from the paved plant roads.<sup>2</sup>

The following subsections provide a detailed process description of the proposed plant. Process flow diagrams are provided at the end of this section.

### **2.1 Raw Material Handling and Storage**

Black Mountain will mine limestone from the on-site quarry. There will be drilling, blasting, truck loading, and hauling activities associated with these mining activities. Best management practices will be employed to minimize emissions from the quarry and associated roads.<sup>3</sup>

The mined limestone from the quarry will be hauled to a limestone crusher building by truck, where it will be crushed and conveyed in an enclosed storage building referred to as the limestone storage building. From the limestone storage building, the limestone will be conveyed to the raw material storage bins which feed the raw mill. Dust collectors will be used to control particulate matter (PM) emissions from stationary equipment where feasible (e.g., hoppers, crushers, feeders, and conveyor transfer points).

Raw materials and cement additives that are not mined on-site, such as gypsum, high grade limestone, and sand will be hauled to the plant by truck or rail to an additive storage building. The trucks will unload the materials into a hopper that will convey the materials to specific locations in the building for storage. From the additive storage building, the materials will be conveyed to the raw material storage bins or will be conveyed to the finish mill and used as an additive to the cement.

### **2.2 Raw Material Milling, Blending, and Storage**

The raw material components to be ground in the raw mill typically include limestone, limestone fines, shale, and sandstone. These or similar raw material components will be blended to provide the desired chemistry for use as raw materials for the production of cement clinker. The raw materials will then be metered in the right proportion and conveyed to the raw mill via a common conveyor belt system.

The function of the raw mill is to dry and grind the raw materials. Mix components will be blended to achieve the required chemistry for the manufacture of clinker. In the raw mix area, the raw materials will pass through a metal separator and detector system to eliminate any metal into the mill and the clean raw

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<sup>2</sup> Per Title 30 of the Texas Administrative Code (30 TAC) 116.10(4), a mine, quarry, well test, or road is not a facility.

<sup>3</sup> Ibid

material will be fed to the mill through a sealing arrangement, such as a rotary feeder or a sluice gate valve. The material will be dropped onto the rotating grinding table through the mill feed chute by gravity.

The raw mill will utilize the heat in the waste gases from the preheater and the cooler for drying and maintaining the raw meal temperature. The Raw Mill fan will draw the hot gases through the mill from below the grinding table. The hot gas will pick up the feed and the gas-dust mixture will then pass through a high efficiency separator that will classify the material and return coarse particles to the mill table. The fine particles (meal) will be transported out of the mill to four (4) cyclones by the mill sweep gas. The material captured in the cyclones will then be transported by a conveyor system to the Homogenizing silo.

Each of the transfer points in this process route will use a bag filter to capture the fugitive dust and recycle into the process before letting the air into ambient.

A major portion of the finished raw meal will be removed from the gas stream in the cyclones after the mill, while the remaining fine particles will be collected in the main bag filter. The cleaned gas will then be exhausted into a dry scrubber and to the atmosphere through an exhaust stack (referred to as the main stack or kiln stack). The main stack will also include the gases from the kiln bypass system. When the raw mill system is not operating, the preheater gases will be cooled in the in-line gas conditioning tower and will be bypassed around the raw mill directly to the bag filter. The preheater and raw meal dust removed by the bag filters will be sent either to the homogenizing silo, to be combined with the kiln feed after the homogenizing silo, or to a kiln dust bin.

## **2.3 Kiln System**

The preheater is a four (4) stage tower with an in-line calciner. The raw meal from the homogenizing silo will be metered and introduced to the preheater in the gas inlet duct of the first stage (top) cyclone. The material will be preheated by the hot kiln and precalciner flue gas as it drops through the stages of the preheater before entering the precalciner.

Fuel is burnt in the precalciner to provide thermal energy to achieve a high level of calcination to the feed material. Combustion air for the precalciner is drawn from the kiln hood at the front end of the kiln through the tertiary air duct. A preheater bypass system is provided at the back end of the kiln to control sulfur and chlorides to minimize operational problems.

The precalciner is specially designed for reducing the NO<sub>x</sub> content in the kiln gases. The kiln riser pipe + precalciner system has a low NO<sub>x</sub> zone at the bottom, where reducing conditions prevail with the presence of CO. The nitrogen oxides are reduced to N<sub>2</sub> gas and CO oxidizing to CO<sub>2</sub>. At a higher level, fuel and feed from the last-but-one cyclone is introduced along with the tertiary air, where the fuel burns up and the energy used for calcining the carbonates in the feed material. The exit gas from the calciner enters the lowermost cyclone, where the material is separated and fed to the kiln while the gases move up to the higher stage cyclones.

Depending on the final vendor selected, the NO<sub>x</sub> control technology will consist of selective catalytic reduction (SCR) or a combination of SCR and selective non-catalytic reduction (SNCR). The low NO<sub>x</sub> precalciner and the NO<sub>x</sub> control system ensures compliance with New Source Performance Standards (NSPS) for NO<sub>x</sub>.

The entire gases through the kiln and preheater will be drawn by a preheater fan placed after the conditioning tower. After the preheater ID fan, the gases will be taken either to the raw mill when the raw mill is on or to the main baghouse when the raw mill is off.

The raw mill system is designed to utilize the maximum amount of waste heat in the kiln and cooler gases. The raw mill utilizes the entire preheater gas plus a part of the cooler gas, which is further heated in a hot gas generator to give the desired gas temperature at the raw mill inlet. This additional heating becomes necessary due to the very high moisture level found in the raw materials.

The raw mill additionally serves as a scrubbing system for the acids and SO<sub>2</sub> in the preheater gases. In addition, a dry scrubber will be installed after the baghouse to bring down the SO<sub>2</sub> level below the NSPS limit. The dry scrubber becomes more useful when the raw mill is not in operation and the entire preheater gases need to be treated for SO<sub>2</sub> without the benefit of being scrubbed in the raw mill.

From the raw material analysis, there could be some requirement to remove the SO<sub>2</sub> from the kiln gases prior to entering the preheater to minimize the potential plugging problem. For this purpose, a bypass arrangement is provided. It is currently estimated that less than 5% of the kiln gases may need to be bypassed, although the design provides up to 10% bypass.

The bypass system consists of a quenching chamber, a baghouse, and a fan. Due to a small bypass provision, only air cooling is considered with no gas conditioning tower. Since the gases are already cleaned, it is routed directly to the main stack.

The bag filter will remove the volatile enriched dust from the cooled kiln gas. A dust bin will store the kiln dust from the bypass system until it is ready for removal from the system.

The kiln will utilize a burner with low primary air consumption to reduce emissions. Automatic control loops will be used to optimize kiln performance and minimize fuel consumption. The main burner will be designed to burn natural gas.

## **2.4 Clinker Cooler and Clinker Storage**

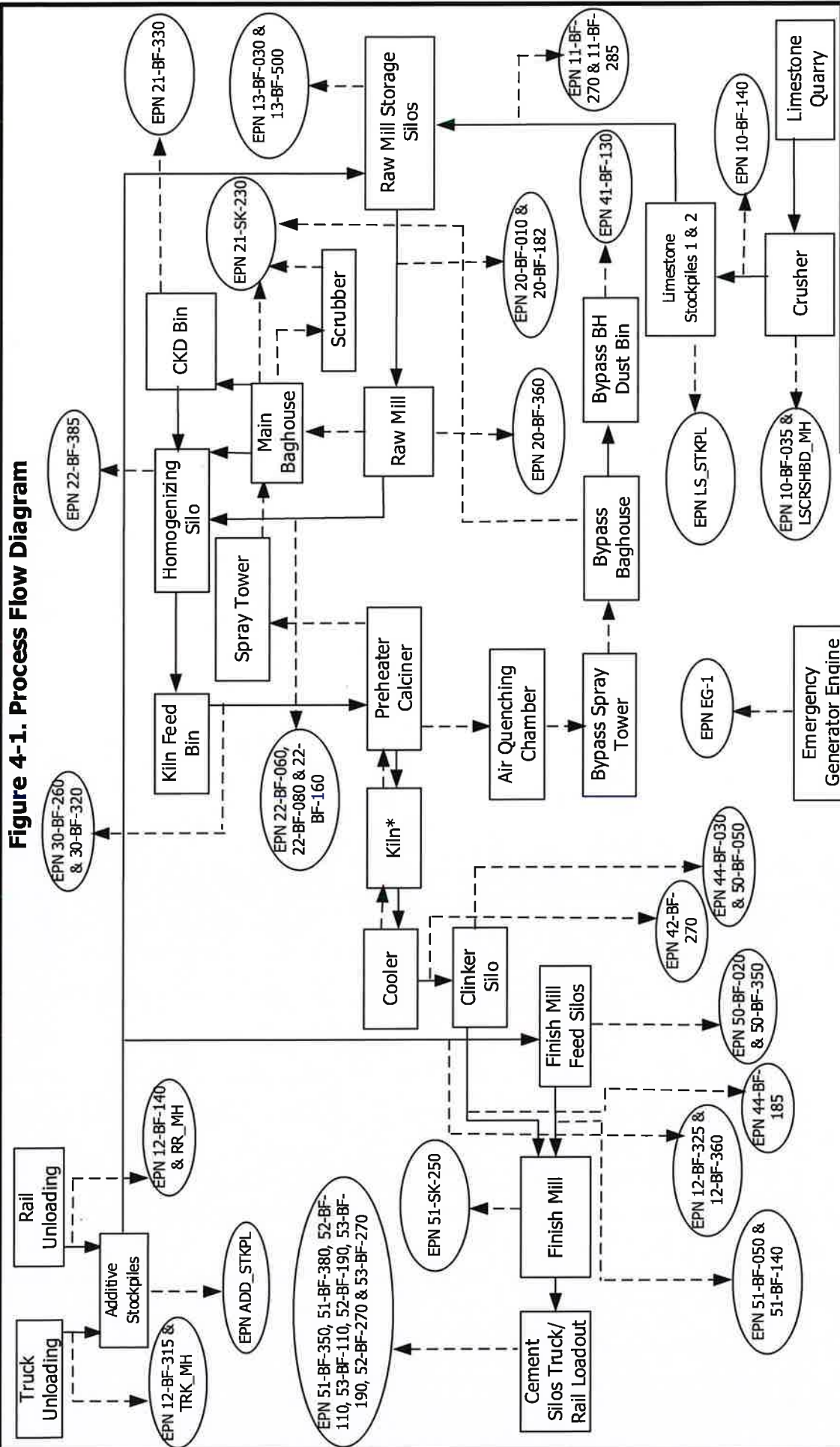
A clinker cooler will be installed to rapidly cool the hot clinker leaving the kiln. The hot air leaving the clinker cooler will be used as secondary combustion air in the kiln, as tertiary air to the precalciner for combustion of the precalciner fuel. The vent air from the cooler will be sent to the raw mill section through a booster fan and will be cleaned in the main baghouse as described earlier. The main stack thus handles all gases from the preheater, bypass gases and the clinker cooler vent air.

Once the clinker leaves the cooler, it will be conveyed by a series of bag filter-controlled conveyors, through diversion gates, and into a clinker storage building. From the clinker storage building, the clinker will be conveyed to the finish mill system for grinding and blending with the other cement constituents (e.g., gypsum, limestone). As with other material handling and storage, bag filters involved with this project return collected particulates to the transfer and storage system to minimize product loss.

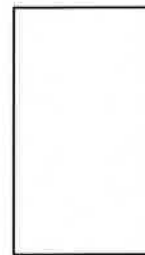
## **2.5 Finish Mill**

Clinker will be supplied from the clinker storage building to a feed bin by a series of bag filter-controlled conveyor belts and gates. There will be mill feed bins for the line (including a clinker feed bin, gypsum feed

**Figure 4-1. Process Flow Diagram**



**Legend**



Process

Emissions

**Black Mountain**  
Dorchester, TX

Dorchester Facility  
October 2023

Process Flow Diagram



Date: 10/19/2023

\*A SCR and/or SNCR control system will be installed to control NOx emissions from the kiln

### **3. TCEQ FORMS**

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**Table 1F (Revised)**

**Table 2F (Revised)**



**TABLE 1F  
AIR QUALITY APPLICATION SUPPLEMENT**

Permit No.: TBA				Application Submittal Date: November 5, 2021 (Rev. October 2023)				
Company: BM Dorchester LLC								
RN: TBA				Facility Location:				
City: Dorchester				County: Grayson				
Permit Unit I.D:				Permit Name: Dorchester Facility				
Permit Activity: <input checked="" type="checkbox"/> New Source <input type="checkbox"/> Modification								
Complete for all Pollutants with a Project Emission Increase.	POLLUTANTS							
	Ozone		CO	PM <sub>10</sub>	PM <sub>2.5</sub>	NO <sub>x</sub>	SO <sub>2</sub>	Other <sup>1</sup>
	VOC	NO <sub>x</sub>						
Nonattainment?	--	--	--	--	--	--	--	--
PSD?	--	--	YES	YES	YES	YES	YES	YES
Existing Site PTE (tpy)?	--	--	--	--	--	--	--	--
Proposed project emission increases (tpy from 2F <sup>2</sup> )?	--	--	1606.47	217.07	216.16	290.14	213.35	See below
Is the existing site a major source?	--	--	--	--	--	--	--	--
If not, is the project a major source by itself?	--	--	Yes	Yes	Yes	Yes	Yes	YES
If site is a major source, is project increase significant?	--	--	Yes	Yes	Yes	Yes	Yes	See below
If netting requires, estimated start of construction: N/A								
5 years prior to start of construction						contemporaneous		
Estimated start of operation						period		
Net contemporaneous change, including proposed project, from Table 3F. (tpy)	--	--	--	--	--	--	--	--
Major NSR Applicable?	--	--	YES	YES	YES	YES	YES	YES
Signature			Title			Date		

<sup>1</sup> Other pollutants. [Pb, H<sub>2</sub>S, TRS, H<sub>2</sub>SO<sub>4</sub>, Fluoride excluding HF, etc.]

H <sub>2</sub> SO <sub>4</sub>	58.66	YES
Pb	0.04	NO
CO <sub>2</sub> e	989,655	YES

<sup>2</sup> Sum of proposed emissions minus baseline emissions, increases only.

The representations made above and on the accompanying tables are true and correct to the best of my knowledge.





TABLE 2F  
PROJECT EMISSION INCREASE

Pollutant <sup>1</sup> : NO <sub>x</sub>										Permit: TBA									
Baseline Period:												to							
Affected or Modified Facilities <sup>2</sup>		EPN		Permit No.		Actual Emissions <sup>3</sup>		Baseline Emissions <sup>4</sup>		Proposed Emissions <sup>5</sup>		Projected Actual Emissions		Difference (B-A) <sup>6</sup>		Correction <sup>7</sup>		Project Increase <sup>8</sup>	
FIN																			
1	KILN	21-SK-230		TBA		0		0		289.00				289.00				289.00	
2	FM	51-SK-250		TBA		0		0		0.70				0.70				0.70	
3	EG-1	EG-1		TBA		0		0		0.44				0.44				0.44	
4	MSSFUG	MSSFUG		TBA		0		0		3.47E-03				3.47E-03				3.47E-03	
														Page Subtotal <sup>9</sup>		0		290.14	

<sup>1</sup> Individual Table 2Fs should be used to summarize the project emission increase for each criteria pollutant

<sup>2</sup> Emission Point Number as designated in NSR Permit or Emissions Inventory

<sup>3</sup> All records and calculations for these values must be available upon request

<sup>4</sup> Correct actual emissions for currently applicable rule or permit requirements, and periods of non-compliance. These corrections, as well as any MSS previously demonstrated under 30 TAC 101, should be explained in the Table 2F supplement

<sup>5</sup> If projected actual emission is used it must be noted in the next column and the basis for the projection identified in the Table 2F supplement

<sup>6</sup> Proposed Emissions (column B) minus Baseline Emissions (column A)

<sup>7</sup> Correction made to emission increase for what portion could have been accommodated during the baseline period. The justification and basis for this estimate must be provided in the Table 2F supplement

<sup>8</sup> Obtained by subtracting the correction from the difference. Must be a positive number.

<sup>9</sup> Sum all values for this page.

Pollutant:		Line	Type <sup>10</sup>
Explanation:			

<sup>10</sup> Type of note. Generally would be baseline adjustment, basis for projected actual, or basis for correction (what could have been accommodated).

## 9. BACT ANALYSIS

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### 9.1 General PSD BACT Methodology

This section of the permit application evaluates BACT for proposed equipment affected by this permit application as set forth in 30 TAC 116.111(a)(2)(C).

The U.S. EPA has agreed to accept the TCEQ's three-tier approach outlined in the TCEQ BACT Guidance as equivalent to the U.S. EPA's Top-Down method for PSD review when the control technologies contained within the U.S. EPA Reasonably Available Control Technology (RACT)/BACT/Lowest Achievable Emission Rate (LAER) Clearinghouse (RBLC) database are considered.<sup>15</sup> Discussion on how the Dorchester Plant meets the TCEQ's three-tiered approach is presented within this section. A supporting RBLC search summary is provided in Appendix D for reference.

#### 9.1.1 TCEQ BACT Guidance

TCEQ guidance for preparing BACT proposals for NSR air permit applications in Texas outlines a three-tiered analysis approach. The evaluation begins at the first tier (Tier I) and continues through subsequent tiers, if necessary, as determined by the evaluation process. A Tier I BACT review involves an analysis of emission reduction performance levels accepted as BACT in recent permit reviews for the same process and/or industry. In some cases, an evaluation of new technical developments may be warranted if the new technical developments offer greater performance levels, resulting in greater emission reductions. In the absence of new technical developments that indicate that additional reductions are economically and technically reasonable, emission reduction performance levels accepted as BACT in recent permit reviews for the same process and/or industry are considered BACT for the process being analyzed. In this case, technical practicability and economic reasonableness are established based on historical and current practice. If a determination of BACT cannot be made in the Tier I BACT analysis, the applicant must proceed to a Tier II BACT analysis. Black Mountain has elected to utilize Texas's three-tiered analysis approach to determine BACT for the PSD triggering pollutants and has proposed that the facilities at the Dorchester Plant will meet the requirements of a Tier I BACT; therefore, no discussion of the subsequent tiers are presented in this section. The PI-1 Workbook provides a summary of TCEQ's Tier I BACT requirements and proposed BACT for normal operations and MSS activities associated with proposed Dorchester Plant.

The following sections provide details on the BACT assessment methodology utilized in preparing the BACT analysis for the Dorchester Plant. The minimum control efficiency to be considered in a BACT assessment must result in an emission rate less than or equal to any applicable NSPS or NESHAP emission rate for the source. The applicable NSPS or NESHAP emission limits will apply to proposed equipment and effectively set the floor for BACT for these units for certain pollutants.

#### 9.1.2 Identification of Potential Control Technologies – RBLC Search

Potentially applicable emission control technologies are identified by researching the U.S. EPA control technology database, technical literature, control equipment vendor information, state permitting authority files, and by using process knowledge and engineering experience. The RBLC Clearinghouse, a database made available to the public through the U.S. EPA's Office of Air Quality Planning and Standards (OAQPS) Technology Transfer Network (TTN), lists technologies and corresponding emission limits that have been

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<sup>15</sup> TCEQ, Air Permits Division, Air Pollution Control – How to Conduct a Pollution Control Evaluation, APDG 6110v2, January 2011

approved by regulatory agencies in permitting actions. These technologies are grouped into categories by industry and can be referenced in determining what emissions levels were proposed for similar types of emissions units. A RBLC database search was performed as a supplement to the TCEQ's three-tiered approach to identify the emission control technologies and emission levels that were determined by permitting authorities as BACT within the past ten years for the emission sources comparable to those at the Dorchester Plant. Appendix D includes the RBLC search results summary.

## **9.2 Cement Kiln**

### **9.2.1 CO Emissions**

CO emissions from cement kiln pyroprocessing systems generally occur from two separate and distinct processes in the system: 1) products of incomplete combustion of fuel and 2) decomposition of organic material in the kiln feed. Each CO formation process occurs under uniquely different conditions and is defined by the process technology and feed materials. Depending on the geological strata of the feed materials, the composition and concentration of the organic materials in the kiln feed (meal) may vary significantly.

Review of the RBLC database presented in Appendix D indicate that proper design and operation represents BACT for CO in portland cement kilns. Black Mountain proposes a limit of 3.0 pounds of CO per ton of clinker (lb CO/ton clinker) on a 12-month rolling average, as BACT for CO using good combustion practices. This proposed limit is consistent with the BACT determination made by the TCEQ for other cement plants in Texas. The proposed kiln system will utilize many of the same raw materials as other sites presented in Appendix D and therefore the 3.0 lb CO/ton clinker emission limit is appropriate and represents BACT for Black Mountain.

### **9.2.2 PM, PM<sub>10</sub>, PM<sub>2.5</sub> Emissions**

Particulate emissions from cement kilns comprise of filterable and condensable forms of PM. Baghouse filters are the industry preferred devices for particulate control for the filterable PM emissions. The proposed kiln is subject to a PM (filterable) limit under NSPS Subpart F and NESHAP Subpart LLL. Review of the RBLC database presented in Appendix D indicates that a baghouse represents BACT for PM (filterable). Black Mountain proposes a limit of approximately 0.30 pounds of PM per ton of clinker (lb PM/ton clinker) with a filterable PM rate of 0.02 lb PM/ton clinker and condensable PM rate of 0.28 lb PM/ton clinker using a fabric filter system and scrubber, which is comparable to other cement kilns in Texas with similar configurations and raw materials identified in the RBLC database.

### **9.2.3 NO<sub>x</sub> Emissions**

Review of the RBLC database presented in Appendix D indicates that a combination of staged combustion, low NO<sub>x</sub> burners, good combustion practices and SNCR represents BACT for NO<sub>x</sub> in portland cement kilns that will achieve 1.5 pounds of NO<sub>x</sub> per ton of clinker (lb NO<sub>x</sub>/ton clinker) on a 30-day rolling average.

Nevertheless, to further reduce the impact on ozone concentrations in the nearby DFW ozone nonattainment area, Black Mountain proposes to exceed BACT for NO<sub>x</sub> by installing an SCR system or a combination of SCR and SNCR with a limit of 0.54 lb NO<sub>x</sub>/ton clinker on an hourly average basis for NO<sub>x</sub>, which is less than the current BACT limit that is based on the 40 CFR Part 60 Subpart F emission limit.

#### **9.2.4 SO<sub>2</sub> and Acid Gas Emissions**

Portland cement kiln SO<sub>2</sub> emissions result from sulfur in both the fuel and the raw feed material.

Black Mountain proposes a limit of 0.4 pounds of SO<sub>2</sub> per ton of clinker (lb SO<sub>2</sub>/ton clinker) on a 30-day rolling average per 40 CFR Part 60 Subpart F, as BACT for SO<sub>2</sub>. SO<sub>2</sub> control will be provided by the alkali absorption inherent in the precalciner kiln, the use of low sulfur content natural gas as fuel, and a scrubber.

Similar to SO<sub>2</sub>, emissions of H<sub>2</sub>SO<sub>4</sub> are dependent on the sulfur content in the raw feed material, kiln fuels, and process conditions. Black Mountain proposes a BACT limit of H<sub>2</sub>SO<sub>4</sub> of 0.11 lb/ton clinker on an annual basis and 1.1 lb/ton clinker on an hourly basis when the in-line raw mill and scrubber are not operating. Black Mountain proposes a BACT limit of 3 ppmvd @ 7% O<sub>2</sub> for HCl emissions on a 30-day rolling average per 40 CFR Part 63 Subpart LLL.

#### **9.2.5 VOC Emissions**

Similar to CO, VOC emissions from cement kilns generally occur from products of incomplete combustion of fuel and from the organic materials contained in the kiln feed.

Review of the RBLC database presented in Appendix D indicate that the VOC BACT determinations vary depending on composition and concentration of the organic materials from the quarry.

Since this will be a new plant and only preliminary organic information is available from the quarry, Black Mountain proposes a limit of 24 ppmv @7% O<sub>2</sub> for THC on a 30-day rolling average per 40 CFR Part 63 Subpart LLL or the alternative limit of 12 ppmvd total organic HAP (30 day rolling average), as BACT for VOC using good combustion practices.

#### **9.2.6 GHG Emissions**

The CO<sub>2</sub> emissions from a cement kiln are generated by the calcination process and by combustion of fuel in the kiln.

Review of the RBLC database presented in Appendix D indicate that proper design and operation represents BACT for CO<sub>2</sub>e in portland cement kilns. Black Mountain proposes a limit of 0.92 lb/ton clinker a 30-day rolling average as BACT for CO<sub>2</sub>e.

#### **9.2.7 Ammonia (NH<sub>3</sub>) Emissions**

An SCR system or combination of SCR and SNCR is proposed for control of NO<sub>x</sub> emissions from the cement kiln at the Dorchester Plant. The SCR system or combination of SCR and SNCR will be operated in a manner to minimize ammonia (NH<sub>3</sub>) slip. Similar to other recent proposed cement kilns in Texas, Black Mountain proposes a limit of 35 ppmv @7% O<sub>2</sub> for ammonia (NH<sub>3</sub>) on a 30-day rolling average, as BACT for ammonia (NH<sub>3</sub>).

### **9.3 BACT Analysis for Other Project Sources**

The proposed project involves the construction of equipment for limestone crushing and pre-blending, raw grinding, raw meal blending, pyro-processing, clinker cooling, cement grinding, cement storage systems, and an emergency generator. All of the emission sources being constructed as part of the project will be subject to either a NSPS (i.e., NSPS Subpart F, NSPS Subpart OOO, or NSPS Subpart JJJJ), a NESHAP (NESHAP Subpart LLL or NESHAP Subpart ZZZZ), or both an NSPS and a NESHAP.

## **APPENDIX C. DETAILED EMISSION CALCULATIONS**

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## Emissions Summary

EPN	Description	Hourly Emission Rate (lb/hr)												
		NO <sub>x</sub>	SO <sub>2</sub>	H <sub>2</sub> SO <sub>4</sub>	HCl	CO	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	Pb	Hg	VOC	NH <sub>3</sub>	CO <sub>2</sub> e
21-SK-230	Cement Kiln Baghouse Stack	75.340	83.325	152,763	2.376	1,249,875	41.663	41.663	41.663	0.010	0.003	25,237	12,950	---
51-SK-250	Finish Mill Baghouse Stack	0.159	0.009	---	---	1,309	3.226	3.226	3.226	---	---	0.086	---	---
10-BF-035	Crusher Building Baghouse	---	---	---	---	---	1.362	1.362	1.362	---	---	---	---	---
10-BF-140	Material Transfer (LS to Storage) Baghouse	---	---	---	---	---	0.252	0.252	0.252	---	---	---	---	---
12-BF-140	Additive Unloading (Rail) Baghouse	---	---	---	---	---	0.252	0.252	0.252	---	---	---	---	---
11-BF-270	Material Transfer (LS to Hopper) Baghouse	---	---	---	---	---	0.202	0.202	0.202	---	---	---	---	---
11-BF-285	Material Transfer (LS to Hopper) Baghouse	---	---	---	---	---	0.202	0.202	0.202	---	---	---	---	---
12-BF-315	Truck Unloading Baghouse	---	---	---	---	---	0.757	0.757	0.757	---	---	---	---	---
12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse	---	---	---	---	---	0.202	0.202	0.202	---	---	---	---	---
12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse	---	---	---	---	---	0.126	0.126	0.126	---	---	---	---	---
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	---	---	---	---	---	0.126	0.126	0.126	---	---	---	---	---
13-BF-500	Raw Mill Feed Bin Building Baghouse	---	---	---	---	---	0.429	0.429	0.429	---	---	---	---	---
20-BF-010	Raw Mill Building Baghouse	---	---	---	---	---	0.303	0.303	0.303	---	---	---	---	---
20-BF-182	Raw Mill Building Baghouse	---	---	---	---	---	0.202	0.202	0.202	---	---	---	---	---
20-BF-360	Raw Mill Building Baghouse	---	---	---	---	---	0.114	0.114	0.114	---	---	---	---	---
21-BF-330	Top of CKD Bin Baghouse	---	---	---	---	---	0.076	0.076	0.076	---	---	---	---	---
22-BF-060	Bottom of Raw Meal Silo Baghouse	---	---	---	---	---	0.227	0.227	0.227	---	---	---	---	---
22-BF-080	Preheater Tower Baghouse	---	---	---	---	---	0.126	0.126	0.126	---	---	---	---	---
22-BF-160	Top of Raw Meal Silo Baghouse	---	---	---	---	---	0.378	0.378	0.378	---	---	---	---	---
22-BF-385	Top of Surge Bin (RM Silo) Baghouse	---	---	---	---	---	0.126	0.126	0.126	---	---	---	---	---
30-BF-260	Bottom of Preheater Tower Baghouse	---	---	---	---	---	0.202	0.202	0.202	---	---	---	---	---
30-BF-320	Top of Preheater Tower Baghouse	---	---	---	---	---	0.114	0.114	0.114	---	---	---	---	---
42-BF-270	Cooler Discharge Baghouse	---	---	---	---	---	0.164	0.164	0.164	---	---	---	---	---
41-BF-130	Top of Bin (Bypass Dust) Baghouse	---	---	---	---	---	0.050	0.050	0.050	---	---	---	---	---
44-BF-030	Top of Clinker Silo Baghouse	---	---	---	---	---	0.631	0.631	0.631	---	---	---	---	---
44-BF-185	Transfer Tower (Clinker Storage and Handling) Baghouse	---	---	---	---	---	0.151	0.151	0.151	---	---	---	---	---
50-BF-050	Top of Clinker Feed Bin Baghouse	---	---	---	---	---	0.101	0.101	0.101	---	---	---	---	---
50-BF-020	Top of Gypsum Feed Bin Baghouse	---	---	---	---	---	0.088	0.088	0.088	---	---	---	---	---
50-BF-350	Cement Feed Bin Extraction Baghouse	---	---	---	---	---	0.404	0.404	0.404	---	---	---	---	---
51-BF-050	Cement Mill Building Baghouse	---	---	---	---	---	0.300	0.300	0.300	---	---	---	---	---
51-BF-140	Cement Mill Building Baghouse	---	---	---	---	---	0.230	0.230	0.230	---	---	---	---	---
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse	---	---	---	---	---	0.114	0.114	0.114	---	---	---	---	---
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse	---	---	---	---	---	0.139	0.139	0.139	---	---	---	---	---
52-BF-110	Top of Cement Silo 1 Baghouse	---	---	---	---	---	0.429	0.429	0.429	---	---	---	---	---
53-BF-110	Top of Cement Silo 2 Baghouse	---	---	---	---	---	0.404	0.404	0.404	---	---	---	---	---
52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse	---	---	---	---	---	0.151	0.151	0.151	---	---	---	---	---
53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse	---	---	---	---	---	0.151	0.151	0.151	---	---	---	---	---
52-BF-270	Loadout System (CM Silo-1) Baghouse	---	---	---	---	---	0.101	0.101	0.101	---	---	---	---	---
53-BF-270	Loadout System (CM Silo-2) Baghouse	---	---	---	---	---	0.101	0.101	0.101	---	---	---	---	---
LSCRSBHD_MH	Limestone - Material Handling LS Crusher Building	---	---	---	---	---	0.035	0.017	0.002	---	---	---	---	---
TRK_MH	Additive - Material Handling Truck Unloading	---	---	---	---	---	0.009	0.003	8.58E-04	---	---	---	---	---
RR_MH	Additive - Material Handling Rail Unloading	---	---	---	---	---	0.009	0.003	8.58E-04	---	---	---	---	---
LS_STKPL	Limestone Stockpile 1	---	---	---	---	---	0.080	0.040	0.010	---	---	---	---	---
LS_STKPL	Limestone Stockpile 2	---	---	---	---	---	0.080	0.040	0.010	---	---	---	---	---
ADD_STKPL	Gypsum Stockpile	---	---	---	---	---	0.030	0.010	0.002	---	---	---	---	---
ADD_STKPL	High Grade Limestone Stockpile	---	---	---	---	---	0.050	0.020	0.004	---	---	---	---	---
ADD_STKPL	Sand Stockpile	---	---	---	---	---	0.020	0.010	0.002	---	---	---	---	---
EG-1	Emergency Generator Engine	8.869	4.29E-03	---	---	17,738	0.142	0.142	0.142	---	---	4,584	0.060	---
NH3FUG	NH3 Fugitives	---	---	---	---	---	---	---	---	---	---	---	---	---
MSSFUG	ILE MSS Activities	0.002	2.6E-04	---	---	0.002	0.814	0.656	0.279	---	---	1.82E-04	---	---
Site-wide Emissions		84,370	83,339	152,763	2,376	1,268,925	55,641	55,313	54,825	1.04E-02	2.92E-03	29,907	13,010	---

\* Short-term rates for GHGs are not applicable.



## Emissions Summary

EPN	Description	Annual Emission Rate (tpy)												
		NO <sub>x</sub>	SO <sub>2</sub>	H <sub>2</sub> SO <sub>4</sub>	HCl	CO	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	Pb	Hg	VOC	NH <sub>3</sub>	CO <sub>2</sub> e
21-SK-230	Cement Klin Baghouse Stack	289,000	213.312	58.661	10,409	1,599,840	159,984	159,984	159,984	0.040	0.011	100,489	56,720	981,402,531
51-SK-250	Finish Mill Baghouse Stack	0.696	0.041	---	---	5,735	14,129	14,129	14,129	---	---	0.376	---	8,210,124
10-BF-035	Crusher Building Baghouse	---	---	---	---	---	5,966	5,966	5,966	---	---	---	---	---
10-BF-140	Material Transfer (LS to Storage) Baghouse	---	---	---	---	---	1,105	1,105	1,105	---	---	---	---	---
12-BF-140	Additive Unloading (Rail) Baghouse	---	---	---	---	---	1,105	1,105	1,105	---	---	---	---	---
11-BF-270	Material Transfer (LS to Hopper) Baghouse	---	---	---	---	---	0.884	0.884	0.884	---	---	---	---	---
11-BF-285	Material Transfer (LS to Hopper) Baghouse	---	---	---	---	---	0.884	0.884	0.884	---	---	---	---	---
12-BF-315	Truck Unloading Baghouse	---	---	---	---	---	3,314	3,314	3,314	---	---	---	---	---
12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse	---	---	---	---	---	0.884	0.884	0.884	---	---	---	---	---
12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse	---	---	---	---	---	0.552	0.552	0.552	---	---	---	---	---
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	---	---	---	---	---	0.552	0.552	0.552	---	---	---	---	---
13-BF-500	Raw Mill Feed Bin Building Baghouse	---	---	---	---	---	1,878	1,878	1,878	---	---	---	---	---
20-BF-010	Raw Mill Building Baghouse	---	---	---	---	---	1,326	1,326	1,326	---	---	---	---	---
20-BF-182	Raw Mill Building Baghouse	---	---	---	---	---	0.884	0.884	0.884	---	---	---	---	---
20-BF-360	Raw Mill Building Baghouse	---	---	---	---	---	0.497	0.497	0.497	---	---	---	---	---
21-BF-330	Top of CKD Bin Baghouse	---	---	---	---	---	0.332	0.332	0.332	---	---	---	---	---
22-BF-060	Bottom of Raw Meal Silo Baghouse	---	---	---	---	---	0.994	0.994	0.994	---	---	---	---	---
22-BF-080	Preheater Tower Baghouse	---	---	---	---	---	0.552	0.552	0.552	---	---	---	---	---
22-BF-160	Top of Raw Meal Silo Baghouse	---	---	---	---	---	1,657	1,657	1,657	---	---	---	---	---
22-BF-385	Top of Surge Bin (RM Silo) Baghouse	---	---	---	---	---	0.552	0.552	0.552	---	---	---	---	---
30-BF-260	Bottom of Preheater Tower Baghouse	---	---	---	---	---	0.884	0.884	0.884	---	---	---	---	---
30-BF-320	Top of Preheater Tower Baghouse	---	---	---	---	---	0.497	0.497	0.497	---	---	---	---	---
42-BF-270	Cooler Discharge Baghouse	---	---	---	---	---	0.718	0.718	0.718	---	---	---	---	---
41-BF-130	Top of Bin (Bypass Dust) Baghouse	---	---	---	---	---	0.221	0.221	0.221	---	---	---	---	---
44-BF-030	Top of Clinker Silo Baghouse	---	---	---	---	---	2,762	2,762	2,762	---	---	---	---	---
44-BF-185	Transfer Tower (Clinker Storage and Handling) Baghouse	---	---	---	---	---	0.663	0.663	0.663	---	---	---	---	---
50-BF-050	Top of Clinker Feed Bin Baghouse	---	---	---	---	---	0.442	0.442	0.442	---	---	---	---	---
50-BF-020	Top of Gypsum Feed Bin Baghouse	---	---	---	---	---	0.387	0.387	0.387	---	---	---	---	---
50-BF-350	Cement Feed Bin Extraction Baghouse	---	---	---	---	---	1,768	1,768	1,768	---	---	---	---	---
51-BF-050	Cement Mill Building Baghouse	---	---	---	---	---	1,315	1,315	1,315	---	---	---	---	---
51-BF-140	Cement Mill Building Baghouse	---	---	---	---	---	1,005	1,005	1,005	---	---	---	---	---
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse	---	---	---	---	---	0.497	0.497	0.497	---	---	---	---	---
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse	---	---	---	---	---	0.608	0.608	0.608	---	---	---	---	---
52-BF-110	Top of Cement Silo 1 Baghouse	---	---	---	---	---	1,878	1,878	1,878	---	---	---	---	---
53-BF-110	Top of Cement Silo 2 Baghouse	---	---	---	---	---	1,768	1,768	1,768	---	---	---	---	---
52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse	---	---	---	---	---	0.663	0.663	0.663	---	---	---	---	---
53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse	---	---	---	---	---	0.663	0.663	0.663	---	---	---	---	---
52-BF-270	Loadout System (CM Silo-1) Baghouse	---	---	---	---	---	0.442	0.442	0.442	---	---	---	---	---
53-BF-270	Loadout System (CM Silo-2) Baghouse	---	---	---	---	---	0.442	0.442	0.442	---	---	---	---	---
LSQSHBD_MH	Limestone - Material Handling LS Crusher Building	---	---	---	---	---	0.152	0.072	0.011	---	---	---	---	---
TRK_MH	Additive - Material Handling Truck Unloading	---	---	---	---	---	0.040	0.013	0.004	---	---	---	---	---
RR_MH	Additive - Material Handling Rail Unloading	---	---	---	---	---	0.040	0.013	0.004	---	---	---	---	---
LS_STKPL	Limestone Stockpile 1	---	---	---	---	---	0.330	0.170	0.030	---	---	---	---	---
LS_STKPL	Limestone Stockpile 2	---	---	---	---	---	0.330	0.170	0.030	---	---	---	---	---
ADD_STKPL	Gypsum Stockpile	---	---	---	---	---	0.110	0.060	0.010	---	---	---	---	---
ADD_STKPL	High Grade Limestone Stockpile	---	---	---	---	---	0.200	0.100	0.020	---	---	---	---	---
ADD_STKPL	Sand Stockpile	---	---	---	---	---	0.090	0.050	0.010	---	---	---	---	---
EG-1	Emergency Generator Engine	0.443	2.15E-04	---	---	0.887	0.007	0.007	0.007	---	---	0.237	---	42,249
NH3FUG	NH3 Fugitives	---	---	---	---	---	---	---	---	---	---	---	0.280	---
MSSFLUG	ILE MSS Activities	0.003	4.82E-04	---	---	0.003	0.771	0.760	0.377	---	---	3.37E-04	---	---
Site-wide Emissions		290.143	213.354	58.661	10,409	1,606,465	217,776	217,071	216,157	4.00E-02	1.12E-02	101.101	57,000	989,654,504

\* Short-term rates for GHGs are not applicable.

Kiln System Emissions Summary  
EPN: 21-SK-230

Parameters	Value	Units
Clinker Production Rate	1,066,560	tpy
Clinker Production Rate	3,313	tpy/day
Annual Days of Operation	365	days/year
Maximum Exhaust Concentration, HCl	35	ppmv @ 7% Oxygen
Maximum Exhaust Concentration, Ammonia	35	ppmv @ 7% Oxygen
Maximum Exhaust Concentration, VOC (as THC)	24	ppmv @ 7% Oxygen
Exhaust Flow Rate	416,414	acfm-wet
Exhaust O <sub>2</sub> Content (wet)	11.0	%
Exhaust Water Content	20.0	wt%
Exhaust Temperature	189	°F
Exhaust Temperature	90	K
Exhaust Flow Rate	171,339	cfm-dry at 7% Oxygen

Kiln System Emission Rates

Pollutant	Short-term Emission Factor	Short-term / Hourly Emission Rate <sup>a, b, c</sup> (lb/hr)	Comments / Basis	Annual Emission Factor	Annual Emissions <sup>b, c</sup> (tpy)	Comments / Basis
HCl Condensable	0.28 lb/ton clinker	38.89	Proposed BACT limit (30 day rolling average)	0.28 lb/ton clinker	149.32	Proposed BACT limit (30 day rolling average)
HCl Filterable	0.02 lb/ton clinker	2.78	NSPS Subpart F (30 day rolling average)	0.02 lb/ton clinker	10.67	NSPS Subpart F (30 day rolling average)
PM <sub>10</sub> Filterable	0.02 lb/ton clinker	2.78	NSPS Subpart F (30 day rolling average)	0.02 lb/ton clinker	10.67	NSPS Subpart F (30 day rolling average)
PM <sub>2.5</sub> Filterable	0.02 lb/ton clinker	2.78	NSPS Subpart F (30 day rolling average)	0.02 lb/ton clinker	10.67	NSPS Subpart F (30 day rolling average)
CO	9.0 lb/ton clinker	1,249.88	Safety margin of three applied to the 12 month rolling average limit for 1-hour average modeling	3.00 lb/ton clinker	1,599.84	Proposed BACT limit (12-month rolling average)
NO <sub>x</sub>	0.54 lb/ton clinker	75.3	Safety margin applied to manufacturer emission rate for 1-hour average modeling	0.54 lb/ton clinker	289.00	30 day rolling average
SO <sub>2</sub>	0.6 lb/ton clinker	83.33	Safety margin of one and one-half (1.5) applied to the 30-day rolling average limit for 1-hour average modeling	0.40 lb/ton clinker	213.31	NSPS Subpart F (30 day rolling average)
VOC (as THC)	0.18 lb/ton clinker	25.24	Safety margin of 10% applied to the MACT Subpart LLL (24 ppmv @ 7% O <sub>2</sub> ) limit	0.19 lb/ton clinker	100.49	MACT Subpart LLL (24 ppmv @ 7% O <sub>2</sub> )
H <sub>2</sub> SO <sub>4</sub>	1.1 lb/ton clinker	152.76	Safety margin of 10 applied to the 12 month rolling average limit of 1-hour average modeling	0.11 lb/ton clinker	58.66	Proposed BACT limit (Annual average)
Hydrochloric Acid	0.02 lb/ton clinker	2.38	MACT Subpart LLL (3 ppmv @ 7% O <sub>2</sub> )	0.02 lb/ton clinker	10.41	MACT Subpart LLL (3 ppmv @ 7% O <sub>2</sub> )
NH <sub>3</sub>	0.09 lb/ton clinker	12.95	Proposed BACT limit (35 ppmv @ 7% O <sub>2</sub> )	0.09 lb/ton clinker	56.72	Proposed BACT limit (35 ppmv @ 7% O <sub>2</sub> )
Hg	0.000021 lb/ton clinker	2.92E-03	MACT Subpart LLL (30 day rolling average)	0.000021 lb/ton clinker	0.01	MACT Subpart LLL (30 day rolling average)
CO <sub>2</sub>				0.92 ton/ton clinker	981,235.20	Proposed BACT limit based on NBLC data
CH <sub>4</sub>				0.0010 kg/MMBtu	3.05	40 CFR Part 98, Table C-2 emission factors for CH <sub>4</sub> and N <sub>2</sub> O for Natural Gas
N <sub>2</sub> O				0.0001 kg/MMBtu	0.31	40 CFR Part 98, Table C-2 emission factors for CH <sub>4</sub> and N <sub>2</sub> O for Natural Gas
CO <sub>2</sub> e				0.92 ton/ton clinker	981,402.53	
Pb	7.50E-05 lb/ton clinker	0.01	AP-42, Section 11.6 Table 11.6-9	7.50E-05 lb/ton clinker	0.04	AP-42, Section 11.6 Table 11.6-9

Some pollutants short-term emission rates include a safety margin for conservatism.  
<sup>a</sup> Emission rates for VOC (as THC), hydrochloric acid, and ammonia are estimated based on the Ideal Gas Law (PV = nRT).  
<sup>b</sup> Sample Calculation for VOC (as THC):  
 $\text{Hourly Emission Rate (lb/hr)} = (V_{\text{actual}}) \times MW_{\text{VOC}} \times SG \times P \times TR$

where,  
 $V_{\text{actual}} = \text{ppmv} @ 7\% \text{ Oxygen} / 1,000,000$   
 $MW = \text{pollutant molecular weight}$   
 $V_{\text{gas}} = \text{Total Volumetric Flow Rate (scfm, dry @ 7\% Oxygen)}$   
 $R = \text{Gas Constant (1.314 atm-ft}^3\text{/(lbmol-R))}$   
 $T = \text{Actual Temperature (K)}$

Hourly Emission Rate (lb/hr) =  $\frac{1.1 \text{ Safety Margin}}{24.0 \text{ ppmv} @ 7\% \text{ Oxygen}} \times \frac{44.0 \text{ lb}}{1,000,000} \times 8760 \text{ hrs/year} = 44.0 \text{ lb/hr}$

Annual Emission Rate (tpy) =  $\frac{1.1 \text{ Safety Margin}}{24.0 \text{ ppmv} @ 7\% \text{ Oxygen}} \times \frac{44.0 \text{ lb}}{1,000,000} \times 8760 \text{ hrs/year} = 149.32 \text{ tpy}$

Hourly Emission Rate (lb/hr) =  $\frac{1.1 \text{ Safety Margin}}{24.0 \text{ ppmv} @ 7\% \text{ Oxygen}} \times \frac{44.0 \text{ lb}}{1,000,000} \times 8760 \text{ hrs/year} = 44.0 \text{ lb/hr}$

Annual Emission Rate (tpy) =  $\frac{1.1 \text{ Safety Margin}}{24.0 \text{ ppmv} @ 7\% \text{ Oxygen}} \times \frac{44.0 \text{ lb}}{1,000,000} \times 8760 \text{ hrs/year} = 149.32 \text{ tpy}$

Hourly Emission Rate (lb/hr) =  $\frac{1.1 \text{ Safety Margin}}{24.0 \text{ ppmv} @ 7\% \text{ Oxygen}} \times \frac{44.0 \text{ lb}}{1,000,000} \times 8760 \text{ hrs/year} = 44.0 \text{ lb/hr}$

Annual Emission Rate (tpy) =  $\frac{1.1 \text{ Safety Margin}}{24.0 \text{ ppmv} @ 7\% \text{ Oxygen}} \times \frac{44.0 \text{ lb}}{1,000,000} \times 8760 \text{ hrs/year} = 149.32 \text{ tpy}$

Hourly Emission Rate (lb/hr) =  $\frac{1.1 \text{ Safety Margin}}{24.0 \text{ ppmv} @ 7\% \text{ Oxygen}} \times \frac{44.0 \text{ lb}}{1,000,000} \times 8760 \text{ hrs/year} = 44.0 \text{ lb/hr}$

Annual Emission Rate (tpy) =  $\frac{1.1 \text{ Safety Margin}}{24.0 \text{ ppmv} @ 7\% \text{ Oxygen}} \times \frac{44.0 \text{ lb}}{1,000,000} \times 8760 \text{ hrs/year} = 149.32 \text{ tpy}$

**AR-20A**  
**TCEQ PI-1 Workbook**

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**General**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

General Information	
This sheet provides administrative information needed by the TCEQ.	
<b>Instructions:</b> 1. Complete all applicable sections below. 2. An original signature on this sheet is only required for applications that cannot be submitted through STEERS. For these specific application types, follow the instructions on the "Copies" sheet to submit a hard copy of this worksheet with the original signature.	
<a href="#">Click here to return to Cover Sheet.</a>	
I. Applicant Information	
<b>I acknowledge that I am submitting an authorized TCEQ application workbook and any necessary attachments. Except for inputting the requested data and adjusting row height and column width, I have not changed the TCEQ application workbook in any way, including but not limited to changing formulas, formatting, content, or protections.</b>	I agree
A. Company Information	
Company or Legal Name:	BM Dorchester LLC
Permits are issued to either the facility owner or operator, commonly referred to as the applicant or permit holder. List the legal name of the company, corporation, partnership, or person who is applying for the permit. We will verify the legal name with the Texas Secretary of State at (512) 463-5555 or at the link below: <a href="https://www.sos.state.tx.us">https://www.sos.state.tx.us</a>	
Texas Secretary of State Charter/Registration Number (if given):	
B. Company Official Contact Information: must not be a consultant	
Prefix (Mr., Ms., Dr., etc.):	Mr.
First Name:	Jacob
Last Name:	Bender
Title:	Chief Financial Officer
Mailing Address:	1008 Southview Cir
Address Line 2:	
City:	Center
State:	Texas
ZIP Code:	75935
Telephone Number:	936-598-8587
Fax Number:	936-590-7464
Email Address:	<a href="mailto:jake@highrollergroup.com">jake@highrollergroup.com</a>
C. Technical Contact Information: This person must have the authority to make binding agreements and representations on behalf of the applicant and may be a consultant. Additional technical contact(s) can be provided in a cover letter.	
Prefix (Mr., Ms., Dr., etc.):	Mr.
First Name:	Michael
Last Name:	Meister
Title:	Principal Consultant
Company or Legal Name:	Trinity Consultants
Mailing Address:	555 N Carancahua St
Address Line 2:	Suite 820
City:	Corpus Christi
State:	Texas
ZIP Code:	78401
Telephone Number:	361-883-1668
Fax Number:	
Email Address:	<a href="mailto:mmeister@trinityconsultants.com">mmeister@trinityconsultants.com</a>

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**General**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

**D. Assigned Numbers**

The CN and RN below are assigned when a Core Data Form is initially submitted to the Central Registry. The RN is also assigned if the agency has conducted an investigation or if the agency has issued an enforcement action. If these numbers have not yet been assigned, leave these questions blank and include a Core Data Form with your application submittal. See Section VI.B. below for additional information.

Enter the CN. The CN is a unique number given to each business, governmental body, association, individual, or other entity that owns, operates, is responsible for, or is affiliated with a regulated entity.

Enter the RN. The RN is a unique agency assigned number given to each person, organization, place, or thing that is of environmental interest to us and where regulated activities will occur. The RN replaces existing air account numbers. The RN for portable units is assigned to the unit itself, and that same RN should be used when applying for authorization at a different location.

**II. Delinquent Fees and Penalties**

Does the applicant have unpaid delinquent fees and/or penalties owed to the TCEQ?

This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ Web site at the link below:

<https://www.tceq.texas.gov/agency/financial/fees/delin>

No

**III. Permit Information**

**A. Permit and Action Type (multiple may be selected, leave no blanks)**

Additional information regarding the different NSR authorizations can be found at the link below:

<https://www.tceq.texas.gov/permitting/air/guidance/authorize.html>

Select from the drop-down the type of action being requested for each permit type. **If that permit type does not apply, you MUST select "Not applicable".**

Provide all assigned permit numbers relevant for the project. Leave blank if the permit number has not yet been assigned.

Permit Type	Action Type Requested (do not leave blank)	Permit Number (if assigned)
Minor NSR (can be a Title V major source): <i>Not applicable, Initial, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Relocation/Alteration, Change of Location, Alteration, Extension to Start of Construction</i>	Not applicable	
Special Permit: <i>Not applicable, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Alteration, Extension to Start of Construction</i>	Not applicable	
De Minimis: <i>Not applicable, Initial</i>	Not applicable	
Flexible: <i>Not applicable, Initial, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Alteration, Extension to Start of Construction</i>	Not applicable	
PSD: <i>Not applicable, Initial, Major Modification</i>	Initial	
Nonattainment: <i>Not applicable, Initial, Major Modification</i>	Not applicable	



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**General**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

HAP Major Source [FCAA § 112(g)]: <i>Not applicable, Initial, Major Modification</i>	Not applicable	
PAL: <i>Not applicable, Initial, Amendment, Renewal, Renewal/Amendment, Alteration</i>	Not applicable	
GHG PSD: <i>Not applicable, Initial, Major Modification, Voluntary Update</i>	Initial	
<b>GHG projects:</b> List the non-GHG applications (pending or being submitted) that are associated with the project. Note: All preconstruction authorizations (including authorization for emissions of greenhouse gases, if applicable) must be obtained prior to start of construction.	PSD Permit Application	
<b>B. MSS Activities</b>		
How are/will MSS activities for sources associated with this project be authorized?	This permit	
<b>C. Consolidating NSR Permits</b>		
Will this permit be consolidated into another NSR permit with this action?	No	
Will NSR permits be consolidated into this permit with this action?	No	
<b>D. Incorporation of Standard Permits, Standard Exemptions, and/or Permits By Rule (PBR)</b>		
<p>To ensure protectiveness, previously issued authorizations (standard permits, standard exemptions, or PBRs) including those for MSS, are incorporated into a permit either by consolidation or by reference.</p> <ul style="list-style-type: none"> <li>-Authorizations entirely incorporated by consolidation will be voided when the project is complete, and the sources and allowable emissions will be added to the NSR permit's MAERT.</li> <li>-Authorizations incorporated by reference will be referenced with the final action for this project but will not be voided. Sources will continue to be authorized in the current manner.</li> </ul> <p>At the time of renewal and/or amendment, consolidation (in some cases) may be voluntary and referencing is mandatory. More guidance regarding incorporation can be found in 30 TAC § 116.116(d)(2), 30 TAC § 116.615(3) and in this memo (link below):</p> <p><a href="https://www.tceq.texas.gov/assets/public/permitting/air/memos/pbr_spc06.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/memos/pbr_spc06.pdf</a></p>		
Are there any standard permits, standard exemptions, or PBRs to be incorporated by reference?	No	
Are there any PBR, standard exemptions, or standard permits associated to be incorporated by consolidation? <b>Note:</b> Emission calculations, a BACT analysis, and an impacts analysis must be attached to this application at the time of submittal for any authorization to be incorporated by consolidation.	No	
<b>E. Associated Federal Operating Permits</b>		
Is this facility located at a site required to obtain a <b>site operating permit (SOP)</b> or <b>general operating permit (GOP)</b> ?	Yes	
Is a <b>SOP</b> or <b>GOP</b> review pending for this source, area, or site?	No	
If required to obtain a <b>SOP</b> or <b>GOP</b> , list all associated permit number(s). If no associated permit number has been assigned yet, enter "TBD":	TBD	
<b>IV. Facility Location and General Information</b>		
<b>A. Location</b>		
County: Enter the county where the facility is physically located.	Grayson	
TCEQ Region	Region 4	
County attainment status as of Sept. 23, 2019	attainment or unclassified for all pollutants	
Street Address:		



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**General**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

City: If the address is not located in a city, then enter the city or town closest to the facility, even if it is not in the same county as the facility.	Dorchester
ZIP Code: Include the ZIP Code of the physical facility site, not the ZIP Code of the applicant's mailing address.	75459
Site Location Description: If there is no street address, provide written driving directions to the site. Identify the location by distance and direction from well-known landmarks such as major highway intersections.	From the intersection of highway 289 and Farm to Market (FM) 902 east of Dorchester, Texas, head east on FM 902 for approximately 0.80 miles. The Dorchester Plant site will be located directly north of FM 902 after the intersection of Taylor Rd.
Use USGS maps, county maps prepared by the Texas Department of Transportation, or an online software application such as Google Earth to find the latitude and longitude.	
Latitude (in degrees, minutes, and nearest second (DDD:MM:SS)) for the street address or the destination point of the driving directions. Latitude is the angular distance of a location north of the equator and will always be between 25 and 37 degrees north (N) in Texas.	33:32:17.43
Longitude (in degrees, minutes, and nearest second (DDD:MM:SS)) for the street address or the destination point of the driving directions. Longitude is the angular distance of a location west of the prime meridian and will always be between 93 and 107 degrees west (W) in Texas.	96:41:22.67
Is this a project for a lead smelter, concrete crushing facility, and/or a hazardous waste management facility?	No
<b>B. General Information</b>	
Site Name:	Dorchester Plant
Area Name: Must indicate the general type of operation, process, equipment or facility. Include numerical designations, if appropriate. Examples are Sulfuric Acid Plant and No. 5 Steam Boiler. Vague names such as Chemical Plant are not acceptable.	Preheater / Precalciner kiln line and associated equipment
Are there any schools located within 3,000 feet of the site boundary?	No
<b>C. Portable Facility</b>	
Permanent or portable facility?	Permanent
<b>D. Industry Type</b>	
Principal Company Product/Business:	Portland Cement Production
A list of SIC codes can be found at the link below: <a href="https://www.naics.com/sic-codes-industry-drilldown/">https://www.naics.com/sic-codes-industry-drilldown/</a>	
Principal SIC code:	3241
NAICS codes and conversions between NAICS and SIC Codes are available at the link below: <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a>	
Principal NAICS code:	327310
<b>E. State Senator and Representative for this site</b>	
This information can be found at the link below (note, the website is not compatible to Internet Explorer): <a href="https://wrm.capitol.texas.gov/">https://wrm.capitol.texas.gov/</a>	
State Senator:	Drew Springer
District:	30
State Representative:	Reggie Smith
District:	62

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<b>V. Project Information</b>	
<b>A. Description</b>	
Provide a <b>brief</b> description of the project that is requested (describe the what, not the how and why). Limited to 500 characters.	Black Mountain Dorchester LLC is proposing to construct a greenfield portland cement production plant that will be located in Dorchester, Texas.
<b>B. Project Timing</b>	
Authorization must be obtained for many projects before beginning construction. Construction is broadly interpreted as anything other than site clearance or site preparation. Enter the date as "Month Date, Year" (e.g. July 4, 1776).	
Projected Start of Construction:	August 1, 2022
Projected Start of Operation:	August 1, 2023
<b>C. Enforcement Projects</b>	
Is this application in response to, or related to, an agency investigation, notice of violation, or enforcement action?	No
<b>D. Operating Schedule</b>	
Will sources in this project be authorized to operate 8760 hours per year?	Yes
<b>VI. Application Materials</b>	
All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. (30 TAC § 116.116)	
<b>A. Confidential Application Materials</b>	
Is confidential information submitted with this application?	No
<b>B. Is the Core Data Form (Form 10400) attached (link to the form below)?</b>	
<a href="https://www.tceq.texas.gov/assets/public/permitting/centralregistry/10400.docx">https://www.tceq.texas.gov/assets/public/permitting/centralregistry/10400.docx</a>	
<b>C. Is a current area map attached?</b>	
Is the area map a current map with a true north arrow, an accurate graduated scale, the entire plant property, the location of the property relative to prominent geographical features including, but not limited to, highways, roads, streams, and significant landmarks such as buildings, residences, schools, parks, hospitals, day care centers, and churches?	Yes
Does the map show a 3,000-foot radius from the property boundary?	Yes
<b>D. Is a plot plan attached?</b>	
Does your plot plan clearly show a north arrow, an accurate scale, all property lines, all emission points, buildings, tanks, process vessels, other process equipment, and two bench mark locations?	Yes
Does your plot plan identify all emission points on the affected property, including all emission points authorized by other air authorizations, construction permits, PBRs, special permits, and standard permits?	Yes
Did you include a table of emission points indicating the authorization type and authorization identifier, such as a permit number, registration number, or rule citation under which each emission point is currently authorized?	Yes
<b>E. Is a process flow diagram attached?</b>	
Is the process flow diagram sufficiently descriptive so the permit reviewer can determine the raw materials to be used in the process; all major processing steps and major equipment items; individual emission points associated with each process step; the location and identification of all emission abatement devices; and the location and identification of all waste streams (including wastewater streams that may have associated air emissions)?	Yes
<b>F. Is a process description attached?</b>	
Does the process description emphasize where the emissions are generated, why the emissions must be generated, what air pollution controls are used (including process design features that minimize emissions), and where the emissions enter the atmosphere?	Yes

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Does the process description also explain how the facility or facilities will be operating when the maximum possible emissions are produced?	Yes
<b>G. Is a detailed list of requested actions included in the application?</b> This list can be included in the project description.	Yes
<b>H. Are detailed calculations attached?</b> Calculations must be provided for each source with new or changing emission rates. For example, a new source, changing emission factors, decreasing emissions, consolidated sources, etc. Calculations do not need to be submitted for sources without any proposed emission rate changes. <b>Note: the preferred format is an electronic workbook (such as Excel) with all formulas viewable for review.</b>	Yes
Are emission rates and associated calculations for planned MSS facilities and related activities attached?	Yes
<b>I. Is a material balance (Table 2, Form 10155) attached?</b>	Yes
Table 2 (Form 10155), entitled Material Balance: A material balance representation may be required for all applications to confirm technical emissions information. Typically this is required for refining and chemical manufacturing processes involving reactions, separations, and blending. It may also be requested by the permit reviewer for other applications. Table 2 should represent the total material balance; that is, all streams into the system and all streams out. Additional sheets may be attached if necessary. Complex material balances may be presented on spreadsheets or indicated using process flow diagrams. All materials in the process should be addressed whether or not they directly result in the emission of an air contaminant. All production rates must be based on maximum operating conditions.	
<b>J. Is a list of MSS activities attached?</b>	Yes
Are the MSS activities listed and discussed separately, each complete with the authorization mechanism or emission rates, frequency, duration, and supporting information if authorized by this permit?	Yes
<b>K. Is a discussion of state regulatory requirements attached, addressing 30 TAC Chapters 101, 111, 112, 113, 115, and 117?</b>	Yes
For all applicable chapters, does the discussion include how the facility will comply with the requirements of the chapter?	Yes
For all not applicable chapters, does the discussion include why the chapter is not applicable?	Yes
<b>L. Are all other required tables, calculations, and descriptions attached?</b>	Yes
<b>VII. Signature</b>	
The owner or operator of the facility must apply for authority to construct. The appropriate company official (owner, plant manager, president, vice president, or environmental director) must sign all copies of the application. The applicant's consultant cannot sign the application. <b>Important Note: Unless submitting through STEERS, signatures must be original in ink, not reproduced by photocopy, fax, or other means, and must be received before any permit is issued.</b>	
The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382; the Texas Clean Air Act (TCAA); the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.	
Name:	George Pigg
Signature:	
<i>Original signature is required unless submitted through STEERS.</i>	
Date:	November 5, 2021



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Texas Commission on Environmental Quality  
Form PI-1 General Application  
Unit Types - Emission Rates

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

Action Requested (only 1 action per FID summary?)	Include these emissions in annual (toy) summary?	Facility ID Number (FID)	Emission Point Number (EPN)	Source Name	Pollutant	Current Short- Term (lb/hr)	Current Long- Term (toy)	Consolidated Current Short- Term (lb/hr)	Consolidated Current Long- Term (toy)	Proposed Short-Term (lb/hr)	Proposed Long Term (toy)	Short-Term Difference (lb/hr)	Long-Term Difference (toy)	Unit Type (Used for reviewing BACT and Monitoring Requirements)	Unit Type Notes (only M "other" unit type in Column O)
New/Modified	Yes	12-BF-315	12-BF-315	Truck Unloading Baghouse	PM					0.757	3.314	0.757	3.314	Control: Bag Filter/Baghouse	
					PM10					0.757	3.314	0.757	3.314		
					PM2.5					0.757	3.314	0.757	3.314		
New/Modified	Yes	12-BF-325	12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse	PM					0.202	0.884	0.202	0.884	Control: Bag Filter/Baghouse	
					PM10					0.202	0.884	0.202	0.884		
					PM2.5					0.202	0.884	0.202	0.884		
New/Modified	Yes	12-BF-360	12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse	PM					0.126	0.552	0.126	0.552	Control: Bag Filter/Baghouse	
					PM10					0.126	0.552	0.126	0.552		
					PM2.5					0.126	0.552	0.126	0.552		
New/Modified	Yes	13-BF-030	13-BF-030	Raw Mill Feed (Top of Bin) Baghouse	PM					0.126	0.552	0.126	0.552	Control: Bag Filter/Baghouse	
					PM10					0.126	0.552	0.126	0.552		
					PM2.5					0.126	0.552	0.126	0.552		
New/Modified	Yes	13-BF-500	13-BF-500	Raw Mill Feed Bin Building Baghouse	PM					0.429	1.878	0.429	1.878	Control: Bag Filter/Baghouse	
					PM10					0.429	1.878	0.429	1.878		
					PM2.5					0.429	1.878	0.429	1.878		
New/Modified	Yes	20-BF-010	20-BF-010	Raw Mill Building Baghouse	PM					0.303	1.326	0.303	1.326	Control: Bag Filter/Baghouse	
					PM10					0.303	1.326	0.303	1.326		
					PM2.5					0.303	1.326	0.303	1.326		
New/Modified	Yes	20-BF-182	20-BF-182	Raw Mill Building Baghouse	PM					0.202	0.884	0.202	0.884	Control: Bag Filter/Baghouse	
					PM10					0.202	0.884	0.202	0.884		
					PM2.5					0.202	0.884	0.202	0.884		
New/Modified	Yes	20-BF-390	20-BF-390	Raw Mill Building Baghouse	PM					0.114	0.497	0.114	0.497	Control: Bag Filter/Baghouse	
					PM10					0.114	0.497	0.114	0.497		
					PM2.5					0.114	0.497	0.114	0.497		
New/Modified	Yes	21-BF-330	21-BF-330	Top of CKD Bin Baghouse	PM					0.076	0.332	0.076	0.332	Control: Bag Filter/Baghouse	
					PM10					0.076	0.332	0.076	0.332		
					PM2.5					0.076	0.332	0.076	0.332		
New/Modified	Yes	22-BF-060	22-BF-060	Bottom of Raw Meal Silo Baghouse	PM					0.227	0.994	0.227	0.994	Control: Bag Filter/Baghouse	
					PM10					0.227	0.994	0.227	0.994		
					PM2.5					0.227	0.994	0.227	0.994		
New/Modified	Yes	22-BF-080	22-BF-080	Pneumatic Tower Baghouse	PM					0.126	0.552	0.126	0.552	Control: Bag Filter/Baghouse	
					PM10					0.126	0.552	0.126	0.552		
					PM2.5					0.126	0.552	0.126	0.552		
New/Modified	Yes	22-BF-160	22-BF-160	Top of Raw Meal Silo Baghouse	PM					0.378	1.657	0.378	1.657	Control: Bag Filter/Baghouse	
					PM10					0.378	1.657	0.378	1.657		
					PM2.5					0.378	1.657	0.378	1.657		
New/Modified	Yes	22-BF-385	22-BF-385	Top of Surge Bin (RM Silo) Baghouse	PM					0.126	0.552	0.126	0.552	Control: Bag Filter/Baghouse	
					PM10					0.126	0.552	0.126	0.552		
					PM2.5					0.126	0.552	0.126	0.552		
New/Modified	Yes	30-BF-260	30-BF-260	Bottom of Preheater Tower Baghouse	PM					0.202	0.884	0.202	0.884	Control: Bag Filter/Baghouse	
					PM10					0.202	0.884	0.202	0.884		
					PM2.5					0.202	0.884	0.202	0.884		
New/Modified	Yes	30-BF-320	30-BF-320	Top of Preheater Tower Baghouse	PM					0.114	0.497	0.114	0.497	Control: Bag Filter/Baghouse	
					PM10					0.114	0.497	0.114	0.497		
					PM2.5					0.114	0.497	0.114	0.497		
New/Modified	Yes	42-BF-270	42-BF-270	Cooler Discharge Baghouse	PM					0.164	0.718	0.164	0.718	Control: Bag Filter/Baghouse	
					PM10					0.164	0.718	0.164	0.718		
					PM2.5					0.164	0.718	0.164	0.718		
New/Modified	Yes	41-BF-130	41-BF-130	Top of Bin (Bypass Dust) Baghouse	PM					0.05	0.221	0.05	0.221	Control: Bag Filter/Baghouse	
					PM10					0.05	0.221	0.05	0.221		
					PM2.5					0.05	0.221	0.05	0.221		
New/Modified	Yes	44-BF-030	44-BF-030	Top of Clinker Silo Baghouse	PM					0.631	2.762	0.631	2.762	Control: Bag Filter/Baghouse	
					PM10					0.631	2.762	0.631	2.762		
					PM2.5					0.631	2.762	0.631	2.762		
New/Modified	Yes	44-BF-185	44-BF-185	Transfer Tower (Clinker Strip And Handling) Baghouse	PM					0.151	0.663	0.151	0.663	Control: Bag Filter/Baghouse	
					PM10					0.151	0.663	0.151	0.663		
					PM2.5					0.151	0.663	0.151	0.663		
New/Modified	Yes	50-BF-050	50-BF-050	Top of Clinker Feed Bin Baghouse	PM					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
					PM10					0.101	0.442	0.101	0.442		
					PM2.5					0.101	0.442	0.101	0.442		



Texas Commission on Environmental Quality  
Form PI-1 General Application  
Unit Types - Emission Rates

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

Action Requested (only 1 action per FQI summary?)	Facility ID Number (FID)	Emission Point Number (EPN)	Source Name	Pollutant	Current Short- Term (lb/yr)	Current Long- Term (lb/yr)	Consolidated Current Short- Term (lb/yr)	Consolidated Current Long- Term (lb/yr)	Proposed Short-Term (lb/yr)	Proposed Long- Term (lb/yr)	Short-Term Difference (lb/yr)	Long-Term Difference (lb/yr)	Unit Type (Used for reviewing BACT and Monitoring Requirements)	Unit Type Notes (only M "other" unit type in Column O)
New/Modified	50-BF-020	50-BF-020	Top of Gypsum Feed Bin Baghouse	PM					0.088	0.387	0.088	0.387	Control: Bag Filter/Baghouse	
				PM10					0.088	0.387	0.088	0.387		
				PM2.5					0.088	0.387	0.088	0.387		
New/Modified	50-BF-350	50-BF-350	Cement Feed Bin Extraction Baghouse	PM					0.404	1.768	0.404	1.768	Control: Bag Filter/Baghouse	
				PM10					0.404	1.768	0.404	1.768		
				PM2.5					0.404	1.768	0.404	1.768		
New/Modified	51-BF-050	51-BF-050	Cement Mill Building Baghouse	PM					0.3	1.315	0.3	1.315	Control: Bag Filter/Baghouse	
				PM10					0.3	1.315	0.3	1.315		
				PM2.5					0.3	1.315	0.3	1.315		
New/Modified	51-BF-140	51-BF-140	Cement Mill Building Baghouse	PM					0.23	1.005	0.41	1.995	Control: Bag Filter/Baghouse	
				PM10					0.23	1.005	0.23	1.005		
				PM2.5					0.23	1.005	0.23	1.005		
New/Modified	51-BF-350	51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse	PM					0.114	0.487	0.114	0.487	Control: Bag Filter/Baghouse	
				PM10					0.114	0.487	0.114	0.487		
				PM2.5					0.114	0.487	0.114	0.487		
New/Modified	51-BF-380	51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse	PM					0.139	0.608	0.139	0.608	Control: Bag Filter/Baghouse	
				PM10					0.139	0.608	0.139	0.608		
				PM2.5					0.139	0.608	0.139	0.608		
New/Modified	52-BF-110	52-BF-110	Top of Cement Silo 1 Baghouse	PM					0.429	1.878	0.429	1.878	Control: Bag Filter/Baghouse	
				PM10					0.429	1.878	0.429	1.878		
				PM2.5					0.429	1.878	0.429	1.878		
New/Modified	53-BF-110	53-BF-110	Top of Cement Silo 2 Baghouse	PM					0.404	1.768	0.404	1.768	Control: Bag Filter/Baghouse	
				PM10					0.404	1.768	0.404	1.768		
				PM2.5					0.404	1.768	0.404	1.768		
New/Modified	52-BF-190	52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse	PM					0.151	0.663	0.151	0.663	Control: Bag Filter/Baghouse	
				PM10					0.151	0.663	0.151	0.663		
				PM2.5					0.151	0.663	0.151	0.663		
New/Modified	53-BF-190	53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse	PM					0.151	0.663	0.151	0.663	Control: Bag Filter/Baghouse	
				PM10					0.151	0.663	0.151	0.663		
				PM2.5					0.151	0.663	0.151	0.663		
New/Modified	52-BF-270	52-BF-270	Loadout System (CM Silo-1) Baghouse	PM					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
				PM10					0.101	0.442	0.101	0.442		
				PM2.5					0.101	0.442	0.101	0.442		
New/Modified	53-BF-270	53-BF-270	Loadout System (CM Silo-2) Baghouse	PM					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
				PM10					0.101	0.442	0.101	0.442		
				PM2.5					0.101	0.442	0.101	0.442		
New/Modified	LSCRSBHD_MH	LSCRSBHD_MH	Limestone - Material Handling LS Crusher Building	PM					0.095	0.152	0.095	0.152	Material Handling: Conveyor	
				PM10					0.095	0.152	0.095	0.152		
				PM2.5					0.095	0.152	0.095	0.152		
New/Modified	TRK_MH	TRK_MH	Additive - Material Handling Truck Unloading	PM					0.009	0.04	0.009	0.04	Material Handling: Conveyor	
				PM10					0.009	0.04	0.009	0.04		
				PM2.5					0.009	0.04	0.009	0.04		
New/Modified	RR_MH	RR_MH	Additive - Material Handling Rail Unloading	PM					0.009	0.04	0.009	0.04	Material Handling: Conveyor	
				PM10					0.009	0.04	0.009	0.04		
				PM2.5					0.009	0.04	0.009	0.04		
New/Modified	LS_STKPL_1	LS_STKPL	Limestone Stockpile 1	PM					0.08	0.33	0.08	0.33	Storage: Stockpile	
				PM10					0.08	0.33	0.08	0.33		
				PM2.5					0.08	0.33	0.08	0.33		
New/Modified	LS_STKPL_2	LS_STKPL	Limestone Stockpile 2	PM					0.08	0.33	0.08	0.33	Storage: Stockpile	
				PM10					0.08	0.33	0.08	0.33		
				PM2.5					0.08	0.33	0.08	0.33		
New/Modified	GYP_STKPL	ADD_STKPL	Gypsum Stockpile	PM					0.01	0.09	0.01	0.09	Storage: Stockpile	
				PM10					0.01	0.09	0.01	0.09		
				PM2.5					0.01	0.09	0.01	0.09		
New/Modified	HLS_STKPL	ADD_STKPL	High Grade Limestone Stockpile	PM					0.05	0.2	0.05	0.2	Storage: Stockpile	
				PM10					0.05	0.2	0.05	0.2		
				PM2.5					0.05	0.2	0.05	0.2		
New/Modified	SAND_STKPL	ADD_STKPL	Sand Stockpile	PM					0.02	0.09	0.02	0.09	Storage: Stockpile	
				PM10					0.02	0.09	0.02	0.09		
				PM2.5					0.02	0.09	0.02	0.09		



**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Unit Types - Emission Rates**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

Action Requested (only 1 action per FRI summary)	Include Base emissions in annual (tpy) summary?	Facility ID Number (FRI)	Emission Point Number (EPN)	Source Name	Pollutant	Current Short- Term (lb/hr)	Current Long- Term (tpy)	Consolidated Current Short- Term (lb/hr)	Consolidated Current Long- Term (tpy)	Proposed Short-Term (lb/hr)	Proposed Long Term (tpy)	Short-Term Difference (lb/hr)	Long-Term Difference (tpy)	Unit Type (Used for reviewing BACT and Monitoring Requirements)	Unit Type Notes (only if "other" unit type in Column O)
New/Modified	Yes	EG-1	EG-1	Emergency Generator Engine	NOx					8.869	0.443	8.869	0.443	Engine	
					SO2					0.00429	0.000215	0.00429	0.000215		
					CO					17.738	0.897	17.738	0.897		
					PM					0.142	0.007	0.142	0.007		
					PM10					0.142	0.007	0.142	0.007		
					PM2.5					0.142	0.007	0.142	0.007		
					VOC					4.584	0.227	4.584	0.227		
					CO2 Equivalent					42.249	0.78	42.249	0.78		
New/Modified	Yes	NR3FLUG	NR3FLUG	NR3 Fugitives	NOx					0.06	0.003	0.06	0.003	Fugitives, Piping and Equipment Leak	
New/Modified	Yes	MSSFLUG	MSSFLUG	ILE MSS Activities	NOx					0.00026	0.000482	0.00026	0.000482	MSS Activities	
					SO2					0.002	0.003	0.002	0.003		
					CO					0.002	0.003	0.002	0.003		
					PM					0.814	0.771	0.814	0.771		
					PM10					0.814	0.771	0.814	0.771		
					PM2.5					0.696	0.76	0.696	0.76		
					VOC					0.279	0.377	0.279	0.377		
										0.000162	0.000332	0.000162	0.000332		

**Texas Commission on Environmental Quality  
Form PL-1 General Application  
Stack Parameters**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

APP-1090

Stack Parameters										
This sheet documents the stack parameters for each EPN. You do not need to complete this sheet for sources included in an EMEW for this project.										
Instructions:										
1. The EPN list is automatically populated from the "Unit Types - Emission Rates" sheet.										
2. Indicate if the source is included in an EMEW. If it is, you do not need to complete the additional information.										
3. Enter the stack parameters that apply for each EPN.										
4. Cap EPNs do not need stack parameters (leave those rows blank).										
<a href="#">Click here to return to Cover Sheet</a>										
EPN	Included in EMEW?	Emission Point Discharge Parameters							Fugitives - Axis Degrees	Fugitives - Width (ft)
		UTM Coordinates Zone	East (Meters)	North (Meters)	Building Height (ft)	Height Above Ground (ft)	Stack Exit Diameter (ft)	Velocity (FPS)		
21-SK-230	Yes									
51-SK-250	Yes									
10-BF-035	Yes									
10-BF-140	Yes									
12-BF-140	Yes									
11-BF-270	Yes									
11-BF-285	Yes									
12-BF-315	Yes									
12-BF-325	Yes									
12-BF-360	Yes									
13-BF-030	Yes									
13-BF-500	Yes									
20-BF-010	Yes									
20-BF-182	Yes									
20-BF-360	Yes									
21-BF-330	Yes									
22-BF-060	Yes									
22-BF-080	Yes									
22-BF-160	Yes									
22-BF-385	Yes									
30-BF-260	Yes									
30-BF-320	Yes									
42-BF-270	Yes									
41-BF-130	Yes									
44-BF-030	Yes									
44-BF-185	Yes									
50-BF-050	Yes									
50-BF-020	Yes									
50-BF-350	Yes									
51-BF-050	Yes									
51-BF-140	Yes									
51-BF-350	Yes									
51-BF-380	Yes									
52-BF-110	Yes									
53-BF-110	Yes									
52-BF-190	Yes									
53-BF-190	Yes									
52-BF-270	Yes									
53-BF-270	Yes									
LSCRSBHD MH	Yes									
TRK MH	Yes									
RR MH	Yes									
LS STKPL	Yes									
ADD STKPL	Yes									
EG-1	Yes									
NH3FUG	Yes									
MSSFUG	Yes									

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

**Public Notice Applicability, Required Information, and Small Business Classification**

This sheet is intended to assist in this determination of public notice requirements and is not a replacement for 30 TAC Chapter 39 (Public Notice). **If you can see the page header, there are questions applicable to your project on this sheet.**

The THSC §382.056 and corresponding rules in 30 TAC Chapter 39 (Public Notice) require that you publish a notice of intent to obtain a permit and in certain circumstances, notice of preliminary decision. Notices must be published in a newspaper of general circulation in the municipality where the proposed facility is or will be located (not applicable to alternative language notices). The notices must include a description of the facility and the fact that a person who may be affected by emissions from the facility may request a public hearing and any other information the TCEQ requires by rule. Signs must also be posted at the site in compliance with 30 TAC § 39.604(c). Additional information regarding public notice such as an overview of requirements, an applicability table, and a list of some common errors that may cause renotice and delays in processing your application can be found at the link below:

[https://www.tceq.texas.gov/permitting/air/bilingual/how1\\_2\\_pn.html](https://www.tceq.texas.gov/permitting/air/bilingual/how1_2_pn.html)

**Instructions:**

1. Complete all blank questions below in the Public Notice Applicability section. A summary statement at the end will indicate if notice is required.
2. If public notice applies, additional information is required to meet the requirements of the THSC § 382.056. If you are unsure whether public notice applies, we encourage you to complete this section to facilitate a quicker review of the application.
3. Complete all questions in the Small Business Classification section to determine eligibility.

[Click here to return to Cover Sheet.](#)

**I. Public Notice Applicability**

**A. Application Type**

Is this an application for an initial permit?	Yes
Is this an application for a new or major modification of a PSD (including GHG), Nonattainment, or HAP permit?	Yes

**B. Project Increases and Public Notice Thresholds (for Initial and Amendment Projects)**

Pollutant	Proposed Long-Term (tpy)
VOC	101.10
PM	217.71
PM <sub>10</sub>	217.03
PM <sub>2.5</sub>	216.12
NO <sub>x</sub>	290.14
CO	1606.47
SO <sub>2</sub>	213.35
Pb	0.04
H <sub>2</sub> SO <sub>4</sub>	58.66
HCl	10.41
Hg	0.011
NH <sub>3</sub>	57
CO <sub>2</sub> Equivalent	989654.904

\* Notice is required for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> if one of these pollutants is above the threshold.

\*\* Notice of a GHG action is determined by action type. Initial and major modification always require notice. Voluntary updates require a consolidated notice if there is a change to BACT. Project emission increases of CO<sub>2</sub>e (CO<sub>2</sub> equivalent) are not relevant for determining public notice of GHG permit actions.

**D. Is public notice required for this project as represented in this PI-1?**

If no, proceed to Section III Small Business Classification.

Note: public notice applicability for this project may change throughout the technical review.

Yes



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

<b>E. Are any HAPs to be authorized/re-authorized with this project?</b> The category "HAPs" must be specifically listed in the public notice if the project authorizes (reauthorizes for renewals) any HAP pollutants.		Yes
<b>II. Public Notice Information</b>		
Complete this section if public notice is required (determined in the above section) or if you are not sure if public notice is required.		
<b>A. Contact Information</b>		
Enter the contact information for the <b>person responsible for publishing</b> . This is a designated representative who is responsible for ensuring public notice is properly published in the appropriate newspaper and signs are posted at the facility site. This person will be contacted directly when the TCEQ is ready to authorize public notice for the application.		
Prefix (Mr., Ms., Dr., etc.):	Mr	
First Name:	Jacob	
Last Name:	Bender	
Title:	Chief Financial Officer	
Company Name:	BM Dorchester LLC	
Mailing Address:	1008 Southview Cir	
Address Line 2:		
City:	Center	
State:	Texas	
ZIP Code:	75935	
Telephone Number:	936-598-8587	
Fax Number:	936-590-7464	
Email Address:	jake@highrollergroup.com	
Enter the contact information for the <b>Technical Contact</b> . This is the designated representative who will be listed in the public notice as a contact for additional information.		
Prefix (Mr., Ms., Dr., etc.):	Mr.	
First Name:	Michael	
Last Name:	Meister	
Title:	Principal Consultant	
Company Name:	Trinity Consultants	
Mailing Address:	555 N Carancahua St	
Address Line 2:	Suite 820	
City:	Corpus Christi	
State:	Texas	
ZIP Code:	78401	
Telephone Number:	361-883-1668	
Fax Number:		
Email Address:	mmeister@trinityconsultants.com	
<b>B. Public place</b> Place a copy of the full application (including the entire completed PI-1 and all attachments) at a public place in the county where the facilities are or will be located. You must state where in the county the application will be available for public review and comment. The location must be a public place and described in the notice. A public place is a location which is owned and operated by public funds (such as libraries, county courthouses, city halls) and cannot be a commercial enterprise. You are required to pre-arrange this availability with the public place indicated below. The application must remain available from the first day of publication through the designated comment period.  If this is an application for a PSD, nonattainment, or FCAA §112(g) permit, the public place must have internet access available for the public as required in 30 TAC § 39.411(f)(3).  If the application is submitted to the agency with information marked as Confidential, you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: <b>Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the TCEQ Public Information Coordinator, MC 197, P.O. Box 13087, Austin, Texas 78711-3087.</b>		
Name of Public Place:	Howe Community Library	
Physical Address:	315 S Collins Frwy	
Address Line 2:		
City:	Howe	

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

ZIP Code:	75459	
County:	Grayson	
Has the public place granted authorization to place the application for public viewing and copying?	Yes	
Does the public place have Internet access available for the public?	Yes	
<b>C. Alternate Language Publication</b>		
<p>In some cases, public notice in an alternate language is required. If an elementary or middle school nearest to the facility is in a school district required by the Texas Education Code to have a bilingual program, a bilingual notice will be required. If there is no bilingual program required in the school nearest the facility, but children who would normally attend those schools are eligible to attend bilingual programs elsewhere in the school district, the bilingual notice will also be required. If it is determined that alternate language notice is required, you are responsible for ensuring that the publication in the alternate language is complete and accurate in that language.</p>		
Is a bilingual program required by the Texas Education Code in the School District?	No	
Are the children who attend either the elementary school or the middle school closest to your facility eligible to be enrolled in a bilingual program provided by the district?	No	
<b>D. PSD and Nonattainment Permits Only</b>		
If this is an application for emissions of GHGs, select either "Separate Public Notice" or "Consolidated Public Notice". Note: Separate public notices requires a separate application.		Consolidated Public Notice
We must notify the applicable county judge and presiding officer when a PSD or Nonattainment permit or modification application is received. This information can be obtained at the link below: <a href="https://www.txdirectory.com">https://www.txdirectory.com</a>		
Provide the information for the <b>County Judge</b> for the location where the facility is or will be located.		
The Honorable:	Bill Magers	
Mailing Address:	100 W. Houston	
Address Line 2:	Suite 15	
City:	Sherman	
State:	Texas	
ZIP Code:	75090	
Provide the Information for the <b>Presiding Officer(s)</b> of the municipality for this facility site. This is frequently the Mayor.		
First Name:	David	
Last Name:	Smith	
Title:	Mayor	
Mailing Address:	373 Main Street	
Address Line 2:		
City:	Dorchester	
State:	Texas	
ZIP Code:	75459	
Are the proposed facilities located within 100 km or less of an affected state or Class I Area?	No	
<b>III. Small Business Classification</b>		
Complete this section to determine small business classification. If a small business requests a permit, agency rules (30 TAC § 39.603(f)(1)(A)) allow for alternative public notification requirements if all of the following criteria are met. If these requirements are met, public notice does not have to include publication of the prominent (12 square inch) newspaper notice.		
Does the company (including parent companies and subsidiary companies) have fewer than 100 employees or less than \$6 million in annual gross receipts?	Yes	
Is the site a major source under 30 TAC Chapter 122, Federal Operating Permit Program?	Yes	
Small business classification:	No	

## Federal Applicability Determination Summary

This sheet provides a summary of nonattainment, PSD and GHG PSD permitting applicability. If nonattainment is required, offset information is included. A full analysis for nonattainment, PSD, and PSD GHG permitting applicability must be included in the permit application. If you can see the page header, there are questions applicable to your project on this sheet.

### Instructions:

1. Complete separate federal permitting application materials to determine applicability of nonattainment, PSD, and GHG PSD applicability, including netting if applicable. Include this analysis in your permit application.
2. Section I: determine the attainment classification of the county where the proposed project will be located.
  - a. Indicate if the project requires retrospective review. If so, complete the associated questions.
  - b. The county is entered based on the response on the General Sheet.
  - c. If the site is located in a county that is partially nonattainment for a pollutant, indicate whether the site is in that portion of the county.
  - d. If desired, use the optional dropdown to indicate the ozone nonattainment classification this project should be reviewed under. This allows you to account for anticipated reclassifications.
3. Section II: PSD and GHG PSD and Section III: Nonattainment applicability summaries
  - a. Enter the project increase for each pollutant. Depending on the step of applicability required, this may be the increases only for the proposed project or may include all increases/decreases during the contemporaneous period if the project requires netting. If doing netting, the values entered here should be after netting has been conducted.
  - b. Enter the applicable thresholds for each pollutant. This will vary depending on the type of project. For example, an unnamed source at a greenfield site with minor emissions may use the 250 tpy thresholds and an existing major source may use the significant emission rates.
  - c. If the project is not located in a nonattainment county, Section III will grey out.
4. Sections IV and V: Offsets
  - a. If nonattainment permitting is required, the applicable offset ratio and quantity will be listed.
  - b. Provide details of where the offsets will be coming from, listing one or more of these options: emission credits (ERCs or DERs), inter-pollutant use of credits, inter-area use of credits, MECT allowances, HECT allowances, internal offsets, and/or to be determined.
  - c. If inter-pollutant use of credits will be utilized to offset the project, please ensure all required information is submitted to the Emissions Banking and Trading Team. The technical analysis for any site-specific inter-pollutant use of credits must be approved prior to the date that the permit application is deemed technically complete.

Guidance for Determining Project Increases

[https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NetSourceReview/fnsr\\_app\\_determ.pdf](https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NetSourceReview/fnsr_app_determ.pdf)

Guidance for Determining Federal Applicability Thresholds

<https://www.tceq.texas.gov/assets/public/permitting/air/factsheets/fa-ctsheets-psd-na-sigemiss-6240.pdf>



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Federal Applicability**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

APP-1095

<b>I. County Classification</b>			
Does the project require retrospective review?		No	
County (completed for you from your response on the General sheet)		Grayson	
This project will be located in an area that is in attainment for ozone as of Sept. 23, 2019. Select from the drop-down list to the right if you would like the project to be reviewed under a different classification.			
Determination:		This project will be located in an area that is in attainment or unclassified for all pollutants. Nonattainment review is not required.	
<b>II. PSD and GHG PSD Applicability Summary</b>			
Is netting required for the PSD analysis for this project?			No
Pollutant	Project Increase	Threshold	PSD Review Required?
CO	1606.47	100	Yes
NO <sub>x</sub>	290.14	40	Yes
PM	217.71	25	Yes
PM <sub>10</sub>	217.03	15	Yes
PM <sub>2.5</sub>	216.12	10	Yes
SO <sub>2</sub>	213.35	40	Yes
Ozone (as VOC)	101.10	40	Yes
Ozone (as NO <sub>x</sub> )	290.14	40	Yes
Pb	0.04	0.6	No
H <sub>2</sub> S	0	10	No
TRS	0	10	No
Reduced sulfur compounds (including H <sub>2</sub> S)	0	10	No
H <sub>2</sub> SO <sub>4</sub>	58.66	7	Yes
Fluoride (excluding HF)	0	3	No
CO <sub>2e</sub>	989654.904	75000	Yes

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Fees**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

### Estimated Capital Cost and Fee Verification

This sheet is for determining application fee requirements for projects which require a fee and for requesting expedited permitting. **If you can see the page header, there are questions applicable to your project on this sheet.**

Fees are due and payable at the time an application is filed. Required fees must be received before the agency will consider an application to be complete.

For amendment/initial actions: Applications will not be considered for review nor will any time constraints required of TCEQ for application processing begin until a fee is received. (30 TAC § 116.143)

For renewal actions: No fee will be accepted before the permit holder has been notified by the commission that the permit is scheduled for review.

All permit review fees shall be remitted by check, certified check, electronic funds transfer, or money order payable to the Texas Commission on Environmental Quality (TCEQ) and mailed to the TCEQ, P.O. Box 13088, MC 214, Austin, Texas 78711-3088. The State Treasury will not accept checks drawn on foreign banks. Instructions for online payment through the ePay system can be found at the following link:

<https://www3.tceq.texas.gov/epay/>

**Instructions:**

1. Enter information related to the expedited permitting option.
2. Answer each of the questions.
3. Enter the amount of each cost in the associated box. Include estimated cost of equipment and services that would normally be capitalized according to standard and generally accepted corporate financing and accounting procedures (non-renewal actions only). If the amount is \$0.00, enter a zero (do not leave blank).
4. Enter the total annual allowable emissions from the permitted facility to be renewed (renewal actions only).
5. Enter payment information.
6. If applicable, submit the application under the seal of a Texas Licensed P.E.

[Click here to return to Cover Sheet.](#)

**I. Expedited Permitting Request**

Are you requesting to expedite this project?	Yes
Does the purpose of the application associated with this request to expedite benefit the economy of this state or an area of this state? If no, this project does not qualify for expedited permitting.	Yes
Surcharge amount due	\$ 20,000.00
Surcharge amount paid	\$ 20,000.00
Enter the check, money order, ePay Voucher, or other transaction number.	1001

You must also submit the Form APD-APS Air Permitting Surcharge Payment to the TCEQ Cashier's office, link to the form below:

<https://www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/20707.pdf>

**II. General Information - Non-Renewal**

Is this project for new facilities controlled and operated directly by the federal government? (30 TAC § 116.141(b)(1) and 30 TAC § 116.163(a))	No
A fee of \$75,000 shall be required if no estimate of capital project cost is included with the permit application. (30 TAC § 116.141(d)) Select "yes" here to use this option.	Yes

**Select Application Type**

Major Application

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Fees**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

In signing the "General" sheet with this fee worksheet attached, I certify that the total estimated capital cost of the project as defined in 30 TAC §116.141 is equal to or less than the above figure. I further state that I have read and understand Texas Water Code § 7.179, which defines Criminal Offenses for certain violations, including intentionally or knowingly making, or causing to be made, false material statements or representations.	
Your estimated capital cost: _____ Maximum fee applies.	
Permit Application Fee:	<b>\$75,000.00</b>
<b>VII. Total Permit Fees</b>	
Note: fees can be paid together with one payment or as two separate payments.	
Non-Renewal Fee	\$75,000.00
Total	\$75,000.00
<b>VIII. Payment Information</b>	
<b>A. Payment One (required)</b>	
Was the fee paid online?	Yes
Enter the fee amount:	\$ 95,000.00
Enter the check, money order, ePay Voucher, or other transaction number (enter "STEERS" if submitting and paying through STEERS):	1001
Enter the Company name as it appears on the check:	BM CEMENT LLC
<b>C. Total Paid</b>	<b>\$95,000.00</b>
<b>IX. Professional Engineer Seal Requirement</b>	
Is the estimated capital cost of the project above \$2 million?	Yes
Is this project subject to an exemption contained in the Texas Engineering Practice Act (TEPA)? (30 TAC § 116.110(f))	No
Is the application required to be submitted under the seal of a Texas licensed P.E.?	Yes
Note: an electronic PE seal is acceptable.	

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Impacts**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

<b>Impacts Summary</b>				
This sheet provides a summary of how the impacts review was conducted for each pollutant. If you can see the page header, there are questions applicable to your project on this sheet.				
<b>Instructions:</b> 1. Ozone, VOC, and all pollutants listed on the Unit Types-Emission Rates sheet are automatically listed below. 2. Select "yes" or "no" to indicate if the project requires PSD review for each pollutant. 3. Select the method used to demonstrate acceptable impacts for PSD or minor NSR review, whichever is applicable for the pollutant. 4. Read all information in the "Notes" column for additional instructions. 5. Add additional notes if desired, such as a short qualitative analysis or other note to your permit reviewer.				
<b>Notes:</b> 1. An impacts analysis may include a qualitative analysis, MERA analysis, and/or modeling. Modeling is not always required to complete an impacts analysis. 2. An air quality impacts demonstration may be required for Change of Location requests to demonstrate protection of public health and welfare. (30 TAC § 116.178(f))				
Links to help with Impacts Analyses				
MERA guidance	<a href="https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/mera.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/mera.pdf</a>			
Modeling website	<a href="https://www.tceq.texas.gov/permitting/air/nav/modeling_index.html">https://www.tceq.texas.gov/permitting/air/nav/modeling_index.html</a>			
Air Quality Modeling Guidelines	<a href="https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/airquality-mod-guidelines6232.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/airquality-mod-guidelines6232.pdf</a>			
PSD protocol guidance	<a href="https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/protocol-checklist.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/protocol-checklist.pdf</a>			
GHG permitting guidance	<a href="https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/ghg/ghg-permitting.html">https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/ghg/ghg-permitting.html</a>			
<a href="#">Click here to return to Cover Sheet.</a>				
Pollutant	Does this pollutant require PSD review?	How will you demonstrate that this project meets all applicable requirements?	Notes	Additional Notes (optional)
Ozone	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
VOC	No	MERA steps 0-2 AND Modeling (screen or refined)	Attach both an "Electronic Modeling Evaluation Workbook" (EMEW) AND a detailed description of which MERA step was met. Include specified emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
NOx	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
SO2	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
H2SO4	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Impacts**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Pollutant	Does this pollutant require PSD review?	How will you demonstrate that this project meets all applicable requirements?	Notes	Additional Notes (optional)
HCl	No	MERA analysis, steps 0-2 only or using screening tables	Attach a detailed description of which MERA step was met for each species in the project. Include speciated emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
CO	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
PM	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
PM10	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
PM2.5	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
Pb	No	Modeling; screen or refined	Attach a completed "Electronic Modeling Evaluation Workbook" (EMEW).	
Hg	No	MERA analysis, steps 0-2 only or using screening tables	Attach a detailed description of which MERA step was met for each species in the project. Include speciated emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
NH3	No	MERA analysis, steps 0-2 only or using screening tables	Attach a detailed description of which MERA step was met for each species in the project. Include speciated emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
CO2 Equivalent	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	

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Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

APP-1100

Best Available Control Technology (BACT)					Applicant Internal Comments		
This sheet provides BACT for each source in the project as listed on the "Unit Type - Emission Rates" sheet.					All comments must be deleted prior to application submittal.		
<b>Instructions for New, Modified, and/or Consolidated Sources</b> 1. Current Tier I BACT is required for all new, modified, and/or consolidated sources, as well as for Change of Locations (unless conducting a Tier II, Tier III, or LAER analysis). 2. The unit types listed in Unit Type (column C) include all new, modified, and/or consolidated sources as indicated on the "Unit Types - Emission Rates" sheet. 3. The pollutants listed in Pollutant (column D) include those indicated on the "Unit Types - Emission Rates" sheet. 4. Tier I BACT is automatically populated for each unit type and pollutant. If BACT is not yet defined for that unit type or that pollutant, "See additional notes" will appear and you must propose BACT requirements for TCEQ review. 5. Fully expand the Tier I BACT (column E) by increasing the row height so all text is visible. (Place the cursor on the bottom of the number line to the far left of this screen, click and drag downward until all text is visible.) 6. Confirm that you will meet all representations listed on the sheet and any additional attachments by entering or selecting "Yes" in Confirm (column F). If the BACT column lists "See additional notes", the confirmation column can be left blank. 7. Add additional notes as necessary in Additional Notes (column G), limited to 500 characters or fewer. Examples of when you may have notes include the following: - Current Tier I BACT column states "See additional notes" or requests details; - indicating there is an attached Tier II, Tier III, or LAER analysis; - Details about alternative controls you are proposing; and - Any additional information relevant to the minimization of emissions. 8. Cap EPNs do not need BACT (leave those rows blank).  <b>Instructions for Renewed Only Sources (not modified with this project):</b> 1. Current Tier I BACT is not required for sources that are only being renewed (not modified). However, units being renewed are required to meet requirements that are economically reasonable and technically practicable given the age of the facility and the impacts of its emissions on the surrounding area. 2. The unit types listed in Unit Type (column C) include all renewed sources too, as indicated on the "Unit Types - Emission Rates" sheet. Each of these sources should list what techniques are utilized to minimize emissions. 3. Follow steps 2 through 8 above. 4. If the sources utilize current Tier I BACT, select confirm. 5. If alternate techniques are used, list the techniques currently used to minimize emissions in the additional notes section.							
<b>Notes:</b> 1. If a FIN was not provided on the Unit Types - Emission Rates sheet, a FIN will be created from the EPN. 2. Tier II, Tier III, PSD BACT review, and/or LAER analyses require additional justification which must be included in the application as an attachment. 3. For federal review projects, review the RBLG and provide relevant data in the application. Additional requirements may be identified during the technical review. For additional details on control technology reviews, visit the link below: <a href="https://www.tceq.texas.gov/permits/air/nav/bact_index.html">https://www.tceq.texas.gov/permits/air/nav/bact_index.html</a> <a href="#">Click here to return to Cover Sheet.</a>							
Plant Type	Action Requested	FINs	Unit Type	Pollutant	Current Tier I BACT	Confirm	Additional Notes
New/Modified		Kiln	Kiln, Cement	NOx	Dry low NOx combustion, NSCR, or water/steam injection. Specify technique. These controls will limit NOx to 1.5 lb/ton clinker on a 30-day rolling average.  Must meet the limits of 40 CFR 60 Subpart F.	Confirm	A limit of 1.5 lb NOx/ton clinker on a 30-day rolling average per 40 CFR Part 60 Subpart F will be met as the BACT for NOx. Due to the close proximity of the DFW ozone nonattainment area, Black Mountain also proposes to voluntarily install a control technology that will consist of a Selective Catalytic Reduction (SCR) system or a combination of SCR and non-selective catalytic reduction (NSCR) system for NOx control (0.54 lb NOx/ton clinker) as a supplemental level of control.
				SO2	Firing low sulfur fuel and/or scrubber. Specify technique. SO2 shall be limited to 0.4 lb/ton clinker on a 30-day rolling average.  Must meet the limits of 40 CFR 60 Subpart F.	Yes	A limit of 0.4 lb SO2/ton clinker on a 30-day rolling average per 40 CFR Part 60 Subpart F is proposed as the BACT for SO2. The SO2 will be controlled by the alkali absorption inherent in the precalciner kiln, the use of low sulfur content natural gas as fuel, and a scrubber.
				H2SO4	Firing low sulfur fuel and/or scrubber. Specify technique.	Yes	A limit of 0.11 lb/ton clinker on an annual basis and 1.1 lb/ton clinker on an hourly basis for H2SO4 when the in-line raw mill and scrubber are not operating. The SO2 will be controlled by the use of low sulfur content natural gas as fuel and a scrubber.
				HCl	Limited to 3 ppmvd at 7% O2	Yes	A limit of 3 ppmvd @ 7% O2 for HCl emissions on a 30-day rolling average per 40 CFR Part 63 Subpart LLL is proposed.
				CO	Must meet the limits of 40 CFR 63 Subpart LLL.  Good combustion practices or oxidation catalyst. Specify technique.	Yes	Good combustion practices will be employed. (3.0 lb/ton clinker on a 12-month rolling average)
					The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Fabric filter, ESP, wet scrubber, or cyclone. Specify technique.  For Portland Cement, PM shall be limited to 0.02 lb/ton clinker.  For Lime: 0.10 lb/ton stone feed (tsl)  Must meet the limits of 40 CFR 63 Subpart LLL.	Yes	A limit of 0.30 lb PM10/ton clinker with a filterable PM rate of 0.02 lb/ton clinker to meet 40 CFR Part 63 Subpart LLL and condensable PM rate of 0.28 lb/ton clinker using a fabric filter system and a scrubber.
				PM	See additional notes:	Yes	
				Pb	Activated carbon injection and/or sorbent injection. Specify technique. Hg shall be limited to 21 lb/MM tons clinker.	Yes	A limit of 21 lb/MM ton clinker on a 30-day rolling basis per 40 CFR Subpart LLL is proposed as the BACT using the scrubber.
				Hg	Must meet the limits of 40 CFR 63 Subpart LLL.  Good combustion practices or oxidizers.	Yes	Good combustion practices. A limit of 24 ppmvd @ 7% O2 for THC on a 30-day rolling average per 40 CFR Part 63 Subpart LLL or the alternative limit of 12 ppmvd total organic HAP on a 30-day rolling average is proposed as BACT.
				VOC	Total Hydrocarbons limited to 24 ppmvd at 7% O2.	Yes	



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Action Requested	File	Unit Type	Pollutant	Current Tier BACT	Confirm	Additional Notes
			NH3	Control of ammonia injection system to minimize ammonia slip.	Yes	Black Mountain will control the ammonia injection system to minimize ammonia slip. (35 ppmv @ 7% O2 on a 30-day rolling average)
			CO2 Equivalent	See additional notes: Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. ESP shall be brought up to manufacturer's suggested temperature and maintained at that temperature for a duration of time specified by manufacturer before being placed into service. Cyclones shall be maintained according to manufacturer's specifications.	Yes	A limit of 0.92 micron dinker on a 30-day rolling average along with proper design and operation are proposed as BACT. Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.
New/Modified	FM	Control: Bag Filter/Baghouse	MSS	See Additional Notes:	Yes	A limit of 0.01 lb/MMBtu is proposed to meet TCEQ Tier 1 BACT.
			NOx	See Additional Notes:	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions.
			SO2	See Additional Notes:	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions.
			CO	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 98% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions. Fabric filter with outlet grain loading of 0.005 gr/dscf.
			PM	See Additional Notes:	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions.
			VOC	See additional notes:	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions.
			CO2 Equivalent	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 98% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	10-BF-035	Control: Bag Filter/Baghouse	PM	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 98% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	10-BF-140	Control: Bag Filter/Baghouse	PM	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 98% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	12-BF-140	Control: Bag Filter/Baghouse	PM	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 98% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	11-BF-270	Control: Bag Filter/Baghouse	PM	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 98% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.

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Action Requested	PNs	Unit Type	Pollutant	Current Year BACT	Confirm	Additional Notes
New/Modified	11-BF-285	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	12-BF-315	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	12-BF-325	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	12-BF-360	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	13-BF-030	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	13-BF-400	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	20-BF-010	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.



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New/Modified	20-BF-182	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf. Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS		Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	20-BF-360	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS		Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	21-BF-330	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS		Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	22-BF-060	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS		Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	22-BF-080	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS		Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	22-BF-160	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS		Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
New/Modified	22-BF-385	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation. Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
			MSS		Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.

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Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

APP-1104

Action Requested	FINs	Unit Type	Pollutant	Current Tier BACT	Confirm	Additional Notes
New/Modified	30-BF-260	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	30-BF-320	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	42-BF-270	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	41-BF-130	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	44-BF-030	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	44-BF-185	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	50-BF-050	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.



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 BACT

Action Requested	PMs	Unit Type	Pollutant	Current Tier BACT	Confirm	Additional Notes
New/Modified	50-BF-020	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 g/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 g/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	50-BF-350	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 g/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 g/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	51-BF-050	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 g/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 g/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	51-BF-140	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 g/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 g/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	51-BF-350	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 g/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 g/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	51-BF-380	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 g/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 g/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	52-BF-110	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 g/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 g/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.



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**BACT**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

APP-1106

Action Requested	FNs	Unit Type	Pollutant	Current Tier (BACT)	Confirm	Additional Notes
New/Modified	53-BF-110	Control, Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	53-BF-190	Control, Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	53-BF-190	Control, Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	52-BF-270	Control, Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	53-BF-270	Control, Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation. Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	LSCRSBD MH	Material Handling, Conveyor	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Coal handling: 90% reduction, typically enclosed (90-90% reduction); chemical sprays (80-90% reduction); or full enclosure (90+%). Specify technique. Best management practices (conducting system maintenance in a manner which minimizes emissions) employed during handling system maintenance. No bypassing of controls. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Black Mountain proposes partial building enclosures as BACT for material handling.
			MSS	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	

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**BACT**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Action Requested	FINs	Unit Type	Pollutant	Current Tier BACT	Confirm	Additional Notes
New/Modified	TRK_MH	Material Handling Conveyor	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Coal handling: 90% reduction, typically enclosed (50-90% reduction); chemical sprays (80-90% reduction); or full enclosure (90+%). Specify technique.	Yes	Black Mountain proposes partial building enclosures as BACT for material handling.
			MSS	Best management practices (conducting system maintenance in a manner which minimizes emissions) employed during handling system maintenance. No bypassing of controls. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	
				Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain proposes partial building enclosures as BACT for material handling.
New/Modified	RR_MH	Material Handling Conveyor	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Coal handling: 90% reduction, typically enclosed (50-90% reduction); chemical sprays (80-90% reduction); or full enclosure (90+%). Specify technique.	Yes	
				Best management practices (conducting system maintenance in a manner which minimizes emissions) employed during handling system maintenance. No bypassing of controls. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	
				Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	
New/Modified	LS_STKPL_1	Storage Stockpile	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
New/Modified	LS_STKPL_2	Storage Stockpile	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
			MSS	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
			MSS	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
				The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
New/Modified	HG_LS_STKPL	Storage Stockpile	PM	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
			MSS	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
New/Modified	SAND_STKPL	Storage Stockpile	PM	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
			MSS	See additional notes.	Yes	Black Mountain proposes NSPS Subpart JJJJ Table 1 emission standards as BACT for the natural gas fired emergency generator engine and limited annual operating hours as BACT.
New/Modified	EG-1	Engine	NOx	See additional notes.	Yes	Black Mountain proposes good combustion practices using natural gas and limited annual operating hours as BACT.
			SO2	See additional notes.	Yes	Black Mountain proposes NSPS Subpart JJJJ Table 1 emission standards as BACT for the natural gas fired emergency generator engine using good combustion practices.
			CO	See additional notes.	Yes	Black Mountain proposes good combustion practices using natural gas and limited annual operating hours as BACT.
			PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. See additional notes.	Yes	Black Mountain proposes NSPS Subpart JJJJ Table 1 emission standards as BACT for the natural gas fired emergency generator engine using good combustion practices and limited annual operating hours.
				See additional notes.	Yes	
			VOC	See additional notes.	Yes	Black Mountain proposes good combustion practices using natural gas and limited annual operating hours as BACT.
			CO2 Equivalent	See additional notes.	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT.
			MSS	See additional notes.	Yes	

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Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

APP-1108

Action Requested	Flare	Unit Type	Pollutant	Current Tier I BACT	Confirm	Additional Notes
New/Modified	NH3FUG	Fugitives, Piping and Equipment Leak	NH3	AVO Inspection  Same as normal operation BACT requirements. Best management practices (BMPs) will be used to minimize emissions, including using proper design of fuel delivery and handling, good air pollution control practices, and safe operating practices. Estimate fugitive emissions of sources such as natural gas, diesel, and ammonia. Leak detection and repair program as required for minimizing VOC leaks.	Yes	Black Mountain will perform AVO inspections and utilize best management practices to minimize NH3 emissions.  Black Mountain will perform AVO inspections and utilize best management practices to minimize NH3 emissions.
New/Modified	MSSFUG	MSS Activities	MS8	See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			NOx	See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			SO2	See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			CO	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. See Additional Notes.	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			PM	See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			VOC	Use of good air pollution control practices and safe operating practices.	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			MS8	Limiting the frequency and duration of activities.	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.



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Monitoring

Monitoring							
This sheet provides the minimum acceptable requirements to demonstrate compliance through monitoring for each pollutant proposed to be emitted from each FPN. This sheet also includes measuring techniques for sources of significant emissions in the project.							
Instructions:							
1. The unit types listed under Unit Type (column B) include all new, modified, consolidated, and/or renewed sources as indicated on the "Unit Types - Emission Rates" sheet. Each new, modified, consolidated, and/or renewed source must address how compliance will be demonstrated. Note: If a FPN was not provided on the Unit Types - Emission Rates sheet, a FPN will be created from the EPN.							
2. The pollutants listed in Pollutant (column C) include the pollutants indicated on the "Unit Types - Emission Rates" sheet.							
Monitoring (30 TAC § 116.111(a)(9)(G))							
3. The minimum acceptable monitoring is automatically populated for each unit type and pollutant.							
4. Fully expand the Minimum Monitoring Requirements (column D) by increasing the row heights so all text is visible. (Place the cursor on the bottom of the number line to the far left of the screen, click and drag downward until all text is visible)							
5. Review the monitoring and confirm that you will need all representations listed on this sheet and any additional attachments by entering or selecting "Yes" in Confirm (column E).							
6. "Additional Notes" (column F) is limited to 500 characters or fewer. Examples include the following:							
- Proposed monitoring for pollutants or units that list "See additional notes."							
- Details requested in the populated data:							
- Alternative monitoring you are proposing; and							
- Any additional information relevant to the minimization of emissions.							
7. Cap EPNs do not need monitoring (leave those rows blank).							
Measurement of Emissions (30 TAC § 116.111(a)(2)(B))							
Note this section will be grayed out if this project does not require PSD or nonattainment review, as represented on the General sheet.							
7. For each pollutant with a project increase greater than the PSD significant emission rate, select the proposed measurement technique using the dropdown (column G).							
8. For each pollutant with a project increase less than the PSD significant emission rate, leave blank.							
9. If selecting "other", provide details in Additional Notes for Measuring (column H).							
10. You may also use the Additional Notes for Measuring (column H) to provide more details on a selection.							
<a href="#">Click here to return to Cover Sheet.</a>							
<b>Important Note:</b> The permit holder shall maintain a copy of the permit, along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours. All required records must be maintained in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within 10 miles specified in the application. The site must make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner. The applicant must comply with any additional recordkeeping requirements specified in special conditions in the permit. All records must be retained in the file for at least two years following the date that the information or data is obtained. Some permits are required to maintain records for five years. (30 TAC § 116.113(b)(2)(E))							
PN	Unit Type	Pollutant	Minimum Monitoring Requirements	Confirm	Additional Notes for Monitoring	Proposed Measurement Technique (only complete for pollutants with a project increase above the PSD threshold)	Additional Notes for Measuring
Mn	Kiln Cement	NO <sub>x</sub>	CEMS. Data collected four times per hour and averaged hourly.	Yes		CEMS	
		SO <sub>2</sub>	Records of daily production used to calculate emission rates.	Yes	Initial performance test	CEMS	
		H <sub>2</sub> SO <sub>4</sub>	See Additional Notes.	Yes	Initial performance test and ongoing compliance with the MACT	Stack testing	
		HCl	See Additional Notes.	Yes	Support LLL by parametrically monitoring SO <sub>2</sub> emissions continuously	Stack testing	
		CO	CEMS. Data collected four times per hour and averaged hourly.	Yes	Initial performance test and ongoing compliance with the MACT	CEMS	
PM	Control Bag Filter/Baghouse	PM	The emission monitoring technique for PM <sub>10</sub> and PM <sub>2.5</sub> will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop at a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, specify the test method used to determine the emissions and compared to the applicable permit or rule limit. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes	Support LLL filterable particulate matter limit with CPMS	CEMS	
		CO	Quantify visible emission observations to demonstrate compliance with opacity requirements.	Yes		CEMS	
		PM	Quantify visible emission observations to demonstrate compliance with opacity requirements.	Yes		CEMS	
		CO	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		PM	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
EPA	Control Bag Filter/Baghouse	NO <sub>x</sub>	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		SO <sub>2</sub>	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		CO	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		PM	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		PM	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
10-BP-026	Control Bag Filter/Baghouse	CO	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		PM	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		CO	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		PM	See additional notes.	Yes	Record keeping of fuel usage	CEMS	
		PM	See additional notes.	Yes	Record keeping of fuel usage	CEMS	

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 Monitoring

10-BF-140	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is at least once per hour. The process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Monitoring shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
12-BF-140	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is at least once per hour. The process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Monitoring shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
11-BF-270	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is at least once per hour. The process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Monitoring shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
11-BF-285	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is at least once per hour. The process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Monitoring shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
12-BF-315	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is at least once per hour. The process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Monitoring shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
12-BF-325	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is at least once per hour. The process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Monitoring shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
12-BF-360	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is at least once per hour. The process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Monitoring shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	



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 Monitoring

13-BF-000	Control Bag Filter/Baghouse PM	<p>The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is more frequent than the process requires more frequent monitoring. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Monitoring and record keeping for visible emissions observations shall be performed and recorded per EPA Test Method 22.</p>	Yes		Record keeping	
13-BF-001	Control Bag Filter/Baghouse PM	<p>The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is more frequent than the process requires more frequent monitoring. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Monitoring and record keeping for visible emissions observations shall be performed and recorded per EPA Test Method 22.</p>	Yes		Record keeping	
20-BF-010	Control Bag Filter/Baghouse PM	<p>The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is more frequent than the process requires more frequent monitoring. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Monitoring and record keeping for visible emissions observations shall be performed and recorded per EPA Test Method 22.</p>	Yes		Record keeping	
20-BF-162	Control Bag Filter/Baghouse PM	<p>The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is more frequent than the process requires more frequent monitoring. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Monitoring and record keeping for visible emissions observations shall be performed and recorded per EPA Test Method 22.</p>	Yes		Record keeping	
20-BF-300	Control Bag Filter/Baghouse PM	<p>The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is more frequent than the process requires more frequent monitoring. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Monitoring and record keeping for visible emissions observations shall be performed and recorded per EPA Test Method 22.</p>	Yes		Record keeping	
21-BF-300	Control Bag Filter/Baghouse PM	<p>The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is more frequent than the process requires more frequent monitoring. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Monitoring and record keeping for visible emissions observations shall be performed and recorded per EPA Test Method 22.</p>	Yes		Record keeping	
22-BF-060	Control Bag Filter/Baghouse PM	<p>The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is more frequent than the process requires more frequent monitoring. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Monitoring and record keeping for visible emissions observations shall be performed and recorded per EPA Test Method 22.</p>	Yes		Record keeping	

22-BF-200	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed at a minimum frequency of once per hour, commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 22. If the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
22-BF-160	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed at a minimum frequency of once per hour, commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 22. If the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
22-BF-365	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed at a minimum frequency of once per hour, commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 22. If the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
30-BF-260	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed at a minimum frequency of once per hour, commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 22. If the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
30-BF-320	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed at a minimum frequency of once per hour, commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 22. If the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
42-BF-270	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed at a minimum frequency of once per hour, commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 22. If the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
41-BF-130	Control Bag Filter/Baghouse (PM)	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed at a minimum frequency of once per hour, commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 22. If the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	

**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Monitoring**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

94-BF-000	Control Bag Filter/Baghouse PM	Yes	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed on a continuous basis. The facility will maintain records of the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and recorded in the permit record. The facility shall be immediately after the facility is returned to service. Visible emissions observations shall be performed and recorded per EPA Test Method 22.	Record keeping	
94-BF-105	Control Bag Filter/Baghouse PM	Yes	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed on a continuous basis. The facility will maintain records of the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and recorded in the permit record. The facility shall be immediately after the facility is returned to service. Visible emissions observations shall be performed and recorded per EPA Test Method 22.	Record keeping	
90-BF-050	Control Bag Filter/Baghouse PM	Yes	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed on a continuous basis. The facility will maintain records of the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and recorded in the permit record. The facility shall be immediately after the facility is returned to service. Visible emissions observations shall be performed and recorded per EPA Test Method 22.	Record keeping	
90-BF-020	Control Bag Filter/Baghouse PM	Yes	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed on a continuous basis. The facility will maintain records of the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and recorded in the permit record. The facility shall be immediately after the facility is returned to service. Visible emissions observations shall be performed and recorded per EPA Test Method 22.	Record keeping	
90-BF-350	Control Bag Filter/Baghouse PM	Yes	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed on a continuous basis. The facility will maintain records of the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and recorded in the permit record. The facility shall be immediately after the facility is returned to service. Visible emissions observations shall be performed and recorded per EPA Test Method 22.	Record keeping	
91-BF-050	Control Bag Filter/Baghouse PM	Yes	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed on a continuous basis. The facility will maintain records of the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and recorded in the permit record. The facility shall be immediately after the facility is returned to service. Visible emissions observations shall be performed and recorded per EPA Test Method 22.	Record keeping	
91-BF-140	Control Bag Filter/Baghouse PM	Yes	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media will be performed on a continuous basis. The facility will maintain records of the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and recorded in the permit record. The facility shall be immediately after the facility is returned to service. Visible emissions observations shall be performed and recorded per EPA Test Method 22.	Record keeping	



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**Form PI-1 General Application**  
**Monitoring**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

51-BF-300	Control Bag Filter/Digthouse PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 100, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
51-BF-300	Control Bag Filter/Digthouse PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 100, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
52-BF-110	Control Bag Filter/Digthouse PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 100, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
53-BF-110	Control Bag Filter/Digthouse PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 100, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
52-BF-190	Control Bag Filter/Digthouse PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 100, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
53-BF-190	Control Bag Filter/Digthouse PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 100, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
52-BF-270	Control Bag Filter/Digthouse PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 100, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limit. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	

[illegible]



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Materials**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

APP-1110

<b>Application Materials</b>		<b>Applicant Internal Comments</b>																																																																																						
<p>This sheet provides a list of application materials and how they were submitted to the Air Permits Division. This also provides the preferred order of application materials in the application.</p> <p><b>Instructions:</b></p> <ol style="list-style-type: none"><li>1. Indicate the submittal method and date for each applicable part of the application.</li><li>2. Items are greyed out based on responses in the PI-1 to help guide you. There may be additional items listed below that are not not greyed out and are not needed for this application. You can select "not applicable" for those items.</li><li>3. If needed, enter additional application materials in Section F.</li></ol> <p><a href="#">Click here to return to Cover Sheet.</a></p>		All comments must be deleted prior to application submittal.																																																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="text-align: left;">Item</th><th style="text-align: center;">How submitted</th><th style="text-align: center;">Date submitted</th></tr></thead><tbody><tr><td colspan="3"><b>A. Administrative Information</b></td></tr><tr><td>Form PI-1 General Application</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Hard copy of the General sheet with original (ink) signature</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Professional Engineer Seal</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td colspan="3"><b>B. General Information</b></td></tr><tr><td>Copy of current permit (both Special Conditions and MAERT)</td><td></td><td></td></tr><tr><td>Core Data Form</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Area map</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Plot plan</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Process description</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Process flow diagram</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>List of MSS activities</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>State regulatory requirements discussion</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td colspan="3"><b>C. Federal Applicability</b></td></tr><tr><td>Summary and project emission increase determination - Tables 1F and 2F</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Netting analysis (if required) - Tables 3F and 4F as needed</td><td style="text-align: center;">Not applicable</td><td></td></tr><tr><td colspan="3"><b>D. Technical Information</b></td></tr><tr><td>BACT discussion, if additional details are attached</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Monitoring information, if additional details are attached</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Material Balance (if applicable)</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>Calculations</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td colspan="3"><b>E. Impacts Analysis</b></td></tr><tr><td>Qualitative impacts analysis</td><td></td><td></td></tr><tr><td>MERA analysis</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>EMEW: SCREEN3</td><td style="text-align: center;">Not applicable</td><td></td></tr><tr><td>EMEW: NonSCREEN3</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td>PSD modeling protocol</td><td style="text-align: center;">STEERS</td><td style="text-align: center;">11/05/2021</td></tr><tr><td colspan="3"><b>F. Additional Attachments</b></td></tr></tbody></table>			Item	How submitted	Date submitted	<b>A. Administrative Information</b>			Form PI-1 General Application	STEERS	11/05/2021	Hard copy of the General sheet with original (ink) signature	STEERS	11/05/2021	Professional Engineer Seal	STEERS	11/05/2021	<b>B. General Information</b>			Copy of current permit (both Special Conditions and MAERT)			Core Data Form	STEERS	11/05/2021	Area map	STEERS	11/05/2021	Plot plan	STEERS	11/05/2021	Process description	STEERS	11/05/2021	Process flow diagram	STEERS	11/05/2021	List of MSS activities	STEERS	11/05/2021	State regulatory requirements discussion	STEERS	11/05/2021	<b>C. Federal Applicability</b>			Summary and project emission increase determination - Tables 1F and 2F	STEERS	11/05/2021	Netting analysis (if required) - Tables 3F and 4F as needed	Not applicable		<b>D. Technical Information</b>			BACT discussion, if additional details are attached	STEERS	11/05/2021	Monitoring information, if additional details are attached	STEERS	11/05/2021	Material Balance (if applicable)	STEERS	11/05/2021	Calculations	STEERS	11/05/2021	<b>E. Impacts Analysis</b>			Qualitative impacts analysis			MERA analysis	STEERS	11/05/2021	EMEW: SCREEN3	Not applicable		EMEW: NonSCREEN3	STEERS	11/05/2021	PSD modeling protocol	STEERS	11/05/2021	<b>F. Additional Attachments</b>	
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**AR-21**

**Comments on Draft Permit**

**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Friday, October 20, 2023 5:12 PM  
**To:** Joel Stanford  
**Cc:** jake@highrollergroup.com  
**Subject:** RE: Draft Permit - Black Mountain Dorchester - NSR#167047, Project #335160  
**Attachments:** MAERT-BM Dorch- Project 335160\_Comments (2023-1020).docx; CND-BM Dorch- Project 335160\_Comments (2023-1020).docx

Joel,

Attached are consolidated comments on the draft permit. Once you've had a chance to review, let me know if you'd like to schedule a call/meeting to discuss the comments with the team.

Thanks,  
Mike

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Thursday, July 13, 2023 11:19 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** Draft Permit - Black Mountain Dorchester - NSR#167047, Project #335160

Hi Mike,  
Attached are first drafts for this project. They are extensive, and given the nature and complexity of this project I've specified 21 days as the timeline. A few notes...

The application references a sulfur compound scrubber, but no details of this were provided anywhere in the application. Please provide all relevant information for control efficiencies, nature of the scrubber, and proposed monitoring. Table 13 should be filled out with available information. Please also clarify whether this scrubber exhausts through the main kiln stack.

<https://www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/Tables/10181tbl.pdf>

Additionally, and relatedly the raw mill bypass system is somewhat confusing and vaguely laid out in terms of the EPNs involved. I have not included anything relating to this on the MAERT or in the Conditions, though CAM associated Conditions currently forbid a control bypass. It sounds like the gas and particulate (raw materials) mixture is sent to bagfilters before the filtered gas is sent to the scrubber for removal of sulfur compounds. The raw materials are then sent back into the process and the gases which went through the scrubber exhaust back into the kiln environment for eventual release out of the kiln stack. This, then, sounds less like a control bypass and more like sending excess emissions to a control while bypassing the mill. Please confirm if this understanding is correct. It is quite possible that Conditions which are added for the Scrubber can address this aspect of the process.

As noted in the CNDs please provide more details on the nature of the partial enclosure represented in the application.

Finally, the application document still contains at least one reference to the old SNCR proposal as opposed to the new SCR proposal. Please make sure all references are updated. An example of this

is on page 49. Additionally, I've specified 0.005 outlet grain loading for all regulated PM species, rather than the mixed outlet grain loading proposed in the application. Given that any filter which can hit 0.005 at PM2.5 can easily do so at PM and PM10 this should not be an issue.

Thanks,

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

Mail Code: MC-163, PO Box 13087

Austin, Texas 78711-3087



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### Special Conditions

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

#### Emission Standards

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

#### Fuel Specifications

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be ultra-low sulfur diesel fuel with a maximum sulfur content of not more than 0.0015 percent by weight and shall not consist of a blend containing waste oils or solvents. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

**Commented [A1]:** Engine is not a diesel fired compression ignition engine. It is spark ignited and fires natural gas.

#### Federal Applicability

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart Y – Coal Preparation Plants;
  - D. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - E. Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and

**Commented [A2]:** Coal is not represented as a fuel in the application



C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks, with the exception of the cement kiln baghouse stack (EPN 21-SK-230) and finish mill baghouse stack (EPN 51-SK-250), shall not exceed 5 percent, averaged over a six-minute period. Opacity of particulate matter emissions from the cement kiln baghouse stack (EPN 21-SK-230) and finish mill baghouse stack (EPN 51-SK-250) shall not exceed 10 percent, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

**Commented [A3]:** Revised the finish mill baghouse stack opacity limit to align with NSPS Subpart F (10%). Other permits for cement kilns have a higher opacity limit for the kiln stack compared to the other baghouses.

Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Commented [A4]:** Revised from "facilities" to kiln

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	<u>0.541-0</u> lb/ton of clinker (hourly avg.)	<u>0.5469</u> lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd <u>corrected to at</u> 7% O <sub>2</sub>	24 ppmvd <u>corrected to at</u> 7% O <sub>2</sub>
o-HAP	12 ppmvd <u>corrected to at</u> 7% O <sub>2</sub>	12 ppmvd <u>corrected to at</u> 7% O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	0.11 lb/ton of clinker
HCl	3 ppmvd <u>corrected to at</u> 7% O <sub>2</sub>	<u>0.02 lb/ton of clinker</u> 3 ppmvd <u>corrected to 7% O<sub>2</sub></u>
NH <sub>3</sub>	35 ppmv <u>corrected to at</u> 7% O <sub>2</sub>	<u>0.09 lb/ton of clinker</u> 35 ppmvd <u>corrected to 7% O<sub>2</sub></u>

**Commented [A5]:** Dioxins and Furans aren't listed as noted in the application.

Dioxins/Furans (D/F) - 0.20 nanogram per dry standard cubic meter (TEQ), corrected to 7 percent O<sub>2</sub>

Pollutant	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Hg	0.000021 <sup>±</sup> lb/ton of clinker	0.000021 lb/ton of clinker
Pb	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

**Commented [A5]:** Dioxins and Furans aren't listed as noted in the application.

Dioxins/Furans (D/F) - 0.20 nanogram per dry standard cubic meter (TEQ), corrected to 7 percent O<sub>2</sub>

**Table 2: Finish Mill Air Heater**

Emissions from the Finish Mill Air Heater (EPN 51-SK-250) shall not exceed the following during any rolling 12-month period.

Pollutant	Emission Standard
NO <sub>x</sub>	001 lb/MMBtu based on the higher heating value of the fuel.
CO	50 ppmvd corrected to 3% O <sub>2</sub>

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §63.6640(f). The following additional requirements apply:

- The engine shall be equipped with a non-resettable hour meter.
- The engine shall satisfy the Tier 4 exhaust emission standards specified at 40 CFR § 1039.101.
- Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 3: Fabric Filter Dust Collector Maximum Outlet Grain Loading Values**

EPN	Source Name	Maximum Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.005
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005

**Commented [A6]:** As discussed on 8/11/2023, BACT for the cement finish mill air heater is good combustion practices. CO emissions are calculated based on U.S. EPA AP-42 Section 1.4 emission factors.

**Commented [A7]:** Since engine would comply with MACT ZZZZ by complying with NSPS JJJJ. Please revise to reference NSPS JJJJ (60.4243(d)).

**Commented [A8]:** Title 40 Chapter I, Subchapter U, Part 1039 is for Control of Emissions from New and In-Use Nonroad Compression Ignition Engines.

These do not apply to a spark-ignited engine.

**Commented [A9]:** Kiln is subject to separate PM limits in NSPS Subpart F and MACT LLL of 0.02 lb PM/ton clinker (filterable).

EPN	Source Name	Maximum Outlet Grain Loading (gr/dscf)
11-BF-270	Material Transfer (LS to Hopper)	0.005
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005

EPN	Source Name	Maximum Outlet Grain Loading (gr/dscf)
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

#### RESERVED FOR SCRUBBER

14. Crushed limestone stockpiles shall be stored in an enclosed storage building.
15. Raw material truck and rail loading operations (EPNs RR\_MH and TRK\_MH) shall utilize partial enclosure defined as consisting of two sides and the use of strip curtains over the front and rear of the enclosure.
16. Raw material conveyers shall be fully enclosed.
17. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
18. A street sweeper and other mobile equipment shall pick up debris from the plant roads. ~~The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected, and dump inside an enclosed structure. The structure shall be enclosed on three sides with the entrance covered by a heavy strip curtain to reduce dump emissions. A front-end loader shall pick up the dust and debris from this structure and load it onto trucks for disposal. The contents of the truck shall be controlled, as necessary, to minimize emissions during transit.~~
19. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
20. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

**Commented [A10]:** A dry scrubber, properly installed and in good working order, will control SO<sub>2</sub> emissions from the cement kiln (EPN 21-SK-230). A lime injection system shall be installed and operated as necessary to reduce SO<sub>2</sub> emissions from EPN 21-SK-230 in order to meet the emission limits stated in the MAERT. SO<sub>2</sub> monitoring performed by CEMS.

**Commented [A11]:** Applicant: Please define the partial enclosure represented in the application.

**Commented [A12R11]:** Two or three side walls with fogging nozzles or peripheral dusty air suction nozzles on the perimeter of the hoppers for unloading by rail or truck. Dustless telescopic spouts for loading trucks or rail from bins or silos.

#### Cement Kiln Selective Catalytic Reduction

21. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).



- A. ~~Except where provided otherwise in paragraph D of this Special Condition,~~ Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
- B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
- C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
- D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).
- E. The ammonia (NH<sub>3</sub>) concentration in the Cement Kiln exhaust stack (NH<sub>3</sub> slip) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for NH<sub>3</sub> slip is only required on days when the SCR unit is in operation.
- (1) Install, calibrate, maintain, and operate, as specified under Special Condition No. 41, a CEMS to measure and record the concentration of NH<sub>3</sub>. The NH<sub>3</sub> concentration shall be corrected and reported in accordance with Special Condition No. 41.
  - (2) Use a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent/stain tube testing shall be performed daily for the first 60 days of operation, after which the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of NH<sub>3</sub> from being introduced in the SCR unit and when operation of the SCR unit has been proven successful with regard to controlling NH<sub>3</sub> slip. Daily sorbent or stain tube testing shall resume when the catalyst is within 30 days of its useful life expectancy. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.  
  
If sorbent or stain tube testing indicates an NH<sub>3</sub> slip concentration which exceed 35 ppm at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or the EPA Conditional Test Method (CTM) 27 on a quarterly basis, in addition to the weekly sorbent or stain tube testing. The quarterly testing shall continue until such time as the SCR unit catalyst is replaced; or if the quarterly testing indicates NH<sub>3</sub> slip is 35 ppm or less, the Nitroprusside/Indophenol/CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> slip or greater. These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.
  - (3) Install, calibrate, maintain, and operate, as specified under Special Condition No. 41, a second NO<sub>x</sub> CEMS upstream of the control device (in addition to the NO<sub>x</sub> CEMS required under this Special Condition). Perform the measurements and calculations associated with the mass balance method specified in 30 TAC § 117.8130(1), using NO<sub>x</sub> CEMS data to determine the NO<sub>x</sub> concentration differential across the control device.
  - (4) Install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS and the other exhaust stream would be routed through a NH<sub>3</sub> converter to convert NH<sub>3</sub> to

**Commented [A13]:** How does paragraph D of this Special Condition "provide otherwise"?



NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> slip concentration shall be calculated according to the method specified in 30 TAC § 117.8130(2). These results shall be recorded and used to determine compliance with paragraph A of this Special Condition.

- (5) Any other method used for measuring NH<sub>3</sub> slip shall require prior approval from the Texas Commission on Environmental Quality (TCEQ) Regional Director.

F. The NO<sub>x</sub> and CO emission limits of this permit shall not apply during non-routine operation of the Cement Kiln. Normal Cement Kiln operation does not include the following circumstances:

(1) MSS activity when the precalciner operating temperature is too low for proper SCR or combination of SCR and SNCR operation; and

(6)(2) An imminent or actual breakdown or excursion of the process, or other process that results in unauthorized emissions; or when a detached or secondary plume is observed by using EPA Test Method (TM) 22 of Appendix A-7 in 40 CFR Part 60. The permit holder must notify the TCEQ Regional Office within 24 hours of a positive EPA TM 22 observation of a detached or secondary plume. This notification does not satisfy excess opacity event reporting requirements under 30 TAC § 101.201.

**Commented [A14]:** Please remove this duplicate condition. This information is identified in Special Condition 43 of the draft permit.

#### Planned Maintenance, Startup, and Shutdown

22. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
23. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:
- A. A planned startup of the kiln is defined as the period starting when the kiln's induced draft fan is turned on and fuel is fired in the main burner and ending when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Planned startups of the cement kiln shall be limited to 300 hours per year.
- B. A planned shutdown of the kiln is defined as the period starting when feed to the kiln is halted and ending when continuous kiln rotation ceases. A planned shutdown of the kiln is limited to 48 hours in a single duration.
24. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
- A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
- B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.

**Commented [A15]:** Please provide the basis for this limit since this representation was not include in the permit application.

25. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
- A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### Ammonia Handling

Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO

26. Except as may be provided in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per 24 hours/shift.
  - B. Immediately, but no later than 24 one hours upon detection of a leak, plant personnel shall take at least one of the following actions:
    - (1) Isolate the leak.
    - (2) Commence repair or replacement of the leaking component.
    - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.
- Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

**Commented [A16]:** Based on other permits for cement kilns in Texas, the frequency has been revised to "once per 24 hours"

**Commented [A17]:** Same comment as above

#### Initial Demonstration of Compliance

27. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include ~~(but are not limited to)~~ PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, THC/VOG,

H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, D/F, methane, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 42. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln #2 shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.

**Commented [A18]:** See updates to the initial demonstration of compliance testing to align with federal requirements.

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and CO. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

**Commented [A19]:** Is it necessary to test the finish mill stack for the combustion emissions from the hot gas generator?

#### Sampling Requirements

29. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.
30. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
- A. Date for pretest meeting;
  - B. Date sampling will occur;
  - C. Points or sources to be sampled;
  - D. Name of firm conducting sampling;
  - E. Type of sampling equipment to be used; and
  - F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

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31. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
32. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
33. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
34. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
35. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
36. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
  - One copy to the TCEQ Regional Office with jurisdiction.
  - One copy to the TCEQ Office of Air, Air Permits Division in Austin.
  - One copy to each appropriate local air pollution control program with jurisdiction.
37. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
38. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:
  - One copy to the TCEQ Regional Office with jurisdiction.
  - One copy to the TCEQ Office of Air, Air Permits Division in Austin.



#### Demonstration of Continuous Compliance and Compliance Assurance Monitoring

39. The holder of this permit shall install, calibrate, and maintain continuous opacity monitoring systems (COMS) for monitoring opacity at the Cement Kiln Baghouse Stack (EPN 21-SK-230) and the Finish Mill Baghouse Stack (EPN 51-SK-250). Additionally, the holder of this permit shall install, and operate a continuous Parametric Monitoring System (CPMS) for filterable PM for the cement kiln in accordance with the requirements of NSPS Subpart F and NESHAP Subpart LLL. Continuous monitoring and recordkeeping of opacity shall be performed in accordance with the following:

- A. The (each) COMS shall meet the design and performance specification, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in Performance Specification No. 1, 40 CFR Part 60, Appendix B.
- B. The (each) COMS shall be installed, operated, and maintained in accordance with the requirements of 40 CFR § 63.1350(f)(4)(i).
- C. The (each) COMS shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR Part 60, Appendix B or as specified by the TCEQ if not specified in Appendix B.
- D. The (each) opacity monitor shall complete a minimum of one cycle of data recording for each successive ten-second period. Six-minute averages shall be computed from at least 36 data points over a six-minute period. Data recorded during periods of COMS breakdowns, repairs, calibration checks, and zero span adjustments shall not be included in the computed data averages.
- E. The holder of this permit shall submit to the appropriate TCEQ Regional Office, on a six-month basis, an excess emissions and monitoring systems performance report for the COMS measured opacity consistent with the requirements of 40 CFR § 60.7(c) and (d).

40. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).

41. Each CEMS required under this permit shall satisfy the following requirements:

- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
- B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
  - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration

**Commented [A20]:** A CPMS is required for NSPS Subpart F and NESHAP LLL for cement kilns and not a COMS.

There are also other permits that note the following:

A PM CPMS that has passed the initial certification requirements of 40 CFR Part 63, Subpart LLL may be used instead of a continuous opacity monitoring system (COMS). A site specific relationship between PM emissions and opacity measurements shall be developed to establish a level of CPMS output that reliably corresponds to the required opacity in Special Condition No. 8. Compliance with such a CPMS level will be considered to demonstrate compliance with the opacity limits for the kiln; however, the TCEQ may use EPA Test Method 9 to determine opacity at any time.

**Commented [A21]:** Please remove this emission source. MACT LLL requires daily visible emissions observation for the finish mills. A COMS is only an option to use in lieu of conducting the daily visible emissions testing.

**Commented [A22]:** Needs to be updated to reflect CPMS instead of COMS



measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of ppmv, lb/MMBtu, and/or the permit allowable emission rate in lb/hr at least once every week.
- D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
- F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

Commented [A23]: Please see revised language...

"reduced to units of the permit allowable emission rate in lb/hr at least once every week"

42. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 41, is subject to the following:

- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.
- B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).
- Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.

Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.

C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.

42.43. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap or CEMSs as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.

43.44. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.

- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with these Special Conditions No. 11 above.
- B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
  - (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 65-35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
  - (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 65-35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 65-35 ppm NH<sub>3</sub> stack concentration or greater.
- C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
- D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through a NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
- E. The permit holder may establish a correlation between the maximum NH<sub>3</sub> stack concentration limit and maximum NH<sub>3</sub> injection rate or other surrogate parameter that may be monitored to determine compliance with NH<sub>3</sub> stack concentration BACT requirements. These results shall be recorded and used to determine compliance with Special Condition No. 11.

- F. Other alternative methods used for measuring NH<sub>3</sub> stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.

44.45. The holder of this permit shall perform monthly inspections to verify proper operation of the capture systems for the Cement Kiln Baghouse (EPN 21-SK-230) and the Finish Mill Baghouse (EPN 51-SK-250) to verify there are no holes, cracks, and/or other conditions that would reduce the collection efficiency of the emission capture systems as represented. If the results of the inspections indicate that a capture system is not operating properly, the permit holder shall promptly take necessary corrective actions.

45.46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.

- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
- B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
- C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
- D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
- E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
- F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
- G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.

46.47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:

- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
- B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.

~~47.48.~~ The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.

~~48.49.~~ The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.

~~49.~~ ~~The control devices shall not have a bypass.~~

**RESERVED FOR SCRUBBER MONITORING**

**Commented [A24]:** Please remove as discussed on 8/11/2023. SO2 is monitored from the cement kiln stack using the SO2 CEMS

#### Recordkeeping Requirements

50. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:

- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
- B. After the CEMS certification, a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;
- C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN -21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;

**Commented [A25]:** Could be using sorbent trap instead of CEMS based on Special Condition 43



- D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. The holder of this permit shall maintain a raw data file of parametric monitoring measurements, including performance testing measurements, all calibration checks and adjustments and maintenance performed on the instrument(s). This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - F. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - G. Any excess emissions and monitoring systems performance reports for the COMS measured opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - H. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - I. Records of pressure drop readings for each baghouse;
  - J. Malfunctions of any air pollution abatement systems;
  - K. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - L. Records of visible emission/opacity observations and any corrective actions taken;
  - M. Hours of operation of the Emergency Generator (EPN EG-1);
  - N. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 22-25 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
51. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

**Commented [A26]:** This appears to be the same recordkeeping requirement as 50.C.

**Commented [A27]:** This appears to be the same recordkeeping requirement as 50.D.

#### Reporting Requirements

52. The holder of this permit shall submit a copy of semiannual COMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.



- C. The total time duration of excess opacity.
  - D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a COMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the COMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the COMS, exceed the limitations in Special Condition No. 8.
53. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

# Greenhouse Gases Special Conditions

54. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2</sub>	0.92 ton/ton-clinker-annual-basis
CH <sub>4</sub>	0.001 kg/MMBtu-annual-basis
N <sub>2</sub> O	0.0001 kg/MMBtu-annual-basis
CO <sub>2e</sub>	0.92 <del>ton</del> lb/ton clinker 30-day <u>12 month</u> rolling average

**Commented [A28]:** Revised to remove "#2" since this application only includes one kiln

**Commented [A29R28]:** Please see revised CO<sub>2e</sub> limit to align with the recordkeeping in Special Condition 58 and the MAERT.

55. Initial determination of compliance as specified in Special Condition No. 27 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 27, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

56. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of ±15 percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln-#2 CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.

- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

**Greenhouse Gases Recordkeeping Requirements**

57. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.
58. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
- B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
- C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
- (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
  - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
  - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A 1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2</sub> and CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

Inherently Low Emitting (ILE) Maintenance Activities

Planned Maintenance Activity	Pollutant					
	VOC	NOx	CO	PM	SO2	CO2
Vacuum truck solids unloading				x		
CEMS calibration	x	x	x		x	x
Refractory maintenance operations				x		
Miscellaneous particulate filter maintenance				x		
Kiln particulate filter maintenance				x		
Equipment heating	x	x	x	x	x	x

Date:

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 167047 and PSDTX1602

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	NO <sub>x</sub>	75.34	143.74
		SO <sub>2</sub>	83.33	213.31
		H <sub>2</sub> SO <sub>4</sub>	152.76	58.66
		HCl	2.38	10.41
		CO	1249.88	1599.84
		PM	41.66	159.98
		PM <sub>10</sub>	41.66	159.98
		PM <sub>2.5</sub>	41.66	159.98
		Pb	0.01	0.04
		Hg	<0.01	0.01
		VOC	25.24	100.49
		NH <sub>3</sub>	12.95	56.72
51-SK-250	Finish Mill Baghouse Stack	NO <sub>x</sub>	0.16	0.70
		SO <sub>2</sub>	<0.01	0.04
		CO	1.31	5.74
		PM	3.23	14.13
		PM <sub>10</sub>	3.23	14.13
		PM <sub>2.5</sub>	3.23	14.13
		VOC	0.09	0.38
10-BF-035	Crusher Building Baghouse Stack	PM	1.36	5.97
		PM <sub>10</sub>	1.36	5.97
		PM <sub>2.5</sub>	1.36	5.97
10-BF-140	Material Transfer (LS to Storage) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11

Project Number: 335160



Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.25	1.11
12-BF-140	Additive Unloading (Rail) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11
		PM <sub>2.5</sub>	0.25	1.11
11-BF-270	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
11-BF-285	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-315	Truck Unloading Baghouse Stack	PM	0.76	3.31
		PM <sub>10</sub>	0.76	3.31
		PM <sub>2.5</sub>	0.76	3.31
12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-030	Raw Mill Feed (Top of Bin Baghouse) Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-500	Raw Mill Feed Bin Building Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
20-BF-010	Raw Mill Building Baghouse Stack	PM	0.30	1.33
		PM <sub>10</sub>	0.30	1.33

Project Number: 335160

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.30	1.33
20-BF-182	Raw Mill Building Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
20-BF-360	Raw Mill Building Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
21-BF-330	Top of CKD Bin Baghouse Stack	PM	0.08	0.33
		PM <sub>10</sub>	0.08	0.33
		PM <sub>2.5</sub>	0.08	0.33
22-BF-060	Bottom of Raw Meal Silo Baghouse Stack	PM	0.23	0.99
		PM <sub>10</sub>	0.23	0.99
		PM <sub>2.5</sub>	0.23	0.99
22-BF-080	Preheater Tower Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
22-BF-160	Top of Raw Meal Silo Baghouse Stack	PM	0.38	1.66
		PM <sub>10</sub>	0.38	1.66
		PM <sub>2.5</sub>	0.38	1.66
22-BF-385	Top of Surge Bin (RM Silo) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
30-BF-260	Bottom of Preheater Tower Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
30-BF-320	Top of Preheater Tower Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.11	0.50
42-BF-270	Cooler Discharge Baghouse Stack	PM	0.16	0.72
		PM <sub>10</sub>	0.16	0.72
		PM <sub>2.5</sub>	0.16	0.72
41-BF-130	Top of Bin (Bypass Dust) Baghouse Stack	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22
44-BF-030	Top of Clinker Silo Baghouse Stack	PM	0.63	2.76
		PM <sub>10</sub>	0.63	2.76
		PM <sub>2.5</sub>	0.63	2.76
44-BF-185	Transfer Tower (Clinker Strg. And Handling) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
50-BF-050	Top of Clinker Feed Bin Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
50-BF-020	Top of Gypsum Feed Bin Baghouse Stack	PM	0.09	0.39
		PM <sub>10</sub>	0.09	0.39
		PM <sub>2.5</sub>	0.09	0.39
50-BF-350	Cement Feed Bin Extraction Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
51-BF-050	Cement Mill Building Baghouse Stack	PM	0.30	1.32
		PM <sub>10</sub>	0.30	1.32
		PM <sub>2.5</sub>	0.30	1.32
51-BF-140	Cement Mill Building Baghouse Stack	PM	0.23	1.01
		PM <sub>10</sub>	0.23	1.01

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Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.23	1.01
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse Stack	PM	0.14	0.61
		PM <sub>10</sub>	0.14	0.61
		PM <sub>2.5</sub>	0.14	0.61
52-BF-110	Top of Cement Silo 1 Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
53-BF-110	Top of Cement Silo 2 Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
52-BF-270	Loadout System (CM Silo-1) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
53-BF-270	Loadout System (CM Silo-2) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
LSCRSBBD_MH	Limestone - Material Handling LS Crusher Building (5)	PM	0.04	0.15
		PM <sub>10</sub>	0.02	0.07
		PM <sub>2.5</sub>	<0.01	0.01
TRK_MH	Additive - Material Handling Truck Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
RR_MH	Additive - Material Handling Rail Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
LS_STKPL	Limestone Stockpile 1 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
LS_STKPL	Limestone Stockpile 2 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
ADD_STKPL	Gypsum Stockpile (5)	PM	0.03	0.11
		PM <sub>10</sub>	0.01	0.06
		PM <sub>2.5</sub>	0.002	0.01
ADD_STKPL	High Grade Limestone Stockpile (5)	PM	0.05	0.20
		PM <sub>10</sub>	0.02	0.10
		PM <sub>2.5</sub>	<0.01	0.02
ADD_STKPL	Sand Stockpile (5)	PM	0.02	0.09
		PM <sub>10</sub>	0.01	0.05
		PM <sub>2.5</sub>	<0.01	0.01
EG-1	Emergency Generator Engine	NO <sub>x</sub> VOC	8.87	0.44
		SO <sub>2</sub> NO <sub>x</sub>	<0.01	<0.01
		CO	17.74	0.89

Commented [A1]: Updated pollutant names to align with respective emission rates



Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM	0.14	0.01
		PM <sub>10</sub>	0.14	0.01
		PM <sub>2.5</sub>	0.14	0.01
		SO <sub>2</sub> VOC	4.58	0.23
NH3FUG	NH3 Fugitives (5)	NH <sub>3</sub>	0.06	0.28
MSSFUG	ILE MSS Activities	NO <sub>x</sub>	<0.01	<0.01
		SO <sub>2</sub>	<0.01	<0.01
		CO	<0.01	<0.01
		PM	0.81	0.77
		PM <sub>10</sub>	0.66	0.76
		PM <sub>2.5</sub>	0.28	0.38
		VOC	<0.01	<0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
SO<sub>2</sub> - sulfur dioxide  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
HCl - hydrogen chloride  
H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
Pb - Lead  
Hg - Mercury  
NH<sub>3</sub> - ammonia  
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.  
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: DRAFT

**Emission Sources - Maximum Allowable Emission Rates**  
**Permit Number GHGPSDTX212**

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities authorized by this permit.

**Air Contaminants Data**

<b>Emission Point No. (1)</b>	<b>Source Name (2)</b>	<b>Air Contaminant Name (3)</b>	<b>Emission Rates</b>	
			<b>lbs/hour</b>	<b>TPY (4)</b>
21-SK-230	Cement Kiln Baghouse Stack	CO <sub>2e</sub>	-	981,402.53
51-SK-250	Finish Mill Baghouse Stack	CO <sub>2e</sub>	-	8,210.12
EG-1	Emergency Generator Engine	CO <sub>2e</sub>	-	42.25
MSSFUG	ILE MSS Activities	CO <sub>2e</sub>	-	0.14

**Commented [A2]:** Removed during submittal of April 11, 2022 application response

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
(3) CO<sub>2e</sub> - carbon dioxide equivalents based on the following Global Warming Potentials (GWP) found in Table A-1 of Subpart A 40 CFR Part 98 (78 FR 71904) for each pollutant: CO<sub>2</sub> (1), N<sub>2</sub>O (298), CH<sub>4</sub>(25)  
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.

Date: DRAFT

Project Number: 335160

**AR-22**

**TCEQ Technical Review Supporting Documentation**

**From:** Joel Stanford  
**Sent:** Wednesday, December 6, 2023 1:06 PM  
**To:** [snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)  
**Cc:** Daniel Jamieson; Daniel Menendez; Wilson, Aimee (she/her/hers); Mohr, Ashley; Kaleri, Cynthia; Chad Dumas  
**Subject:** RE: BM Dorchester Ozone MERP Impact

Hi Erik,  
FYI – the new draft permit (which will go out fairly soon) will have a 1-hour averaging limit for NOx of 0.54 lb/ton of clinker. We definitely agree with your position. The consultant for the applicant also seems to understand that we are planning on doing this.

Also, sorry for the late response! After talking to Chad Dumas about some other project issues I figured that I should be the one to reply.

Thanks,

**Joel Stanford**  
Team Leader - Expedited Team  
Air Permits Division  
Texas Commission on Environmental Quality  
Mail Code: MC-163, PO Box 13087  
Austin, Texas 78711-3087



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**From:** Snyder, Erik <[snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)>  
**Sent:** Wednesday, November 8, 2023 1:43 PM  
**To:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Cc:** Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Wilson, Aimee (she/her/hers) <[Wilson.Aimee@epa.gov](mailto:Wilson.Aimee@epa.gov)>; Mohr, Ashley <[Mohr.Ashley@epa.gov](mailto:Mohr.Ashley@epa.gov)>; Kaleri, Cynthia <[kaleri.cynthia@epa.gov](mailto:kaleri.cynthia@epa.gov)>  
**Subject:** RE: BM Dorchester Ozone MERP Impact

Hi Chad,

Thanks Chad, doing good on my end and hope things are going well for you.

Thanks for sharing the updated information for BM Dorchester project. Looks like they are reducing emissions significantly to get the impacts down and going beyond BACT, which is good.

Looking over the information, I am ok with using the Parker County MERP source. I don't have the details but would assume this source would have a CEM for NOx that would provide hourly data available for compliance assessment. They are close but it is below 1 ppb. The only concern I saw was the averaging period for the 1-hour NOx limit appears to be proposed to use a 30-day averaging period

for compliance (Table for Kiln System Emission Summary on pdf page 17 of the 'Rev Dorchester Supplement (2023-1020).pdf') . Given this is for the 8-hour ozone NAAQS (70 ppb), the 30 day rolling average is not protective of the ozone impact analysis given the high level of controls and potential for small changes in control level potentially resulting in a relatively large variability that would be averaged out coupled with how close the analysis is to 1 ppb, so not much room for variability and could see more than 10% variability on a shorter than 30 day rolling average. Wasn't clear what the safety factor is for the NOx limit but 10% was used for some of the other pollutants on the same page.

I did some checking with the OAQPS and other regional modelers today on a call and confirmed concern with having a 30-day averaging period for compliance for this ozone impact analysis. Most similar situation related to NOx limits to protect ozone impact was using a 24-hour averaging period for coal-fired power plants in an ozone maintenance area. Given that is for an 8-hour standard hourly compliance with the NOx limit for the ozone impact would be too strict but seems like a 24-hour rolling average period would be reasonable in this situation. Can do more digging if needed but think I would find similar examples in similar situations.

Let me know if you would like to have a call to discuss further or have any questions.

Thanks,  
Erik



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**Erik Snyder.**  
Lead Regional Air Quality Modeler  
(214) 665-7305 | [snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)  
Division of Air and Radiation | U.S. EPA, Region 6 Dallas, TX

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**From:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Sent:** Tuesday, November 7, 2023 5:32 PM  
**To:** Snyder, Erik <[snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)>  
**Cc:** Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Wilson, Aimee (she/her/hers) <[Wilson.Aimee@epa.gov](mailto:Wilson.Aimee@epa.gov)>; Mohr, Ashley <[Mohr.Ashley@epa.gov](mailto:Mohr.Ashley@epa.gov)>  
**Subject:** RE: BM Dorchester Ozone MERP Impact

**Caution:** This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Hi Erik,

I hope you are doing well. I wanted to update you on the BM Dorchester project. The applicant provided a revised MERP analysis for ozone. See the revised analysis and permit supplement attached. Note the



applicant made refinements to their proposed NOx emissions. TCEQ is still in the process of reviewing the revised submittal, but we wanted to send this your way and ask if you had any comments.

Also, Rachel Melton is no longer working in Air Permits and does not need to be included on further correspondence.

Feel free to contact us if you have any questions or would like to discuss.

Thank you,  
Chad Dumas  
Texas Commission on Environmental Quality  
Air Permits Division  
Air Dispersion Modeling Team Leader  
(512) 239-2057  
[Chad.Dumas@tceq.texas.gov](mailto:Chad.Dumas@tceq.texas.gov)

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**From:** Snyder, Erik <[snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)>  
**Sent:** Wednesday, July 26, 2023 5:17 PM  
**To:** Rachel Melton <[Rachel.Melton@Tceq.Texas.Gov](mailto:Rachel.Melton@Tceq.Texas.Gov)>  
**Cc:** Daniel Jamieson <[Daniel.Jamieson@tceq.texas.gov](mailto:Daniel.Jamieson@tceq.texas.gov)>; Daniel Menendez <[Daniel.Menendez@tceq.texas.gov](mailto:Daniel.Menendez@tceq.texas.gov)>; Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>; Wilson, Aimee <[Wilson.Aimee@epa.gov](mailto:Wilson.Aimee@epa.gov)>; Mohr, Ashley <[Mohr.Ashley@epa.gov](mailto:Mohr.Ashley@epa.gov)>  
**Subject:** BM Dorchester Ozone MERP Impact

Hi Rachel,

Good talking with you this morning, appreciate the time. I cc'd folks that were on the original email with the protocol and report previously shared.

I was on vacation for a little over three weeks so sorry we didn't get back sooner on our review on this. We have reviewed the ozone MERP analysis and have a concern that the wrong tpy emission rate is being used for the estimation of ozone impacts. We have previously indicated that since ozone is a short-term (less than 24 hr standard) that the short-term emission rate should be the basis for MERPs and/or CAMx modeling. The modeling protocol and report use annual tpy emissions for both NOx and VOC emissions. From the Report the MERP analysis uses project emissions of 369.14 tpy for NOx and 101.10tpy for VOCs with MERP values from Parker Co. of 386 tpy NOx and 3289 tpy VOC.

For PSD, Table 8-2 from the Guideline on Air Quality Models indicates how modeled emission rates can be determined for short-term standards such as the 2015 8-Hour Ozone NAAQS. As was done for the 1-Hour NOx NAAQS modeling demonstration, the maximum short-term NOx and VOC emission rates should be used for the ozone impact analysis. Since the MERPs are in tpy, the maximum lb/hr emission rates should be converted to the equivalent tpy value reflective of the maximum short-term emission rate operating 8760 hours/year. From the report, the total facility short-term NOx lb/hr emission rate is 144 lb/hr which equates to 630.73 tpy of NOx (see table below). Similarly, if the VOC short-term

emission rate is higher than the annual lb/hr that equates to 101.1 tpy, then the short-term equivalent VOC tpy value should be used instead of 101.1 tpy.

**5220 Federal Register/Vol. 82, No. 10/Tuesday, January 17, 2017/Rules and Regulations**

**Table 8-2. - Point Source Model Emission Inputs for NAAQS Compliance in PSD Demonstrations**

Averaging time	Emissions limit (lb/MMBtu) <sup>1</sup>	X	Operating level (MMBtu/hr) <sup>2</sup>	X	Operating factor (e.g., hr/yr, hr/day)
<b>Proposed Major New or Modified Source</b>					
Annual & quarterly .....	Maximum allowable emission limit or federally enforceable permit limit.		Design capacity or federally enforceable permit condition.		Continuous operation (i.e. hours). <sup>2</sup>
Short term (≤ 24 hours) .....	Maximum allowable emission limit or federally enforceable permit limit.		Design capacity or federally enforceable permit condition. <sup>3</sup>		Continuous operation, i.e. hours of each time period consideration (for all hours meteorological database)
<b>Nearby Source(s)<sup>4,5</sup></b>					
Annual & quarterly .....	Maximum allowable emission limit or federally enforceable permit limit. <sup>5</sup>		Annual level when actually operating, averaged over the most recent 2 years. <sup>6</sup>		Actual operating factor averaged over the most recent 2 years
Short term (≤ 24 hours) .....	Maximum allowable emission limit or federally enforceable permit limit. <sup>5</sup>		Temporally representative level when actually operating, reflective of the most recent 2 years. <sup>6,7</sup>		Continuous operation, i.e. hours of each time period consideration (for all hours meteorological database)
<b>Other Source(s)<sup>5,9</sup></b>					

The ambient impacts from Non-nearby or Other Sources (e.g., natural sources, minor sources and distant major sources, and unidentified sources) can be represented by air quality monitoring data unless adequate data do not exist.

1. Terminology applicable to fuel burning sources; analogous terminology (e.g., lb/throughput) may be used for other types of sources.
2. If operation does not occur for all hours of the time period of consideration (e.g., 3 or 24-hours) and the source operation is constrained by a federally enforceable permit condition, an appropriate adjustment to the modeled emission rate may be made (e.g., if operation is only 8 a.m. to 4 p.m. each day, only these hours will be modeled with emissions from the source. Modeled emissions should not be averaged across non-operating time periods).
3. Operating levels such as 50 percent and 75 percent of capacity should also be modeled to determine the load causing the highest concentration.
4. Includes existing facility to which modification is proposed if the emissions from the existing facility will not be affected by the modification. Otherwise use the same parameters as for major modification.
5. See Section 8.3.3.
6. Unless it is determined that this period is not representative.
7. Temporally representative operating level could be based on Continuous Emissions Monitoring (CEM) data or other information and should be determined through consultation with the appropriate reviewing authority (Paragraph 3.0(b)).
8. For those permitted sources not in operation or that have not established an appropriate factor, continuous operation (i.e., 8760) should be used.
9. See Section 8.3.2.

From the BM Dorchester Report. We have put together a table of the short-term (hourly PTE, 1-hr allowable, g/s) emission rates and the annual emission rates and there is a sizeable difference. We do not have short-term emission limits for the VOCs, so we have only adjusted for the short-term NOx emission rate limits. If VOC short-term emission rate is higher than annual limit on a lb/hr basis then that will also need to be adjusted. From the calculations below the ozone impacts of the proposed facility are at least 1.66 ppb (could be higher due to VOC emission rate differences). The only other MERP source near DFW is in Henderson County and would result in larger impacts due to the NOx emissions, so MERPS does not result in a value less than 1 ppb. Since the proposed facility is significant at the proposed emission rate then a cumulative analysis should be done, we note that the DVs at the Pilot Point and Frisco monitors (two closest monitors) are above the 2015 Ozone NAAQS. We note that ozone levels may be less than those two monitors DVs in the area where the proposed facility will be located. A Tier II analysis with CAMx modeling as previously discussed would be a way to further analyze and determine whether the impacts are significant on ozone exceedances.

	NOx						
	Hourly PTE		1-Hr Modeled			Annual Mo	
	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(tpy equivalent)	(tpy)	
Main Stack (Raw Mill & Kiln) with either Raw Mill On/Off	143.7356	18.1104	143.74	18.1104	629.5812	368	1
Cement Mill Stack	0.159	2.00E-02	0.159	2.00E-02	0.69642	0.696	
Emergency Generator	8.869	1.1175	0.101	1.28E-02	0.44238	0.443	
ILE MSS Activities - CEMS Calibration	1.90E-03	2.39E-04	1.90E-03	2.39E-04	0.008322	3.47E-03	
<b>SUM</b>	<b>152.77</b>	<b>19.25</b>	<b>144.00</b>	<b>18.14</b>	<b>630.73</b>	<b>369.14</b>	
				Contribution			
	NOx (tpy)	VOC (tpy)		NOx	VOC		
Parker County data (8-Hr Ozone MERP)	386	3286		1.6340	0.0308		
Hypothetical Source (High Stack)	500	1000					

You mentioned that there has been some analysis of ozone levels at Pilot Point and Frisco for when the wind would be transporting towards the proposed source but have some concerns that may underestimate the ozone levels that the proposed facility would contribute if I understand the approach. If you have a write-up or data analysis you can share we can review and talk further about it.

Let us know if you have questions and wish to discuss further and next steps.

Thanks,  
Erik



**Erik Snyder.**

**Lead Regional Air Quality Modeler**

**(214) 665-7305 | [snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)**

**Division of Air and Radiation | U.S. EPA, Region 6 Dallas, TX**

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**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Friday, December 1, 2023 11:38 AM  
**To:** Joel Stanford  
**Cc:** Chad Dumas  
**Subject:** RE: "Non-Routine" Operation of the Cement Kiln

Joel,

We received feedback from the design firm and OEMs. See our response in red below. If we need to discuss more, etc., let me know. Further, on the modeling question, the modeling as submitted was conducted using emission rates before the SCR/SNCR control(s) were evaluated and implemented into the project. So, from this perspective, the modeling represents impacts without the control(s) in operation.

Thanks,  
Mike

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**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Monday, November 6, 2023 4:37 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Cc:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Subject:** "Non-Routine" Operation of the Cement Kiln

Hi Mike,  
In the current draft permit response, the following is proposed:

- A. *The NO<sub>x</sub> and CO emission limits of this permit shall not apply during non-routine operation of the Cement Kiln. Routine Cement Kiln operation does not include the following circumstances:*
- (1) *MSS activity when the precalciner operating temperature is too low for proper SCR or combination of SCR and SNCR operation; and...*

Can you clarify the following?

- Would the emissions in the scenario (1) be expected to be greater than the short-term draft CND/permit limits for NO<sub>x</sub> and CO?

No, the emissions in scenario (1) would not be expected to be greater than the short-term draft CND/permit limits for NO<sub>x</sub> and CO. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, only the main kiln burner will be operating in low-heat input mode and no feed will be entering the kiln generating the higher emissions. The feed entering the preheater is not introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and operational.

If so...

- Can you also specify how many hours per year that this would occur?



- Is scenario (1) is accounted for the in modeling?

Thanks,

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

Mail Code: MC-163, PO Box 13087

Austin, Texas 78711-3087



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**From:** Chad Dumas  
**Sent:** Thursday, November 9, 2023 11:24 AM  
**To:** Joel Stanford  
**Subject:** FW: BM Dorchester Ozone MERP Impact

FYI. I believe Daniel Menendez was going to forward the message to management.

Thank you,  
Chad Dumas  
Texas Commission on Environmental Quality  
Air Permits Division  
Air Dispersion Modeling Team Leader  
(512) 239-2057  
[Chad.Dumas@tceq.texas.gov](mailto:Chad.Dumas@tceq.texas.gov)

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**From:** Snyder, Erik <[snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)>  
**Sent:** Wednesday, November 8, 2023 1:43 PM  
**To:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Cc:** Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Wilson, Aimee (she/her/hers) <[Wilson.Aimee@epa.gov](mailto:Wilson.Aimee@epa.gov)>; Mohr, Ashley <[Mohr.Ashley@epa.gov](mailto:Mohr.Ashley@epa.gov)>; Kaleri, Cynthia <[kaleri.cynthia@epa.gov](mailto:kaleri.cynthia@epa.gov)>  
**Subject:** RE: BM Dorchester Ozone MERP Impact

Hi Chad,

Thanks Chad, doing good on my end and hope things are going well for you.

Thanks for sharing the updated information for BM Dorchester project. Looks like they are reducing emissions significantly to get the impacts down and going beyond BACT, which is good.

Looking over the information, I am ok with using the Parker County MERP source. I don't have the details but would assume this source would have a CEM for NOx that would provide hourly data available for compliance assessment. They are close but it is below 1 ppb. The only concern I saw was the averaging period for the 1-hour NOx limit appears to be proposed to use a 30-day averaging period for compliance (Table for Kiln System Emission Summary on pdf page 17 of the 'Rev Dorchester Supplement (2023-1020).pdf'). Given this is for the 8-hour ozone NAAQS (70 ppb), the 30 day rolling average is not protective of the ozone impact analysis given the high level of controls and potential for small changes in control level potentially resulting in a relatively large variability that would be averaged out coupled with how close the analysis is to 1 ppb, so not much room for variability and could see more than 10% variability on a shorter than 30 day rolling average. Wasn't clear what the safety factor is for the NOx limit but 10% was used for some of the other pollutants on the same page.

I did some checking with the OAQPS and other regional modelers today on a call and confirmed concern with having a 30-day averaging period for compliance for this ozone impact analysis. Most similar

situation related to NOx limits to protect ozone impact was using a 24-hour averaging period for coal-fired power plants in an ozone maintenance area. Given that is for an 8-hour standard hourly compliance with the NOx limit for the ozone impact would be too strict but seems like a 24-hour rolling average period would be reasonable in this situation. Can do more digging if needed but think I would find similar examples in similar situations.

Let me know if you would like to have a call to discuss further or have any questions.

Thanks,  
Erik



---

**Erik Snyder.**  
Lead Regional Air Quality Modeler  
(214) 665-7305 | [snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)  
Division of Air and Radiation | U.S. EPA, Region 6 Dallas, TX

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**From:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Sent:** Tuesday, November 7, 2023 5:32 PM  
**To:** Snyder, Erik <[snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)>  
**Cc:** Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Wilson, Aimee (she/her/hers) <[Wilson.Aimee@epa.gov](mailto:Wilson.Aimee@epa.gov)>; Mohr, Ashley <[Mohr.Ashley@epa.gov](mailto:Mohr.Ashley@epa.gov)>  
**Subject:** RE: BM Dorchester Ozone MERP Impact

**Caution:** This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

Hi Erik,

I hope you are doing well. I wanted to update you on the BM Dorchester project. The applicant provided a revised MERP analysis for ozone. See the revised analysis and permit supplement attached. Note the applicant made refinements to their proposed NOx emissions. TCEQ is still in the process of reviewing the revised submittal, but we wanted to send this your way and ask if you had any comments.

Also, Rachel Melton is no longer working in Air Permits and does not need to be included on further correspondence.

Feel free to contact us if you have any questions or would like to discuss.

Thank you,  
Chad Dumas  
Texas Commission on Environmental Quality

Air Permits Division  
Air Dispersion Modeling Team Leader  
(512) 239-2057  
[Chad.Dumas@tceq.texas.gov](mailto:Chad.Dumas@tceq.texas.gov)

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**From:** Snyder, Erik <[snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)>  
**Sent:** Wednesday, July 26, 2023 5:17 PM  
**To:** Rachel Melton <[Rachel.Melton@Tceq.Texas.Gov](mailto:Rachel.Melton@Tceq.Texas.Gov)>  
**Cc:** Daniel Jamieson <[Daniel.Jamieson@tceq.texas.gov](mailto:Daniel.Jamieson@tceq.texas.gov)>; Daniel Menendez <[Daniel.Menendez@tceq.texas.gov](mailto:Daniel.Menendez@tceq.texas.gov)>; Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>; Wilson, Aimee <[Wilson.Aimee@epa.gov](mailto:Wilson.Aimee@epa.gov)>; Mohr, Ashley <[Mohr.Ashley@epa.gov](mailto:Mohr.Ashley@epa.gov)>  
**Subject:** BM Dorchester Ozone MERP Impact

Hi Rachel,

Good talking with you this morning, appreciate the time. I cc'd folks that were on the original email with the protocol and report previously shared.

I was on vacation for a little over three weeks so sorry we didn't get back sooner on our review on this. We have reviewed the ozone MERP analysis and have a concern that the wrong tpy emission rate is being used for the estimation of ozone impacts. We have previously indicated that since ozone is a short-term (less than 24 hr standard) that the short-term emission rate should be the basis for MERPs and/or CAMx modeling. The modeling protocol and report use annual tpy emissions for both NOx and VOC emissions. From the Report the MERP analysis uses project emissions of 369.14 tpy for NOx and 101.10tpy for VOCs with MERP values from Parker Co. of 386 tpy NOx and 3289 tpy VOC.

For PSD, Table 8-2 from the Guideline on Air Quality Models indicates how modeled emission rates can be determined for short-term standards such as the 2015 8-Hour Ozone NAAQS. As was done for the 1-Hour NOx NAAQS modeling demonstration, the maximum short-term NOx and VOC emission rates should be used for the ozone impact analysis. Since the MERPs are in tpy, the maximum lb/hr emission rates should be converted to the equivalent tpy value reflective of the maximum short-term emission rate operating 8760 hours/year. From the report, the total facility short-term NOx lb/hr emission rate is 144 lb/hr which equates to 630.73 tpy of NOx (see table below). Similarly, if the VOC short-term emission rate is higher than the annual lb/hr that equates to 101.1 tpy, then the short-term equivalent VOC tpy value should be used instead of 101.1 tpy.

Table 8-2. - Point Source Model Emission Inputs for NAAQS Compliance in PSD Demonstrations

Averaging time	Emissions limit (lb/MMBtu) <sup>1</sup>	X	Operating level (MMBtu/hr) <sup>2</sup>	X	Operating factor (e.g., hr/yr, hr/day)
<b>Proposed Major New or Modified Source</b>					
Annual & quarterly .....	Maximum allowable emission limit or federally enforceable permit limit.		Design capacity or federally enforceable permit condition.		Continuous operation (i.e. hours). <sup>2</sup>
Short term (≤ 24 hours) .....	Maximum allowable emission limit or federally enforceable permit limit.		Design capacity or federally enforceable permit condition. <sup>3</sup>		Continuous operation, i.e. hours of each time period consideration (for all hour meteorological database)
<b>Nearby Source(s)<sup>4,5</sup></b>					
Annual & quarterly .....	Maximum allowable emission limit or federally enforceable permit limit. <sup>5</sup>		Annual level when actually operating, averaged over the most recent 2 years. <sup>6</sup>		Actual operating factor averaged over the most recent 2 years
Short term (≤ 24 hours) .....	Maximum allowable emission limit or federally enforceable permit limit. <sup>5</sup>		Temporally representative level when actually operating, reflective of the most recent 2 years. <sup>6,7</sup>		Continuous operation, i.e. hours of each time period consideration (for all hour meteorological database)
<b>Other Source(s)<sup>5,9</sup></b>					

The ambient impacts from Non-nearby or Other Sources (e.g., natural sources, minor sources and distant major sources, and unidentified sources) can be represented by air quality monitoring data unless adequate data do not exist.

1. Terminology applicable to fuel burning sources; analogous terminology (e.g., lb/throughput) may be used for other types of sources.
2. If operation does not occur for all hours of the time period of consideration (e.g., 3 or 24-hours) and the source operation is constrained by a federally enforceable permit condition, an appropriate adjustment to the modeled emission rate may be made (e.g., if operation is only 8 a.m. to 8 p.m. each day, only these hours will be modeled with emissions from the source. Modeled emissions should not be averaged across non-operating time periods).
3. Operating levels such as 50 percent and 75 percent of capacity should also be modeled to determine the load causing the highest concentration.
4. Includes existing facility to which modification is proposed if the emissions from the existing facility will not be affected by the modification. Otherwise use the same parameters as for major modification.
5. See Section 8.3.3.
6. Unless it is determined that this period is not representative.
7. Temporally representative operating level could be based on Continuous Emissions Monitoring (CEM) data or other information and should be determined through consultation with the appropriate reviewing authority (Paragraph 3.0(b)).
8. For those permitted sources not in operation or that have not established an appropriate factor, continuous operation (i.e., 8760) should be used.
9. See Section 8.3.2.

From the BM Dorchester Report. We have put together a table of the short-term (hourly PTE, 1-hr allowable, g/s) emission rates and the annual emission rates and there is a sizeable difference. We do not have short-term emission limits for the VOCs, so we have only adjusted for the short-term NOx emission rate limits. If VOC short-term emission rate is higher than annual limit on a lb/hr basis then



that will also need to be adjusted. From the calculations below the ozone impacts of the proposed facility are at least 1.66 ppb (could be higher due to VOC emission rate differences). The only other MERP source near DFW is in Henderson County and would result in larger impacts due to the NOx emissions, so MERPS does not result in a value less than 1 ppb. Since the proposed facility is significant at the proposed emission rate then a cumulative analysis should be done, we note that the DVs at the Pilot Point and Frisco monitors (two closest monitors) are above the 2015 Ozone NAAQS. We note that ozone levels may be less than those two monitors DVs in the area where the proposed facility will be located. A Tier II analysis with CAMx modeling as previously discussed would be a way to further analyze and determine whether the impacts are significant on ozone exceedances.

	NOx						Annual Mo
	Hourly PTE		1-Hr Modeled			(tpy)	
	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(tpy equivalent)		
Main Stack (Raw Mill & Kiln) with either Raw Mill On/Off	143.7356	18.1104	143.74	18.1104	629.5812	368	1
Cement Mill Stack	0.159	2.00E-02	0.159	2.00E-02	0.69642	0.696	
Emergency Generator	8.869	1.1175	0.101	1.28E-02	0.44238	0.443	
ILE MSS Acitivities - CEMS Calibration	1.90E-03	2.39E-04	1.90E-03	2.39E-04	0.008322	3.47E-03	
SUM	152.77	19.25	144.00	18.14	630.73	369.14	
					Contribution		T
	NOx (tpy)	VOC (tpy)			NOx	VOC	
Parker County data (8-Hr Ozone MERP)	386	3286			1.6340	0.0308	
Hypothetical Source (High Stack)	500	1000					

You mentioned that there has been some analysis of ozone levels at Pilot Point and Frisco for when the wind would be transporting towards the proposed source but have some concerns that may underestimate the ozone levels that the proposed facility would contribute if I understand the approach. If you have a write-up or data analysis you can share we can review and talk further about it.

Let us know if you have questions and wish to discuss further and next steps.

Thanks,  
Erik



**Erik Snyder.**  
Lead Regional Air Quality Modeler  
(214) 665-7305 | [snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)  
Division of Air and Radiation | U.S. EPA, Region 6 Dallas, TX

**From:** Chad Dumas  
**Sent:** Monday, October 16, 2023 5:08 PM  
**To:** Joel Stanford  
**Subject:** FW: BM Dorchester Ozone MERP Impact

FYI.

Thank you,  
Chad Dumas  
Texas Commission on Environmental Quality  
Air Permits Division  
Air Dispersion Modeling Team Leader  
(512) 239-2057  
[Chad.Dumas@tceq.texas.gov](mailto:Chad.Dumas@tceq.texas.gov)

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**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Monday, October 16, 2023 10:10 AM  
**To:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Cc:** Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>  
**Subject:** RE: BM Dorchester Ozone MERP Impact

Chad,

Thanks for checking in. Since my last email, we have conversed with two of the applicant's OEM/vendors for control technology and have concurrence on a lower NOx emission guarantee such that the MERP screening calculations, as proposed by EPA, will demonstrate that the project is not significant for ozone. The application update package was sent to the applicant and their design engineering firm last week and I expect comments/approvals within the next day or so. Once we obtain approval, we will submit the updated MERP information to ADMT and application update to Joel. Also – my understanding is that these are the same control devices for which we obtained stack parameter information (the only “update” is that they are comfortable in going lower on the guarantee). As such, we would consider the NO2 modelling demonstration previously submitted to be conservative. I wanted to confirm that ADMT would concur and would not require a revised AQA to be submitted.

Mike

---

**From:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Sent:** Monday, October 16, 2023 10:02 AM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Cc:** Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>  
**Subject:** RE: BM Dorchester Ozone MERP Impact

Good morning Mike,

I wanted to follow up and see if there are any updates to pass along. Also, Rachel Melton is now working in another division within TCEQ, so she no longer needs to be included on this correspondence.

Thank you,  
Chad Dumas  
Texas Commission on Environmental Quality  
Air Permits Division  
Air Dispersion Modeling Team Leader  
(512) 239-2057  
[Chad.Dumas@tceq.texas.gov](mailto:Chad.Dumas@tceq.texas.gov)

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**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Tuesday, September 12, 2023 4:20 PM  
**To:** Rachel Melton <[Rachel.Melton@Tceq.Texas.Gov](mailto:Rachel.Melton@Tceq.Texas.Gov)>  
**Cc:** Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Subject:** RE: BM Dorchester Ozone MERP Impact

Rachel,

Sorry for the late response - I was out the latter part of last week and have been trying to pull together a complete response in interim.

I talked with Joel about this and he did some checking with his tech specialist and Rick Goertz about how permit compliance would need to be demonstrated (recall we discussed the permit NOx emissions basis representations of a 30-day average – as specified by the NSPS and what was used as the basis for the MERP demonstration - and whether daily or weekly averages could be used in lieu of an “instantaneous” hour-by-hour compliance requirement). Unfortunately, the answer back was that it would be very rare to specify compliance with anything greater than a 1-hr to 3-hr average.

Our next step was to go back to the design engineers and their OEMs to see if we could get a lower SCR NOx guarantee for the kiln stack. We see a lower number in an interim report from an OEM that was issued just yesterday afternoon, but we are having the design engineers confirm that number is real and sustainable for permitting purposes. I hope to have that answer tomorrow.

To recap – I think the solution here is lowering our max hourly based on a revised vendor guarantee, rather than trying to rely on a permit condition that allows us to demonstrate compliance over a longer period of time.

Mike

**From:** Rachel Melton <[Rachel.Melton@Tceq.Texas.Gov](mailto:Rachel.Melton@Tceq.Texas.Gov)>  
**Sent:** Thursday, September 7, 2023 7:40 AM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Cc:** Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Subject:** RE: BM Dorchester Ozone MERP Impact

Good morning Mike,

I wanted to follow up and see if you had any updates to pass along.

Thank you,

Rachel Melton  
Texas Commission on Environmental Quality  
Office of Air - Air Permits Division  
Air Dispersion Modeling Team  
512-239-1512  
[Rachel.Melton@tceq.texas.gov](mailto:Rachel.Melton@tceq.texas.gov)

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**From:** Rachel Melton  
**Sent:** Thursday, August 17, 2023 3:31 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Cc:** Daniel Menendez <[Daniel.Menendez@tceq.texas.gov](mailto:Daniel.Menendez@tceq.texas.gov)>; Daniel Jamieson <[Daniel.Jamieson@tceq.texas.gov](mailto:Daniel.Jamieson@tceq.texas.gov)>; Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Subject:** FW: BM Dorchester Ozone MERP Impact

Good afternoon Mike,

I am forwarding you a comment we received from Erik Snyder, EPA Region 6 regarding the Ozone MERP calculation provided in the BM Dorchester AQA. We were hoping to setup a call with you early next week to discuss the short term emission rate development. Let me know if you have any availability and I can set something up.

Thank You,

Rachel Melton  
Texas Commission on Environmental Quality  
Office of Air - Air Permits Division  
Air Dispersion Modeling Team  
512-239-1512  
[Rachel.Melton@tceq.texas.gov](mailto:Rachel.Melton@tceq.texas.gov)

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**From:** Snyder, Erik <[snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)>  
**Sent:** Wednesday, July 26, 2023 5:17 PM  
**To:** Rachel Melton <[Rachel.Melton@Tceq.Texas.Gov](mailto:Rachel.Melton@Tceq.Texas.Gov)>  
**Cc:** Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>; Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>; Wilson, Aimee <[Wilson.Aimee@epa.gov](mailto:Wilson.Aimee@epa.gov)>; Mohr, Ashley <[Mohr.Ashley@epa.gov](mailto:Mohr.Ashley@epa.gov)>  
**Subject:** BM Dorchester Ozone MERP Impact

Hi Rachel,

Good talking with you this morning, appreciate the time. I cc'd folks that were on the original email with the protocol and report previously shared.

I was on vacation for a little over three weeks so sorry we didn't get back sooner on our review on this. We have reviewed the ozone MERP analysis and have a concern that the wrong tpy emission rate is being used for the estimation of ozone impacts. We have previously indicated that since ozone is a short-term (less than 24 hr standard) that the short-term emission rate should be the basis for MERPs and/or CAMx modeling. The modeling protocol and report use annual tpy emissions for both NOx and VOC emissions. From the Report the MERP analysis uses project emissions of 369.14 tpy for NOx and 101.10tpy for VOCs with MERP values from Parker Co. of 386 tpy NOx and 3289 tpy VOC.

For PSD, Table 8-2 from the Guideline on Air Quality Models indicates how modeled emission rates can be determined for short-term standards such as the 2015 8-Hour Ozone NAAQS. As was done for the 1-Hour NOx NAAQS modeling demonstration, the maximum short-term NOx and VOC emission rates should be used for the ozone impact analysis. Since the MERPs are in tpy, the maximum lb/hr emission rates should be converted to the equivalent tpy value reflective of the maximum short-term emission rate operating 8760 hours/year. From the report, the total facility short-term NOx lb/hr emission rate is 144 lb/hr which equates to 630.73 tpy of NOx (see table below). Similarly, if the VOC short-term emission rate is higher than the annual lb/hr that equates to 101.1 tpy, then the short-term equivalent VOC tpy value should be used instead of 101.1 tpy.



Table 8-2. - Point Source Model Emission Inputs for NAAQS Compliance in PSD Demonstration

Averaging time	Emissions limit (lb/MMBtu) <sup>1</sup>	X	Operating level (MMBtu/hr) <sup>2</sup>	X
<b>Proposed Major New or Modified Source</b>				
Annual & quarterly .....	Maximum allowable emission limit or federally enforceable permit limit.		Design capacity or federally enforceable permit condition.	Continuous (hours)
Short term (≤ 24 hours) .....	Maximum allowable emission limit or federally enforceable permit limit.		Design capacity or federally enforceable permit condition. <sup>3</sup>	Continuous (hours) or considered meteorological
<b>Nearby Source(s)<sup>4,5</sup></b>				
Annual & quarterly .....	Maximum allowable emission limit or federally enforceable permit limit. <sup>5</sup>		Annual level when actually operating, averaged over the most recent 2 years. <sup>6</sup>	Actual over time
Short term (≤ 24 hours) .....	Maximum allowable emission limit or federally enforceable permit limit. <sup>5</sup>		Temporally representative level when actually operating, reflective of the most recent 2 years. <sup>6,7</sup>	Continuous (hours) or considered meteorological
<b>Other Source(s)<sup>5,9</sup></b>				

The ambient impacts from Non-nearby or Other Sources (e.g., natural sources, minor sources and distant major sources) can be represented by air quality monitoring data unless adequate data do not exist.

1. Terminology applicable to fuel burning sources; analogous terminology (e.g., lb/throughput) may be used for other types.
2. If operation does not occur for all hours of the time period of consideration (e.g., 3 or 24-hours) and the source operates under a federally enforceable permit condition, an appropriate adjustment to the modeled emission rate may be made (e.g., if continuous operation is required only 12 hours per day, only these hours will be modeled with emissions from the source. Modeled emissions should not be averaged over time periods).
3. Operating levels such as 50 percent and 75 percent of capacity should also be modeled to determine the load causing concern.
4. Includes existing facility to which modification is proposed if the emissions from the existing facility will not be affected by the modification. Otherwise use the same parameters as for major modification.
5. See Section 8.3.3.
6. Unless it is determined that this period is not representative.
7. Temporally representative operating level could be based on Continuous Emissions Monitoring (CEM) data or other information determined through consultation with the appropriate reviewing authority (Paragraph 3.0(b)).
8. For those permitted sources not in operation or that have not established an appropriate factor, continuous operation is assumed.
9. See Section 8.3.2.

From the BM Dorchester Report. We have put together a table of the short-term (hourly PTE, 1-hr allowable, g/s) emission rates and the annual emission rates and there is a sizeable difference. We do not have short-term emission limits for the VOCs, so we have only adjusted for the short-term NOx emission rate limits. If VOC short-term

emission rate is higher than annual limit on a lb/hr basis then that will also need to be adjusted. From the calculations below the ozone impacts of the proposed facility are at least 1.66 ppb (could be higher due to VOC emission rate differences). The only other MERP source near DFW is in Henderson County and would result in larger impacts due to the NOx emissions, so MERPS does not result in a value less than 1 ppb. Since the proposed facility is significant at the proposed emission rate then a cumulative analysis should be done, we note that the DVs at the Pilot Point and Frisco monitors (two closest monitors) are above the 2015 Ozone NAAQS. We note that ozone levels may be less than those two monitors DVs in the area where the proposed facility will be located. A Tier II analysis with CAMx modeling as previously discussed would be a way to further analyze and determine whether the impacts are significant on ozone exceedances.

	NOx				
	Hourly PTE		1-Hr Modeled		
	(lb/hr)	(g/s)	(lb/hr)	(g/s)	(tpy equivalent)
Main Stack (Raw Mill & Kiln) with either Raw Mill On/Off	143.7356	18.1104	143.74	18.1104	629.581
Cement Mill Stack	0.159	2.00E-02	0.159	2.00E-02	0.6964
Emergency Generator	8.869	1.1175	0.101	1.28E-02	0.4423
ILE MSS Activities - CEMS Calibration	1.90E-03	2.39E-04	1.90E-03	2.39E-04	0.00832
<b>SUM</b>	<b>152.77</b>	<b>19.25</b>	<b>144.00</b>	<b>18.14</b>	<b>630.7</b>
			Contribution		
	NOx (tpy)	VOC (tpy)	NOx	VOC	
Parker County data (8-Hr Ozone MERP)	386	3286	1.6340	0.030	
Hypothetical Source (High Stack)	500	1000			

You mentioned that there has been some analysis of ozone levels at Pilot Point and Frisco for when the wind would be transporting towards the proposed source but have some concerns that may underestimate the ozone levels that the proposed facility would contribute if I understand the approach. If you have a write-up or data analysis you can share we can review and talk further about it.

Let us know if you have questions and wish to discuss further and next steps.

Thanks,  
Erik



**Erik Snyder.**

**Lead Regional Air Quality Modeler**

**(214) 665-7305 | [snyder.erik@epa.gov](mailto:snyder.erik@epa.gov)**

**Division of Air and Radiation | U.S. EPA, Region 6 Dallas, TX**

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**AR-23**

**Revised Draft Permit**

**From:** Joel Stanford  
**Sent:** Friday, December 8, 2023 4:03 PM  
**To:** Michael Meister  
**Subject:** Draft Permit #2 for BM Dorchester - Proposed Permit # 167047  
**Attachments:** CND-BM Dorchester- 167047-335160\_Comments-V2.docx; MAERT-BM Dorchester- 167047-335160\_Comments-V2.docx

Hi Mike,

Attached is a second round of drafts for this project. These incorporate comments and fixes from the first round, though some items were rejected. Some notable fixes were highlighted in yellow, and I provided explanations where necessary.

I cleaned up most of the tracked changes for readability. It's definitely fine to do new ones for this round.

Please let me know if you have any questions. Given the holidays and some homework enclosed (scrubbers), I'm not going to put the customary deadlines on this and instead rely on the applicant's desire to get this moving.

Thanks,

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

Mail Code: MC-163, PO Box 13087

Austin, Texas 78711-3087



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### Special Conditions

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

#### Emission Standards

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

#### Fuel Specifications

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

Commented [A1]: Engine is not a diesel fired compression ignition engine. It is spark ignited and fires natural gas.

Commented [A2R1]: Fixed.

#### Federal Applicability

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Averagings Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.60 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	--	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>

**Commented [A3]:** Revised the finish mill baghouse stack opacity limit to align with NSPS Subpart F (10%). Other permits for cement kilns have a higher opacity limit for the kiln stack compared to the other baghouses.

**Commented [A4R3]:** This change is rejected. 5% opacity is a matter of BACT for dust collectors/baghouses controlling these sources - not a matter of meeting Subpart F. For an example of this see cement kiln Permit # 154671, as well as permits for what can be viewed as a similar industry - lime kilns - Permit #'s 48196 and 7808 (Kiln 4). These represent some of the most recently modified kilns and all have 5% limits.

**Commented [A5]:** Added this requirement in accordance with Permit # 154671 and general BACT.

**Commented [A6]:** Revised from "facilities" to kiln

**Commented [A7]:** Each pollutant with a 1-hour rate on the MAERT has been moved to 1-hour averaging. This is for consistency with permits for other large combustion sources. NO<sub>x</sub> is already required due to modeling concerns, but the other pollutants must also have a reasonable time span involved to show compliance with short-term rates on the MAERT and to match permitting best practices and defensibility. We understand that historically we just pointed to the 30-day limits, but do not consider that currently defensible.

**Commented [A8]:** Dioxins and Furans aren't listed as noted in the application.

Dioxins/Furans (D/F) - 0.20 nanogram per dry standard cubic meter (TEQ), corrected to 7 percent O<sub>2</sub>

**Commented [A9R8]:** I couldn't find this listed in the application. Please revise to add as necessary.

Pollutant	1-Hr Averagings Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	--	1.10 lb/ton of clinker	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

**Commented [A8]:** Dioxins and Furans aren't listed as noted in the application.

Dioxins/Furans (D/F) - 0.20 nanogram per dry standard cubic meter (TEQ), corrected to 7 percent O<sub>2</sub>

**Commented [A9R8]:** I couldn't find this listed in the application. Please revise to add as necessary.

**Table 2: Finish Mill Air Heater**

Emissions from the Finish Mill Air Heater (EPN 51-SK-250) shall not exceed the following during any rolling 12-month period.

Pollutant	Emission Standard
NO <sub>x</sub>	0.01 lb/MMBtu based on the higher heating value of the fuel.

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(j). The following additional requirements apply:

- The engine shall be equipped with a non-resettable hour meter.
- Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

**Commented [A10]:** Since engine would comply with MACT 2222 by complying with NSPS 444. Please revise to reference NSPS 444 (60.4243(j)).

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 4: Fabric Filter Dust Collector Maximum Outlet Grain Loading Values**

EPN	Source Name	Maximum Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.005
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005

**Commented [A11]:** Kiln is subject to separate PM limits in NSPS Subpart F and MACT LLL of 0.02 lb PM/ton clinker (filterable).

**Commented [A12R11]:** This request is rejected, as state and PSD BACT requires an outlet grain loading of 0.005 for the kiln and this limit is different from the overall PM limit in the NSPS. BACT limits can and do exceed state or federal control requirements. If a control device exists we have to specify the control efficiency.

EPN	Source Name	Maximum Outlet Grain Loading (gr/dscf)
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005

EPN	Source Name	Maximum Outlet Grain Loading (gr/dscf)
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

#### RESERVED FOR SCRUBBER

43. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass with lime injection shall meet the following requirements: (XX/2023)

- A. The scrubber and/or bypass system shall operate with no less than the specified removal efficiency for the following pollutants on an hourly or 30-day rolling average, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	xx
H <sub>2</sub> SO <sub>4</sub>	xx
xx	xx

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the representations relating to monitoring for the dry scrubbing and bypass system.

#### Material Handling and Housekeeping

14. Crushed limestone stockpiles shall be stored in an enclosed storage building.
15. Raw material truck and rail loading operations (EPNs RR\_MH and TRK\_MH) shall utilize partial enclosure defined as consisting of two or three-sided walls with fogging nozzles or peripheral dusty air suction nozzles on the perimeter of the hoppers for unloading by rail or truck. Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.

**Commented [A13]:** A dry scrubber, properly installed and in good working order, will control SO<sub>2</sub> emissions from the cement kiln (EPN 21-SK-230). A lime injection system shall be installed and operated as necessary to reduce SO<sub>2</sub> emissions from EPN 21-SK-230 in order to meet the emission limits stated in the MAERT. SO<sub>2</sub> monitoring performed by CEMS.

**Commented [A14R13]:** This proposal isn't sufficient so we've included a requirement to come back in and permit it correctly with an as-built. This will be required to establish monitoring and operating parameters. Additionally, as noted below we must establish reduction efficiencies for pollutants if control is represented.

One more item is that the process description makes it sound like the dry scrubber would be downstream of the kiln baghouse prior to exhaust. This wouldn't work, as you'd need a filter system to collect the reaction byproduct. Please clarify if an additional filter system is proposed or if this will be upstream of the kiln baghouse.

**Commented [A15]:** Applicant: Please provide a list of pollutants controlled by the scrubber/bypass and a reduction efficiency. Any pollutants represented as controlled should carry an associated reduction efficiency for enforceability. Additionally, BACT should be addressed in the application.

We understand that there are two systems in play here and can add a second table if necessary. It is OK to state an overall system efficiency for the two separate systems. Additionally, if a dry reagent is used - handling of it may need permitting.

All of this should be baked into the BACT analysis and compared to RBLCL.



16. Raw material conveyers shall be fully enclosed.
17. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
18. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.
19. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
20. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

#### Cement Kiln Selective Catalytic Reduction

21. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

~~E. The NO<sub>x</sub> and CO emission limits of this permit shall not apply during non-routine operation of the Cement Kiln. Normal Cement Kiln operation does not include the following circumstances:~~

~~(1) MSS activity when the precalciner operating temperature is too low for proper SCR or combination of SCR and SNCR operation; and~~

~~(1)(2) An imminent or actual breakdown or excursion of the process, or other process that results in unauthorized emissions; or when a detached or secondary plume is observed by using EPA Test Method (TM) 22 of Appendix A-7 in 40 CFR Part 60. The permit holder must notify the TCEQ Regional Office within 24 hours of a positive EPA TM 22~~

**Commented [A16]:** This Condition will be removed. Given that a representation has been made that the limits won't be exceeded during startup and no "non-routine" scenarios are represented or modeled, it's not relevant here. The limit will apply at all times.

Additionally we cannot permit upset events.

~~observation of a detached or secondary plume. This notification does not satisfy  
excess opacity event reporting requirements under 30 TAC § 101.201.~~

#### Planned Maintenance, Startup, and Shutdown

22. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
23. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:
- A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.
24. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
- A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
25. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
- A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

**Commented [A17]:** These Conditions based on the 12/1/23 email from Mike Meister.

#### Ammonia Handling

Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO

26. Except as may be provided in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per 24 hours.
- B. Immediately, but no later than 24 hours upon detection of a leak, plant personnel shall take at least one of the following actions:
- (1) Isolate the leak.
  - (2) Commence repair or replacement of the leaking component.
  - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

Commented [A18]: Based on other permits for cement kilns in Texas, the frequency has been revised to "once per 24 hours"

Commented [A19]: Same comment as above

#### Initial Demonstration of Compliance

27. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 42. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and CO. Sampling shall be

Commented [A20]: This is standard language included in all permits to allow region to require testing of other pollutants should they find reason for it.

Commented [A21]: See updates to the initial demonstration of compliance testing to align with federal requirements.

Commented [A22]: Is it necessary to test the finish mill stack for the combustion emissions from the hot gas generator?

Commented [A23R22]: Given that this source is <40 MMBtu/hr only PM testing will be required.

accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### Sampling Requirements

29. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.
30. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
  - A. Date for pretest meeting;
  - B. Date sampling will occur;
  - C. Points or sources to be sampled;
  - D. Name of firm conducting sampling;
  - E. Type of sampling equipment to be used; and
  - F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.
31. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
32. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
33. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
34. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.



Special Conditions

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35. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
36. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

One copy to each appropriate local air pollution control program with jurisdiction.

37. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
38. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

**Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

~~The holder of this permit shall install, calibrate, and maintain continuous opacity monitoring systems (COMS) for monitoring opacity at the Cement Kiln Baghouse Stack (EPN 21-SK-230). Additionally, the holder of this permit shall install, and operate a continuous Parametric Monitoring System (CPMS) for filterable PM for the cement kiln in accordance with the requirements of NSPS Subpart F and NESHAP Subpart LLL. Continuous monitoring and recordkeeping of opacity shall be performed in accordance with the following:~~

- ~~A. The (each) COMS shall meet the design and performance specification, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in Performance Specification No. 1, 40 CFR Part 60, Appendix B.~~
- ~~B. The (each) COMS shall be installed, operated, and maintained in accordance with the requirements of 40 CFR § 63.1350(f)(4)(i).~~
- ~~C. The (each) COMS shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR Part 60, Appendix B or as specified by the TCEQ if not specified in Appendix B.~~
- ~~D. The (each) opacity monitor shall complete a minimum of one cycle of data recording for each successive ten-second period. Six-minute averages shall be computed from at least 36 data points over a six-minute period. Data recorded during periods of COMS breakdowns,~~

**Commented [A24]:** A CPMS is required for NSPS Subpart F and NESHAP LLL for cement kilns and not a COMS.

There are also other permits that note the following:

A PM CPMS that has passed the initial certification requirements of 40 CFR Part 63, Subpart LLL may be used instead of a continuous opacity monitoring system (COMS). A site specific relationship between PM emissions and opacity measurements shall be developed to establish a level of CPMS output that reliably corresponds to the required opacity in Special Condition No. 8. Compliance with such a CPMS level will be considered to demonstrate compliance with the opacity limits for the kiln; however, the TCEQ may use EPA Test Method 9 to determine opacity at any time.

**Commented [A25R24]:** COMS references removed, CPMS specific CNDs added below.



~~repairs, calibration checks, and zero span adjustments shall not be included in the computed data averages.~~

- ~~E. The holder of this permit shall submit to the appropriate TCEQ Regional Office, on a six-month basis, an excess emissions and monitoring systems performance report for the COMS measured opacity consistent with the requirements of 40 CFR § 60.7(c) and (d).~~

Commented [A26]: Needs to be updated to reflect CPMS instead of COMS

39. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with in 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
40. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
41. Each CEMS required under this permit shall satisfy the following requirements:
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
    - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
    - (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
  - F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
42. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 41, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.
  - B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).  
  
Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.  
  
Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.
  - C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.
43. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in

accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.

44. The  $\text{NH}_3$  concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the  $\text{NH}_3$  stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of  $\text{NH}_3$ . The  $\text{NH}_3$  concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
  - B. The  $\text{NH}_3$  stack concentration may be measured using a sorbent or stain tube device specific for  $\text{NH}_3$  measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
    - (1) If the sorbent or stain tube testing indicates an ammonia ( $\text{NH}_3$ ) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin  $\text{NH}_3$  testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
    - (2) If the quarterly testing indicates  $\text{NH}_3$  stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm  $\text{NH}_3$  stack concentration or greater.
  - C. The permit holder may install and operate a second  $\text{NO}_x$  CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack  $\text{NO}_x$  CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and  $\text{NH}_3$  injection rate to estimate  $\text{NH}_3$  stack concentration. This condition shall not be construed to set a minimum  $\text{NO}_x$  reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - D. The permit holder may install and operate a dual stream system of  $\text{NO}_x$  CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one  $\text{NO}_x$  CEMS, and the other exhaust stream would be routed through a  $\text{NH}_3$  converter to convert  $\text{NH}_3$  to  $\text{NO}_x$  and then to a second  $\text{NO}_x$  CEMS. The  $\text{NH}_3$  stack concentration shall be calculated from the delta between the two  $\text{NO}_x$  CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - E. The permit holder may establish a correlation between the maximum  $\text{NH}_3$  stack concentration limit and maximum  $\text{NH}_3$  injection rate or other surrogate parameter that may be monitored to determine compliance with  $\text{NH}_3$  stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - F. Other alternative methods used for measuring  $\text{NH}_3$  stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
45. The holder of this permit shall perform monthly inspections to verify proper operation of the capture systems for the Cement Kiln Baghouse (EPN 21-SK-230) and the Finish Mill Baghouse (EPN 51-SK-250) to verify there are no holes, cracks, and/or other conditions that would reduce the collection efficiency of the emission capture systems as represented. If the results of the

inspections indicate that a capture system is not operating properly, the permit holder shall promptly take necessary corrective actions.

46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:
- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or

Commented [A27]: Removed this source from the COMS requirements and specified daily observations.



- B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The *Finish Mill* (EPN 51-SK-250) control device shall not have a bypass.

#### Recordkeeping Requirements

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
- B. After the CEMS certification, a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;
- C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
- D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
- E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;

**Commented [A28]:** Please remove as discussed on 8/11/2023. SO2 is monitored from the cement kiln stack using the SO2 CEMS

**Commented [A29R28]:** Can you specify whether any other control devices are subject to CAM? As specified in 30 TAC 122.604(c)(6), sources with CEMS are not subject - but what about other baghouse controlled sources? If so, they should be listed here by EPNs - as this is a CAM-specific CND.

**Commented [A30]:** Could be using sorbent trap instead of CEMS based on Special Condition 43

**Commented [A31R30]:** The sorbent trap based CEMS is still a type of CEMS, so I think this language could still work. Clarified language above.



- F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;
  - H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 22-25 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### Reporting Requirements

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.
  - D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.

- H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.
54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

#### Greenhouse Gases Special Conditions

55. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 27 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 27, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance

Commented [A32]: Revised to remove "12" since this application only includes one kiln

Commented [A33R32]: Please see revised CO<sub>2e</sub> limit to align with the recordkeeping in Special Condition 53 and the MAERT.

Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### **Greenhouse Gases Recordkeeping Requirements**

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.
59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and

- C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
- (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
  - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
  - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

Inherently Low Emitting (ILE) Maintenance Activities

Planned Maintenance Activity	Pollutant					
	VOC	NOx	CO	PM	SO2	CO2
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:



**Emission Sources - Maximum Allowable Emission Rates**

Permit Numbers 167047 and PSDTX1602

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

**Air Contaminants Data**

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	NO <sub>x</sub>	75.34	289.00
		SO <sub>2</sub>	83.33	213.31
		H <sub>2</sub> SO <sub>4</sub>	152.76	58.66
		HCl	2.38	10.41
		CO	1249.88	1599.84
		PM	41.66	159.98
		PM <sub>10</sub>	41.66	159.98
		PM <sub>2.5</sub>	41.66	159.98
		Pb	0.01	0.04
		Hg	<0.01	0.01
		VOC	25.24	100.49
		NH <sub>3</sub>	12.95	56.72
51-SK-250	Finish Mill Baghouse Stack	NO <sub>x</sub>	0.16	0.70
		SO <sub>2</sub>	<0.01	0.04
		CO	1.31	5.74
		PM	3.23	14.13
		PM <sub>10</sub>	3.23	14.13
		PM <sub>2.5</sub>	3.23	14.13
		VOC	0.09	0.38
10-BF-035	Crusher Building Baghouse Stack	PM	1.36	5.97
		PM <sub>10</sub>	1.36	5.97
		PM <sub>2.5</sub>	1.36	5.97
10-BF-140	Material Transfer (LS to Storage) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11

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Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.25	1.11
12-BF-140	Additive Unloading (Rail) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11
		PM <sub>2.5</sub>	0.25	1.11
11-BF-270	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
11-BF-285	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-315	Truck Unloading Baghouse Stack	PM	0.76	3.31
		PM <sub>10</sub>	0.76	3.31
		PM <sub>2.5</sub>	0.76	3.31
12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-030	Raw Mill Feed (Top of Bin Baghouse) Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-500	Raw Mill Feed Bin Building Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
20-BF-010	Raw Mill Building Baghouse Stack	PM	0.30	1.33
		PM <sub>10</sub>	0.30	1.33

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.30	1.33
20-BF-182	Raw Mill Building Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
20-BF-360	Raw Mill Building Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
21-BF-330	Top of CKD Bin Baghouse Stack	PM	0.08	0.33
		PM <sub>10</sub>	0.08	0.33
		PM <sub>2.5</sub>	0.08	0.33
22-BF-060	Bottom of Raw Meal Silo Baghouse Stack	PM	0.23	0.99
		PM <sub>10</sub>	0.23	0.99
		PM <sub>2.5</sub>	0.23	0.99
22-BF-080	Preheater Tower Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
22-BF-160	Top of Raw Meal Silo Baghouse Stack	PM	0.38	1.66
		PM <sub>10</sub>	0.38	1.66
		PM <sub>2.5</sub>	0.38	1.66
22-BF-385	Top of Surge Bin (RM Silo) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
30-BF-260	Bottom of Preheater Tower Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
30-BF-320	Top of Preheater Tower Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50

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Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.11	0.50
42-BF-270	Cooler Discharge Baghouse Stack	PM	0.16	0.72
		PM <sub>10</sub>	0.16	0.72
		PM <sub>2.5</sub>	0.16	0.72
41-BF-130	Top of Bin (Bypass Dust) Baghouse Stack	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22
44-BF-030	Top of Clinker Silo Baghouse Stack	PM	0.63	2.76
		PM <sub>10</sub>	0.63	2.76
		PM <sub>2.5</sub>	0.63	2.76
44-BF-185	Transfer Tower (Clinker Strg. And Handling) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
50-BF-050	Top of Clinker Feed Bin Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
50-BF-020	Top of Gypsum Feed Bin Baghouse Stack	PM	0.09	0.39
		PM <sub>10</sub>	0.09	0.39
		PM <sub>2.5</sub>	0.09	0.39
50-BF-350	Cement Feed Bin Extraction Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
51-BF-050	Cement Mill Building Baghouse Stack	PM	0.30	1.32
		PM <sub>10</sub>	0.30	1.32
		PM <sub>2.5</sub>	0.30	1.32
51-BF-140	Cement Mill Building Baghouse Stack	PM	0.23	1.01
		PM <sub>10</sub>	0.23	1.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.23	1.01
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse Stack	PM	0.14	0.61
		PM <sub>10</sub>	0.14	0.61
		PM <sub>2.5</sub>	0.14	0.61
52-BF-110	Top of Cement Silo 1 Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
53-BF-110	Top of Cement Silo 2 Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
52-BF-270	Loadout System (CM Silo-1) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
53-BF-270	Loadout System (CM Silo-2) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44



Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
LSCRSBBD_MH	Limestone - Material Handling LS Crusher Building (5)	PM	0.04	0.15
		PM <sub>10</sub>	0.02	0.07
		PM <sub>2.5</sub>	<0.01	0.01
TRK_MH	Additive - Material Handling Truck Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
RR_MH	Additive - Material Handling Rail Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
LS_STKPL	Limestone Stockpile 1 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
LS_STKPL	Limestone Stockpile 2 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
ADD_STKPL	Gypsum Stockpile (5)	PM	0.03	0.11
		PM <sub>10</sub>	0.01	0.06
		PM <sub>2.5</sub>	0.002	0.01
ADD_STKPL	High Grade Limestone Stockpile (5)	PM	0.05	0.20
		PM <sub>10</sub>	0.02	0.10
		PM <sub>2.5</sub>	<0.01	0.02
ADD_STKPL	Sand Stockpile (5)	PM	0.02	0.09
		PM <sub>10</sub>	0.01	0.05
		PM <sub>2.5</sub>	<0.01	0.01
EG-1	Emergency Generator Engine	NO <sub>x</sub>	8.87	0.44
		SO <sub>2</sub>	<0.01	<0.01
		CO	17.74	0.89

Commented [A1]: Updated pollutant names to align with respective emission rates

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM	0.14	0.01
		PM <sub>10</sub>	0.14	0.01
		PM <sub>2.5</sub>	0.14	0.01
		VOC	4.58	0.23
NH3FUG	NH3 Fugitives (5)	NH <sub>3</sub>	0.06	0.28
MSSFUG	ILE MSS Activities	NO <sub>x</sub>	<0.01	<0.01
		SO <sub>2</sub>	<0.01	<0.01
		CO	<0.01	<0.01
		PM	0.81	0.77
		PM <sub>10</sub>	0.66	0.76
		PM <sub>2.5</sub>	0.28	0.38
		VOC	<0.01	<0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
SO<sub>2</sub> - sulfur dioxide  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
HCl - hydrogen chloride  
H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
Pb - Lead  
Hg - Mercury  
NH<sub>3</sub> - ammonia  
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.  
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: DRAFT

Emission Sources - Maximum Allowable Emission Rates  
Permit Number GHGPSDTX212

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities authorized by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	CO <sub>2e</sub>	-	981,402.53
51-SK-250	Finish Mill Baghouse Stack	CO <sub>2e</sub>	-	8,210.12
EG-1	Emergency Generator Engine	CO <sub>2e</sub>	-	42.25

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO<sub>2e</sub> - carbon dioxide equivalents based on the following Global Warming Potentials (GWP) found in Table A-1 of Subpart A 40 CFR Part 98 (78 FR 71904) for each pollutant: CO<sub>2</sub> (1), N<sub>2</sub>O (298), CH<sub>4</sub> (25)
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.

Date: DRAFT

Project Number: 335160

### Special Conditions

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

#### Emission Standards

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

#### Fuel Specifications

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

Commented [A1]: Engine is not a diesel fired compression ignition engine. It is spark ignited and fires natural gas.

Commented [A2R1]: Fixed.

#### Federal Applicability

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.60 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	--	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>

**Commented [A3]:** Revised the finish mill baghouse stack opacity limit to align with NSPS Subpart F (10%). Other permits for cement kilns have a higher opacity limit for the kiln stack compared to the other baghouses.

**Commented [A4R3]:** This change is rejected. 5% opacity is a matter of BACT for dust collectors/baghouses controlling these sources - not a matter of meeting Subpart F. For an example of this see cement kiln Permit # 154671, as well as permits for what can be viewed as a similar industry - lime kilns - Permit #'s 48196 and 7808 (Kiln 4). These represent some of the most recently modified kilns and all have 5% limits.

**Commented [A5]:** Added this requirement in accordance with Permit # 154671 and general BACT.

**Commented [A6]:** Revised from "facilities" to kiln

**Commented [A7]:** Each pollutant with a 1-hour rate on the MAERT has been moved to 1-hour averaging. This is for consistency with permits for other large combustion sources. NO<sub>x</sub> is already required due to modeling concerns, but the other pollutants must also have a reasonable time span involved to show compliance with short-term rates on the MAERT and to match permitting best practices and defensibility. We understand that historically we just pointed to the 30-day limits, but do not consider that currently defensible.

**Commented [A8]:** Dioxins and Furans aren't listed as noted in the application.

Dioxins/Furans (D/F) - 0.20 nanogram per dry standard cubic meter (TEQ), corrected to 7 percent O<sub>2</sub>

**Commented [A9R8]:** I couldn't find this listed in the application. Please revise to add as necessary.

**Commented [A10R8]:** Response: Listed in Table 7-3 under the Federal Rule Applicability section



Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	--	1.10 lb/ton of clinker	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

**Table 2: Finish Mill Air Heater**

Emissions from the Finish Mill Air Heater (EPN 51-SK-250) shall not exceed the following during any rolling 12-month period.

Pollutant	Emission Standard
NO <sub>x</sub>	0.01 lb/MMBtu based on the higher heating value of the fuel.

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The following additional requirements apply:
- The engine shall be equipped with a non-resettable hour meter.
  - Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 4: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.005
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005

**Commented [A8]:** Dioxins and Furans aren't listed as noted in the application.

Dioxins/Furans (D/F) - 0.20 nanogram per dry standard cubic meter (TEQ), corrected to 7 percent O<sub>2</sub>

**Commented [A9R8]:** I couldn't find this listed in the application. Please revise to add as necessary.

**Commented [A10R8]:** Response: Listed in Table 7-3 under the Federal Rule Applicability section

**Commented [A11]:** Since engine would comply with MACT 2222 by complying with NSPS JJJJ. Please revise to reference NSPS JJJJ (60.4243(d)).

**Commented [A12]:** Kiln is subject to separate PM limits in NSPS Subpart F and MACT LLL of 0.02 lb PM/ton clinker (filterable).

**Commented [A13R12]:** This request is rejected, as state and PSD BACT requires an outlet grain loading of 0.005 for the kiln and this limit is different from the overall PM limit in the NSPS. BACT limits can and do exceed state or federal control requirements. If a control device exists we have to specify the control efficiency.

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

#### RESERVED FOR SCRUBBER

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements: (XX/2023)

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Crushed limestone stockpiles shall be stored in an enclosed storage building.
16. Raw material truck and rail loading operations (EPNs RR\_MH and TRK\_MH) shall utilize partial enclosure defined as consisting of two or three-sided walls with fogging nozzles or peripheral dusty air suction nozzles on the perimeter of the hoppers for unloading by rail or truck. Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.
17. Raw material conveyers shall be fully enclosed.

**Commented [A14]:** A dry scrubber, properly installed and in good working order, will control SO<sub>2</sub> emissions from the cement kiln (EPN 21-SK-230). A lime injection system shall be installed and operated as necessary to reduce SO<sub>2</sub> emissions from EPN 21-SK-230 in order to meet the emission limits stated in the MAERT. SO<sub>2</sub> monitoring performed by CEMS.

**Commented [A15R14]:** This proposal isn't sufficient so we've included a requirement to come back in and permit it correctly with an as-built. This will be required to establish monitoring and operating parameters. Additionally, as noted below we must establish reduction efficiencies for pollutants if control is represented.

One more item is that the process description makes it sound like the dry scrubber would be downstream of the kiln baghouse prior to exhaust. This wouldn't work, as you'd need a filter system to collect the reaction byproduct. Please clarify if an additional filter system is proposed or if this will be upstream of the kiln baghouse.

**Commented [A16]:** Applicant: Please provide a list of pollutants controlled by the scrubber/bypass and a reduction efficiency. Any pollutants represented as controlled should carry an associated reduction efficiency for enforceability. Additionally, BACT should be addressed in the application.

We understand that there are two systems in play here and can add a second table if necessary. It is OK to state an overall system efficiency for the two separate systems. Additionally, if a dry reagent is used - handling of it may need permitting.

All of this should be baked into the BACT analysis and compared to RBLG.

18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.
20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

#### Cement Kiln Selective Catalytic Reduction

22. The following requirements shall apply to the Cement Kiln (EPN:21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

~~E. The NO<sub>x</sub> and CO emission limits of this permit shall not apply during non-routine operation of the Cement Kiln. Normal Cement Kiln operation does not include the following circumstances:~~

~~(1) MSS activity when the precalciner operating temperature is too low for proper SCR or combination of SCR and SNCR operation; and~~

~~(1)(2) An imminent or actual breakdown or excursion of the process, or other process that results in unauthorized emissions; or when a detached or secondary plume is observed by using EPA Test Method (TM) 22 of Appendix A-7 in 40 CFR Part 60. The permit holder must notify the TCEQ Regional Office within 24 hours of a positive EPA TM 22 observation of a detached or secondary plume. This notification does not satisfy excess opacity event reporting requirements under 30 TAC § 101.201.~~

**Commented [A17]:** This Condition will be removed. Given that a representation has been made that the limits won't be exceeded during startup and no "non-routine" scenarios are represented or modeled, it's not relevant here. The limit will apply at all times.

Additionally we cannot permit upset events.



#### Planned Maintenance, Startup, and Shutdown

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:
- A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.
25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
- A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
- A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

**Commented [A18]:** These Conditions based on the 12/1/23 email from Mike Meister.

#### Ammonia Handling

Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO



27. Except as may be provided in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per 24 hours.
  - B. Immediately, but no later than 24 hours upon detection of a leak, plant personnel shall take at least one of the following actions:
    - (1) Isolate the leak.
    - (2) Commence repair or replacement of the leaking component.
    - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.
- Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

Commented [A19]: Based on other permits for cement mills as Toxics the frequency has been revised to "once per 24 hours."

Commented [A20]: Same comment as above

#### Initial Demonstration of Compliance

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 4.32. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and CO. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

Commented [A21]: This is standard language included in all permits to allow region to require testing of other pollutants should they find reason for it.

Commented [A22]: See updates to the initial demonstration of compliance testing to align with federal requirements.

Commented [A23]: Is it necessary to test the finish mill stack for the combustion emissions from the hot gas generator?

Commented [A24R23]: Given that this source is <40 MMBtu/hr only PM testing will be required.

#### Sampling Requirements

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.
31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
  - A. Date for pretest meeting;
  - B. Date sampling will occur;
  - C. Points or sources to be sampled;
  - D. Name of firm conducting sampling;
  - E. Type of sampling equipment to be used; and
  - F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.
32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.

37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

One copy to each appropriate local air pollution control program with jurisdiction.

38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

#### Demonstration of Continuous Compliance and Compliance Assurance Monitoring

~~The holder of this permit shall install, calibrate, and maintain continuous opacity monitoring systems (COMS) for monitoring opacity at the Cement Kiln Baghouse Stack (EPN 21-SK-230). Additionally, the holder of this permit shall install, and operate a continuous Parametric Monitoring System (CPMS) for filterable PM for the cement kiln in accordance with the requirements of NSPS Subpart F and NESHAP Subpart LLL. Continuous monitoring and recordkeeping of opacity shall be performed in accordance with the following:~~

- ~~A. The (each) COMS shall meet the design and performance specification, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in Performance Specification No. 1, 40 CFR Part 60, Appendix B.~~
- ~~B. The (each) COMS shall be installed, operated, and maintained in accordance with the requirements of 40 CFR § 63.1350(f)(4)(i).~~
- ~~C. The (each) COMS shall be zeroed and spanned daily and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in 40 CFR Part 60, Appendix B or as specified by the TCEQ if not specified in Appendix B.~~
- ~~D. The (each) opacity monitor shall complete a minimum of one cycle of data recording for each successive ten-second period. Six-minute averages shall be computed from at least 36 data points over a six-minute period. Data recorded during periods of COMS breakdowns, repairs, calibration checks, and zero span adjustments shall not be included in the computed data averages.~~

**Commented [A25]:** A CPMS is required for NSPS Subpart F and NESHAP LLL for cement kilns and not a COMS.

There are also other permits that note the following:

A PM CPMS that has passed the initial certification requirements of 40 CFR Part 63, Subpart LLL may be used instead of a continuous opacity monitoring system (COMS). A site specific relationship between PM emissions and opacity measurements shall be developed to establish a level of CPMS output that reliably corresponds to the required opacity in Special Condition No. 8. Compliance with such a CPMS level will be considered to demonstrate compliance with the opacity limits for the kiln; however, the TCEQ may use EPA Test Method 9 to determine opacity at any time.

**Commented [A26R25]:** COMS references removed, CPMS specific CNDs added below.



~~E. The holder of this permit shall submit to the appropriate TCEQ Regional Office, on a six-month basis, an excess emissions and monitoring systems performance report for the COMS measured opacity consistent with the requirements of 40 CFR § 60.7(e) and (d).~~

Commented [A27]: Needs to be updated to reflect CPMS instead of COMS

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with in 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
    - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
    - (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.
- Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An

equivalent quality-assurance method approved by the TCEQ may also be used.  
Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
  - F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 424, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.
  - B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).  
  
Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.  
  
Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.
  - C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.
44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.



45. The  $\text{NH}_3$  concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the  $\text{NH}_3$  stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of  $\text{NH}_3$ . The  $\text{NH}_3$  concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
  - B. The  $\text{NH}_3$  stack concentration may be measured using a sorbent or stain tube device specific for  $\text{NH}_3$  measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
    - (1) If the sorbent or stain tube testing indicates an ammonia ( $\text{NH}_3$ ) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin  $\text{NH}_3$  testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
    - (2) If the quarterly testing indicates  $\text{NH}_3$  stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm  $\text{NH}_3$  stack concentration or greater.
  - C. The permit holder may install and operate a second  $\text{NO}_x$  CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack  $\text{NO}_x$  CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and  $\text{NH}_3$  injection rate to estimate  $\text{NH}_3$  stack concentration. This condition shall not be construed to set a minimum  $\text{NO}_x$  reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - D. The permit holder may install and operate a dual stream system of  $\text{NO}_x$  CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one  $\text{NO}_x$  CEMS, and the other exhaust stream would be routed through a  $\text{NH}_3$  converter to convert  $\text{NH}_3$  to  $\text{NO}_x$  and then to a second  $\text{NO}_x$  CEMS. The  $\text{NH}_3$  stack concentration shall be calculated from the delta between the two  $\text{NO}_x$  CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - E. The permit holder may establish a correlation between the maximum  $\text{NH}_3$  stack concentration limit and maximum  $\text{NH}_3$  injection rate or other surrogate parameter that may be monitored to determine compliance with  $\text{NH}_3$  stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - F. Other alternative methods used for measuring  $\text{NH}_3$  stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The holder of this permit shall perform monthly inspections to verify proper operation of the capture systems for the Cement Kiln Baghouse (EPN 21-SK-230) and the Finish Mill Baghouse (EPN 51-SK-250) to verify there are no holes, cracks, and/or other conditions that would reduce the collection efficiency of the emission capture systems as represented. If the results of the inspections indicate that a capture system is not operating properly, the permit holder shall promptly take necessary corrective actions.

47. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
48. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:
- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
  - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.

**Commented [A28]:** Removed this source from the COMS requirements and specified daily observations.

49. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
50. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
51. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass.

#### Recordkeeping Requirements

52. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification, a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;
  - C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;

**Commented [A29]:** Please remove as discussed on 8/11/2023. SO<sub>2</sub> is monitored from the cement kiln stack using the SO<sub>2</sub> CEMS

**Commented [A30R29]:** Can you specify whether any other control devices are subject to CAM? As specified in 30 TAC 122.604(c)(6), sources with CEMS are not subject - but what about other baghouse controlled sources? If so, they should be listed here by EPNs - as this is a CAM-specific CND.

**Commented [A31]:** Could be using sorbent trap instead of CEMS based on Special Condition 43

**Commented [A32R31]:** The sorbent trap based CEMS is still a type of CEMS, so I think this language could still work. Clarified language above.

- H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 2322-2626 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
53. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### Reporting Requirements

54. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.
  - D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.

55. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

#### Greenhouse Gases Special Conditions

56. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2</sub>	0.92 ton/ton clinker 12 month rolling average

57. Initial determination of compliance as specified in Special Condition No. 2827 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 2827, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

Commented [A33]: Revised to remove "e2" since this application only includes one kiln

Commented [A34R33]: Please see revised CO<sub>2</sub>e limit to align with the recordkeeping in Special Condition 56 and the MAERT



58. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### Greenhouse Gases Recordkeeping Requirements

59. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.
60. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
  - C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
    - (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.

Special Conditions

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

Page 19

- (2) Calculate total nitrous oxide ( $\text{N}_2\text{O}$ ) and methane ( $\text{CH}_4$ ) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
- (3) Convert  $\text{CO}_2$ ,  $\text{N}_2\text{O}$  and  $\text{CH}_4$  monthly emissions to  $\text{CO}_2\text{e}$  emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of  $\text{CO}_2\text{e}$  to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

Inherently Low Emitting (ILE) Maintenance Activities

Planned Maintenance Activity	Pollutant					
	VOC	NOx	CO	PM	SO2	CO2
Vacuum truck solids unloading				x		
CEMS calibration	x	x	x		x	x
Refractory maintenance operations				x		
Miscellaneous particulate filter maintenance				x		
Kiln particulate filter maintenance				x		
Equipment heating	x	x	x	x	x	x

Date:

**AR-24**

**Comments on Revised Draft Permit**

**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Monday, January 22, 2024 9:48 AM  
**To:** Joel Stanford; Chad Dumas; Daniel Jamieson  
**Cc:** Stephen Beene  
**Subject:** RE: Draft Permit #2 for BM Dorchester - Proposed Permit # 167047  
**Attachments:** MSS\_Modeling\_Addendum 2024-0119.pdf

Joel/Chad/Dan:

Attached is the MSS modeling addendum previously discussed for your consideration. Black Mountain has no comments on the most recent draft permit.

Thanks,  
Mike

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Wednesday, January 17, 2024 2:17 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>; Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Subject:** RE: Draft Permit #2 for BM Dorchester - Proposed Permit # 167047

Hi Mike,  
Please see responses below. I've included some CNDs from a different permit as well as the latest drafts for this one.

Thanks!

**Joel Stanford**

Team Leader - Expedited Team  
Air Permits Division  
Texas Commission on Environmental Quality  
Mail Code: MC-163, PO Box 13087  
Austin, Texas 78711-3087



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**From:** Mike Meister  
**Sent:** Wednesday, January 10, 2024 4:41 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** Kate Gross <[KGross@trinityconsultants.com](mailto:KGross@trinityconsultants.com)>; Stephen Beene <[SBeene@trinityconsultants.com](mailto:SBeene@trinityconsultants.com)>;  
[jake@highrollergroup.com](mailto:jake@highrollergroup.com); [luke@highrollergroup.com](mailto:luke@highrollergroup.com)  
**Subject:** RE: Draft Permit #2 for BM Dorchester - Proposed Permit # 167047

Joel,



Please find attached comments on the draft permit conditions (attached) as well as further discussion below. No further comments are provided on the MAERT. Once you've had a chance to look over the comments, we'd like to schedule a call to go over anything that needs additional clarification or discussion. We would like to schedule this call for Friday, 1/12, depending on your schedule.

1. Special Condition 8. Opacity for cement kiln. Based on review of the referenced permits, Black Mountain disagrees with the 5% opacity requirement applying to the proposed natural gas fired rotary cement kiln and believes that the opacity limit for the kiln should be 10 percent.
  - a. Permit No. 154671 for the Texas Lehigh Buda cement production site identifies the opacity limits as follows in Special Conditions 9 and 10:
    - All sources listed on the MAERT, except the dust collector stacks, shall be limited to 10 percent opacity.
    - Opacity of particulate matter emissions from all dust collectors' stacks shall not exceed 5 percent, average over a six-minute period.
    - Therefore, the opacity limit for the Texas Lehigh Buda cement kiln is 10 percent.
  - b. Permit No. 48196 authorizes a rotary dryer and not a kiln, which is not an equivalent comparison to the proposed natural gas fired rotary cement kiln.
  - c. Permit No. 7808 authorizes a new natural gas-fired vertical lime kiln (Kiln No. 4), which is not an equivalent comparison to the proposed natural gas fired a rotary cement kiln. The other rotary lime kilns listed in Permit No. 7808 have a 10% opacity limit.
  - d. Lastly, the kiln baghouse suppliers will only guarantee a 10% opacity.

**Response:**

Please see the attached Texas Lehigh Permit #3611D as an example of the latest cement kiln permit issued by TCEQ which met 5% opacity. We believe that this represents BACT for cement kilns as well as for any filter controlled source in general. We believe that the supplier needs to find a way to meet 5%.

2. Special Condition 11. Table 1. Dioxins/Furans (D/F) need to be included in Table 1 because D/F were listed in Table 7-3 under the Federal Rule Applicability Section of the NSR permit application.

**Response:**

Noted.

3. Special Condition 13. Table 4. The maximum outlet grain loading has been revised to reflect the filterable portion of PM.

**Response:**

The change is accepted.

4. Special Condition 43 (Please note that this should be re-numbered as new Special Condition 14.) Reserved for Scrubber. The SO2 scrubber will contain its own baghouse with the same PM collection efficiency as the main baghouse. The scrubber baghouse will be installed in series

after the main baghouse. The flue gas treatment system will use fresh hydrated lime to be injected into the Venturi Reactor for intimate contact between the reagent and the acid gas and to provide residence time before the second reaction stage in the baghouse. The PM collected in the scrubber baghouse will be transported from the baghouse to a conditioning system where a small amount of water will be added to the recycled material before re-injection into the Venturi Reactor. A portion of the injected lime collected in the baghouse will be extracted for disposal as a waste product. The control efficiency will vary depending on the operation mode of the kiln. The SO<sub>2</sub> scrubber has been designed to have an approximate SO<sub>2</sub> control efficiency of at least 90%. The vendor has not provided information for any other pollutants.

**Response:**

Thank you for the additional information. The requested changes to the CND itself were accepted. The 90% representation was added along with a rider relating to clarifying the target pollutants and control efficiencies in a later as-built. I thought it better to not have an unfinished table in this iteration of the permit, so will just add H<sub>2</sub>SO<sub>4</sub> etc. later on.

5. Special Condition 50. Compliance Assurance Monitoring (CAM) applies to emission sources with an uncontrolled potential to emit greater than the major source threshold. The following dust collectors will be subject to CAM based on the assumption their control efficiencies are 99%: 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110.

**Response:**

Added all of these EPNs to the list in this CND.

6. Air Dispersion Modeling for kiln planned MSS - The SCR will be operating at all times when fuel is being fired in the kiln/pre-heater except during kiln heat-ups at the beginning of startup. During these times, no raw materials will be fed into the kiln. During a cold startup after major refractory work, it will take about 36 hours to heat up the kiln. This operation is expected to only occur once per year. During the kiln heat-up process, NO<sub>x</sub> emissions are estimated to range from 3 to 12 lb/hr based the AP-42 Table 1.4-1 NO<sub>x</sub> emission factor for a large (>100 MMBtu/hr) boiler equipped with a low NO<sub>x</sub> burner\*.

This NO<sub>x</sub> emission rate range is well below the proposed MAERT NO<sub>x</sub> limit for normal kiln operations of 75.34 lb/hr, which is less than the kiln emission rate of 143.7 lb/hr evaluated in the Air Quality Analysis (AQA) submitted along with the initial application materials. During these kiln heat-up periods, supplemental air will be added to ensure that any combustion emissions are being exhausted. Although stack flow and temperature during these kiln heat-up periods have not been quantified, any reduction in dispersion due to stack flow and/or temperature is not expected to offset the ~13X lower NO<sub>x</sub> emissions expected during planned kiln MSS periods shown in the example below.

In addition, the total planned kiln MSS operating hours per year are expected to be not more than 72 hr/yr, which would qualify as an intermittent source under TCEQ and US EPA modeling guidance. The expected planned MSS hours are listed below:

1. Case 1 - Kiln heat-up from cold after major refractory work - estimated to occur once per year at main maintenance stoppage (36 hrs per event)

2. Case 2 - Kiln heat-up from cold after maintenance work w/o refractory work - estimated to occur once per year at secondary maintenance stoppage (12 hrs per event)
3. Case 3 - Kiln heat-up from short stoppage for secondary maintenance work not requiring a full cool-down - estimated to occur about four times per year (6 hrs per event)

Example Calculation - Maximum heat input during any warm-up case is not expected to exceed 81 MMBtu/hr. Therefore, the maximum NOx emissions during warm-up periods are estimated as follows:

$$81 \text{ MMBtu/hr} * 140 \text{ lb NOx}/10^6 \text{ scf} / 1020 \text{ Btu/scf} = 11.15 \text{ lb/hr NOx}$$

\* It should be noted that the factor used for the qualitative comparison above is conservative in that it reflects a low NOx burner for a large (>100 MMBtu/hr) combustion unit; however, given that the kiln burner is a low NOx burner rated at less than 100 MMBtu/hr (peak heat input during a start-up is expected to be approximately 81 MMBtu/hr), the NOx emissions from the kiln burner during start-up could be as much as 36X lower than the emissions modeled in the AQA.

**Response provided by ADMT:**

Regarding item #6, the applicant claims any reduction in dispersion due to stack flow and/or temperature is not expected to offset the lower NOx emissions expected during planned kiln MSS periods. More information is needed to support this claim. Provide additional information that the routine scenario is still representative of worst-case operations. Additionally, please address CO emissions. Contact the ADMT if you have any questions.

Regards,  
Mike

**Michael Meister**  
Principal Consultant

P 361.883.1668, Direct 361.235.3147  
555 N. Carancahua St, Ste 820 Corpus Christi, TX 78401  
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**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Friday, December 8, 2023 4:03 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** Draft Permit #2 for BM Dorchester - Proposed Permit # 167047

Hi Mike,  
Attached is a second round of drafts for this project. These incorporate comments and fixes from the first round, though some items were rejected. Some notable fixes were highlighted in yellow, and I provided explanations where necessary.

I cleaned up most of the tracked changes for readability. It's definitely fine to do new ones for this round.

Please let me know if you have any questions. Given the holidays and some homework enclosed (scrubbers), I'm not going to put the customary deadlines on this and instead rely on the applicant's desire to get this moving.

Thanks,

**Joel Stanford**  
Team Leader - Expedited Team  
Air Permits Division  
Texas Commission on Environmental Quality  
Mail Code: MC-163, PO Box 13087  
Austin, Texas 78711-3087



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**AR-24A**

**MSS Modeling Addendum**



# **MSS MODELING ADDENDUM PSD AIR QUALITY ANALYSIS Dorchester Cement Plant**

## **Black Mountain**

### **Prepared By:**

Michael Meister – Principal Consultant  
Stephen Beene – Senior Consultant

### **TRINITY CONSULTANTS**

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January 2024

Project 214401.0054



## KILN MSS MODELING

The addendum is being submitted to address the ambient NO<sub>x</sub> and CO impacts during the Kiln startup process. The Selective Catalytic Reduction (SCR) system will operate when fuel is being fired in the kiln/pre-heater except during kiln heat-ups at the beginning of startup. During these times, no raw materials will be fed into the kiln. During a cold startup, after major refractory work, it will take about 36 hours to heat up the kiln. This operation is expected to occur once per year. NO<sub>x</sub> and CO emissions during the kiln heat-up are estimated using the AP-42 Table 1.4-1 emission factors for a large (>100 MMBtu/hr) boiler equipped with a low NO<sub>x</sub> burner.

The total planned kiln MSS operating hours per year are expected to be around 72 hrs/yr. The expected, planned MSS hours are listed below:

- ▶ Case 1: Kiln heat-up from cold after major refractory work - estimated to occur once per year at main maintenance stoppage (36 hrs per event)
- ▶ Case 2: Kiln heat-up from cold after maintenance work w/o refractory work - estimated to occur once per year at secondary maintenance stoppage (12 hrs per event)
- ▶ Case 3: Kiln heat-up from short stoppage for secondary maintenance work not requiring a full cool-down - estimated to occur about four times per year (6 hrs per event)

The maximum heat input during any warm-up case is not expected to exceed 81.126 MMBtu/hr, and the maximum NO<sub>x</sub> and CO emissions during warm-up periods are estimated as follows:

$$\left(\frac{81.236 \text{ MMBtu}}{\text{Hr}}\right)\left(\frac{140 \text{ lb NO}_x}{\text{MMscf}}\right)\left(\frac{\text{scf}}{1020 \text{ Btu}}\right) = 11.15 \frac{\text{lb NO}_x}{\text{hr}} = 1.405 \frac{\text{g NO}_x}{\text{sec}}$$
$$\left(\frac{81.236 \text{ MMBtu}}{\text{Hr}}\right)\left(\frac{84 \text{ lb CO}}{\text{MMscf}}\right)\left(\frac{\text{scf}}{1020 \text{ Btu}}\right) = 6.69 \frac{\text{lb CO}}{\text{hr}} = 0.8429 \frac{\text{g CO}}{\text{sec}}$$

The flue gas flow rate during the heat-up period is estimated to be around 10% of normal operations, with equals 45,000 m<sup>3</sup>/hr (31,783 acfm). This results in a stack velocity of 1.427 m/s. The flue gas temperature is estimated to exceed 100 °F (310.93 K).

The CO and NO<sub>x</sub> project impact modeling was updated to include the MSS scenario based on the emission rates and stack parameters listed above. Table 1 provides a comparison of the MSS scenario modeling results to the normal operating scenario (raw mill on and raw mill off) results. For NO<sub>x</sub>, the maximum modeled MSS impact is well below the results for the normal operating scenarios. For CO, the kiln stack is not the dominant source therefore, the MSS results are equal to the normal operating scenario results. Table 2 provides a comparison of the maximum CO impacts by operating scenario from the kiln independent of any other project sources. Table 2 shows the maximum modeled MSS CO impact is well below the results for the normal operating scenarios.

Based on these results, the MSS modeling scenario is not the worst-case scenario. Therefore, the full impact modeling on file still represents worst-case.

**Table 1. NO<sub>x</sub> and CO Short-term PSD Class II SIL Analysis Results Including Kiln Heat Up (MSS)**

Pollutant	Averaging Period	Modeled Year	Description	Modeled GLCmax (µg/m <sup>3</sup> )	
				RM_ON	RM_OFF
NO <sub>2</sub>	1-Hr	2017-21	Project Normal (H1H averaged over 5 years)	16.50	18.89
			Project MSS (H1H averaged over 5 years)	8.201	
CO	1-hr	2017-21	Project Normal (H1H across 5 years)	769.17	769.17
			Project MSS (H1H across 5 years)	769.17	
	8-hr	2017-21	Project Normal (H1H across 5 years)	275.90	275.90
			Project MSS (H1H across 5 years)	275.90	

Source:

AERMOD NO<sub>2</sub> model run - NS1721H09-MSS.ami

AERMOD CO model run - CS1721HE05-MSS.ami

**Table 2. Maximum CO Impacts from the Kiln Stack**

Pollutant	Averaging Period	Modeled Year	Description	Modeled GLCmax (µg/m <sup>3</sup> )
CO	1-hr	2017-21	Kiln Stack Raw Mill On (H1H across 5 years)	279.78
			Kiln Stack Raw Mill Off (H1H across 5 years)	301.81
			Kiln Stack MSS (H1H across 5 years)	9.01
	8-hr	2017-21	Kiln Stack Raw Mill On (H1H across 5 years)	122.68
			Kiln Stack Raw Mill Off (H1H across 5 years)	139.92
			Kiln Stack MSS (H1H across 5 years)	3.56

Source: AERMOD Run CS1721HE05-Kiln.ami

**AR-25**

**Legislative Notice**

Senate Bill 709 (84th Texas Legislative Session, 2015) amended the Texas Water Code by adding new Section 5.5553, which requires the Texas Commission on Environmental Quality (TCEQ) to provide written notice to you at least thirty (30) days prior to the TCEQ's issuance of draft permits for applications that are located in your district.

**Bm Dorchester LLC** has applied to the TCEQ for air quality permitting actions regarding a Portland Cement Plant.

Application Received Date: November 8, 2021

Location: from the intersection of Highway 289 and Highway 902 East of Dorchester head east on Highway 902 for approximately 0.80 miles the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas, 75459

This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice: <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.689632,33.538174&level=13>.

Air Quality Permits affected:

- Air Quality Permit **167047**
- Prevention of Significant Deterioration **PSDTX1602**
- Greenhouse Gas Prevention of Significant Deterioration **GHGPSDTX212**

You were previously sent notification for this application, but the draft permit was delayed.

TCEQ is preparing the initial draft permit for applicant review. At the time the draft permit is issued, the applicant will be required to publish notice in a newspaper of general circulation, and the TCEQ will provide a copy of the notice of draft permit to persons who have requested to be on a mailing list.

Questions regarding this email may be directed to Bonnie Evridge by calling 512-239-5222.

Issued: January 22, 2024



**AR-26**

**Resubmitted NORI Public Notice Supporting Documentation**

## Juliet Varra

---

**From:** Emily Aronson <Emily.Aronson@trinityconsultants.com>  
**Sent:** Tuesday, January 23, 2024 4:01 PM  
**To:** R6AirPermitsTX; Joel Stanford; PROOFS  
**Cc:** Mike Meister  
**Subject:** BM Dorchester Public Notice  
**Attachments:** BM PN Verification signed.pdf

To Whom it May Concern,

On behalf of BM Dorchester, we are resubmitting the public notice verification form for your records. Please find the affidavit, tear sheets, and public notice verification form attached.

Thank you,

---

Emily Aronson, EIT | Associate Consultant – Corpus Christi

555 N Carancahua St | Ste 820 | Corpus Christi, TX 78401

[Trinity Consultants](#) | E: [Emily.Aronson@trinityconsultants.com](mailto:Emily.Aronson@trinityconsultants.com) | P: (361) 235-3358





12700 Park Central Dr, Ste 2100, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203 / [trinityconsultants.com](http://trinityconsultants.com)

January 27, 2022

**Via email:** [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov)

Texas Commission on Environmental Quality

Office of the Chief Clerk

Attn: Notice Team

*RE: Public Notice Requirements – Public Notice Verification Form*

*Permit Numbers: 167047, GHGPSDTX212, and PSDTX1602*

*TCEQ Project Number: 335160*

*BM Dorchester LLC*

*Customer Reference Number: CN605952373*

*Regulated Entity Reference Number: RN111368437*

To Whom It May Concern:

BM Dorchester LLC (BM Dorchester) is constructing a Portland cement manufacturing facility located in Dorchester, Grayson County, Texas (Dorchester Facility). BM Dorchester has been assigned Customer Number (CN) 605952373. The Dorchester Facility has been assigned Texas Commission on Environmental Quality (TCEQ) Regulated Entity Number (RN) 111368437.

BM Dorchester submitted an initial permit application on November 8, 2021. As a part of the application process, the Dorchester Facility is required to publish a formal public notice in a newspaper of general circulation in the municipality nearest to the facility location. In accordance with the public notice guidance package received from the TCEQ on November 18, 2021, BM Dorchester has completed the following:

- ▶ Published a formal public notice on December 19, 2021 in "The Herald Democrat" circulated in Grayson County;
- ▶ Placed a copy of the Air Quality Permit Application at the public location, Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, for public viewing and copying, beginning December 16, 2021; and
- ▶ Prepared and posted signs per TCEQ requirements at the Dorchester Facility beginning December 16, 2021.

#### **HEADQUARTERS**

12700 Park Central Dr, Ste 2100, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203

APP-1233

The Dorchester Facility is required to submit copies of the aforementioned items to those listed on the Notification List. Therefore, copies are also being sent to the following:

U.S. Environmental Protection Agency  
Region 6  
[R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov)  
(electronic only)

Texas Commission on Environmental Quality  
Office of Air  
Air Permits Division  
Joel Stanford  
[Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov)  
(electronic only)

Texas Commission on Environmental Quality  
Air Section Manager  
Dallas/Fort Worth Regional Office  
2309 Gravel Dr  
Fort Worth, Texas 76118-6951

If you have any questions, please feel free to contact me at (972) 661-8100 or via email at [MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com).

Sincerely,

TRINTY CONSULTANTS



Michael Meister  
Principal Consultant

cc: U.S. EPA, Region 6 ([R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov))  
Mr. Joel Stanford, Air Permits Division ([Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov))  
Air Section Manager, TCEQ Region 4, DFW  
Mr. Rhett Bennett, BM Dorchester LLC (electronic)  
Mr. Jake Bender, BM Dorchester LLC (electronic)


**ATTACHMENT 1**  
**Public Notice Verification Form**




**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: BM Dorchester LLC		
Site or Facility Name: Dorchester Facility		
Application Received Date: 11/08/2021		
TCEQ Account Number (if applicable):	Permit Number: 167047, GHGPSDTX212, and PSDTX1602	
Regulated Entity Number (RN): RN111368437	Customer Number (CN): CN605952373	
<p>All applicants must <b>complete all applicable</b> portions of this form. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk <b>within 10 business days after the end of the designated comment period</b>. For more information regarding public notice, refer to the instructions in the public notice package.</p>		
<b>Alternative Language Checklist</b>		
I have contacted the appropriate school district. <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>		
School District: Gunter ISD	Phone Number:	
Person Contacted: Consulted District Website	Date: November 2021	
Is a bilingual education program (BEP) required by the Texas Education Code in the district? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>		
<p><b>If answer is "NO," skip to first question in verification box on next page.</b>  <i>(Note: A BEP is different from "English as a Second Language" (ESL) program; and Elementary/Middle schools that only offer ESL will not trigger notice in an alternative language.)</i></p>		
Notice in an alternative language is required if a BEP is required in the District, and one of the following conditions is met:		
1. students in the elementary or middle school nearest the facility are enrolled in a program at that school;	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2. students from the elementary or middle school nearest the facility attend a BEP at another location; or	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3. the school district that otherwise would be required to provide a BEP has been granted an exception from the requirements to provide the program, as provided for in 19 Texas Administrative Code 89.1207(a).	<input type="checkbox"/> Yes <input type="checkbox"/> No	
If the answer is "NO" to 1, 2, and 3 above, then alternative language notice is not required.		
The name of the elementary school nearest to the proposed or existing facility is:		
The name of the middle school nearest to the proposed or existing facility is:		
The following language(s) is/are utilized in the bilingual program:		
<p><b>If notice in an alternative language is required, then applicants must publish alternative language notice(s) and post alternative language sign(s), as outlined in the <i>Instructions for Public Notice</i> and certify compliance with those requirements on this form.</b></p>		

**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: BM Dorchester LLC	
Site or Facility Name: Dorchester Facility	
Application Received Date: 11/08/2021	
TCEQ Account Number (if applicable):	Permit Number: 167047, GHGPSDTX212, and PSDTX1602
Regulated Entity Number (RN): RN111368437	Customer Number (CN): CN605952373
For more information regarding public notice, refer to the instructions in the public notice package.	
<b>Alternative Language Verification</b>	
1. A BEP is required by the Texas Education Code in the area addressed by this permit application and is subject to alternative language public notice requirements. If "NO," skip 2 through 6 and complete signature, title, date, and name of applicant.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. The applicant has conducted a diligent search for a newspaper or publication of general circulation in both the municipality and county in which the facility is located (or proposed to be located).	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. A newspaper or publication <b>could not be found</b> in any of the alternative language(s) in which notice is required.	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. The publishers of the newspaper listed below refused to publish the notice as requested, and another newspaper or publication in the same language and of general circulation <b>could not be found</b> in the municipality or county in which the facility is located (or proposed to be located).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Newspaper:	Language:
5. Proof of publication of the newspaper alternative language notice(s) and the requested affidavits have been sent to the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Alternative language signs were posted as required by the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk within 10 business days after the end of the designated comment period. The TCEQ will not accept this form if submitted prior to that date.</b>	
Verified by (signature): 	
Applicant: Mr. Michael Meister	
Title: Principal Consultant	Date: 1/27/2022

**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: BM Dorchester LLC	
Site or Facility Name: Dorchester Facility	
Application Received Date: 11/08/2021	
TCEQ Account Number (if applicable):	Permit Number: 167047, GHGPSDTX212, and PSDTX1602
Regulated Entity Number (RN): RN111368437	Customer Number (CN): CN605952373
For more information regarding public notice, refer to the instructions in the public notice package.	
<b>New Source Review Permit Notice Verification (Complete this section, if applicable)</b>	
Proof of publication of the newspaper notices and the requested affidavits have been furnished in accordance with the regulations and instructions of the TCEQ.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Notice of Receipt of Application and Intent to Obtain Permit (1<sup>st</sup> Notice):</b>	
Required signs (for 1st notice) were posted in accordance with the regulations and instructions of the TCEQ.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
A copy of the administratively complete air quality application, and any revisions, were available for review and copying at the public place indicated below throughout the duration of the public comment period.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
The public place indicated below provides public access to the internet (for PSD, nonattainment, or FCAA 112(g) Permit).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<b>Notice of Application and Preliminary Decision (2<sup>nd</sup> Notice, if applicable):</b>	
A copy of the complete air quality application (including any subsequent revisions to the application), executive director's preliminary decision (which includes the draft permit), the preliminary determination summary and air quality analysis (if applicable), are available for review and copying at the public place indicated below from the first day after newspaper publication, and will remain available until either: (1) the TCEQ acts on the application; or (2) the application is referred to the State Office of Administrative Hearings (SOAH) for hearing	<input type="checkbox"/> Yes <input type="checkbox"/> No
Name of Public Place: Howe Community Library	
Address of Public Place: 315 South Collins Freeway	
City: Howe	State: Texas      ZIP Code: 75459
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk within 10 business days after the end of the designated comment period. The TCEQ will not accept this form if submitted prior to that date.</b>	
Verified by (signature): 	
Applicant: Mr. Michael Meister	
Title: Principal Consultant	Date: 1/27/2022

**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: BM Dorchester LLC		
Site or Facility Name: Dorchester Facility		
Application Received Date: 11/08/2021		
TCEQ Account Number (if applicable):	Permit Number: 167047, GHGPSDTX212, and PSDTX1602	
Regulated Entity Number (RN): RN111368437	Customer Number (CN): CN605952373	
For more information regarding public notice, refer to the instructions in the public notice package.		
<b>Federal Operating Permit (Title V) Notice Verification (Complete this section, if applicable)</b>		
I verify that the required signs were posted in accordance with the regulations and instructions of the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
I verify that proof of publication of the newspaper notices and the requested affidavits have been furnished in accordance with the regulations and instruction of the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
I verify that a copy of the complete air quality application (including any subsequent revisions to the application) and draft permit were available for review and copying at the public place indicated below throughout the duration of the public comment period.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Name of Public Place:		
Address of Public Place:		
City:	State:	ZIP Code:
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk within 10 business days after the end of the designated comment period. The TCEQ will not accept this form if submitted prior to that date.</b>		
Verified by (signature):		
Applicant:		
Title:	Date:	

**ATTACHMENT 2**

**Affidavit of Publication for Air Permitting**



TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: Bm Dorchester LLC  
Permit No.: 167047, GHGPSDTX212, and PSDTX1602  
Application Received Date: November 8, 2021

### AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF WISCONSIN §  
COUNTY OF Brown §

BEFORE ME, the undersigned authority, on this day personally appeared

Amy Kokott, who being by me duly sworn, deposes and says that (s)he is (Name  
of Person Representing Newspaper)

the Legal Clerk of the Herald Democrat  
(Title of Person Representing Newspaper) (Name of the Newspaper)

that said newspaper is generally circulated in Dorchester, Grayson County, Texas;  
(The municipality or nearest municipality to the location of the facility or the proposed facility)

that the enclosed notice was published in said newspaper on the following date(s):

December 19, 2021  
Amy Kokott  
(Newspaper Representative's Signature)

Subscribed and sworn to before me this the 20 day of January, 20 22  
to certify which witness my hand and seal of office.

[Affix Seal]

Vicky Felty  
Notary Public in and for the State of Wisconsin

Vicky Felty  
Print or Type Name of Notary Public

9.19.25  
My Commission Expires

## **ATTACHMENT 3**

### **Tear sheets**



# Classified

IN PRINT AND

- LINE ADS - ON LINE - UPDATED DAILY -

Visit our Web Site: [www.heralddemocrat.com](http://www.heralddemocrat.com)

Call: 844-239-7670

Email: [TexomaClass@gannett.com](mailto:TexomaClass@gannett.com)

## Announcements

### Special Notices

**Red River SPCA,**  
Tommy Kirksmith, President,  
IS ANNOUNCING THE  
DISSOLUTION OF OUR 501C3.  
After many years of serving  
our county and our  
surrounding counties,  
we are sad to say that due to  
health and other issues,  
we have stopped taking in  
any more critters.  
Prayers for all the animals  
and for the people we served.



### Why Do We Need The Holy Spirit

Join Pastor Emanuel Johnson &  
First Lady Charlene Johnson  
at a Special Event  
Saturday 2-4pm  
Full Gospel Holy Temple  
of Denison  
4006 Texoma Pkwy

## Legal Notices

### Legal Notices

**PUBLIC NOTICE**  
ORDINANCE NO. 5180  
AN ORDINANCE OF THE CITY OF  
DENISON, TEXAS, AMENDING  
CHAPTER 28 OF THE CODE OF  
ORDINANCES OF THE CITY, THE  
SAME BEING THE ZONING  
COMPREHENSIVE ZONING  
ORDINANCE OF THE CITY, AND  
AMENDING THE OFFICIAL  
ZONING MAP OF THE CITY BY  
CHANGING THE ZONING  
CLASSIFICATION FOR TWO  
TRACTS OF LAND WITHIN TRACT  
LEGALLY DESCRIBED AS A TRACT  
OF LAND SITUATED IN THE J.  
STREPPER SURVEY, ABSTRACT  
NO. 1156, CITY OF DENISON,  
GRAYSON COUNTY, TEXAS,  
BEING PART OF TRACT 12,  
PARCEL A (MAIN HOSPITAL  
TRACT) CONVEYED TO UHS OF  
TEXOMA INC. DEED  
RECORDED IN VOLUME 4172,  
PAGE 482 OF THE DEED RECORDS,  
GRAYSON COUNTY, TEXAS,  
(DROCT), AND BEING ALL OF  
LOTS 2 AND 4 OF THE TEXOMA  
INDUSTRIAL ADDITION, RECORDED  
IN VOLUME 21, PAGE 147, PLAT  
RECORDS, GRAYSON COUNTY,  
TEXAS, AND TRACT 2 LEGALLY  
DESCRIBED AS A TRACT OF LAND  
SITUATED IN THE J. STREPPER  
SURVEY, ABSTRACT NO. 1156,  
CITY OF DENISON, GRAYSON  
COUNTY, TEXAS, BEING PART  
OF TRACT 12 - PARCEL A (MAIN  
HOSPITAL TRACT) CONVEYED TO  
UHS OF TEXOMA INC. DEED  
RECORDED IN VOLUME 4172,  
PAGE 482 OF THE DEED RECORDS,  
GRAYSON COUNTY, TEXAS, AND  
BEING ALL OF LOT 13, MEMORIAL  
MEDICAL ADDITION, RECORDED  
IN VOLUME 6, PAGE 25,  
PROPERTY RECORDS GRAYSON  
COUNTY, TEXAS, AND WITH  
BOTH TRACTS BEING MORE  
PARTICULARLY DESCRIBED AND  
DEPICTED IN EXHIBIT "A" FROM  
ITS ZONING CLASSIFICATION OF  
OFFICE DISTRICT (O) TO MULTI-  
FAMILY RESIDENTIAL (MF-2)  
DISTRICT, PROVIDING THAT  
SUCH TRACT OF LAND SHALL BE  
USED IN ACCORDANCE WITH THE  
REQUIREMENTS OF THE  
COMPREHENSIVE ZONING  
ORDINANCE AND ALL OTHER  
APPLICABLE ORDINANCES OF  
THE CITY, PROVIDING THAT THE  
ZONING MAP SHALL REFLECT  
THE MULTI-FAMILY RESIDENTIAL  
(MF-2) DISTRICT FOR THE

## Legal Notices

**PROPERTY; PROVIDING A  
PENALTY; PROVIDING  
REPEALING, SEVERABILITY, AND  
SAVINGS CLAUSES; PROVIDING  
FOR PUBLICATION AND AN  
EFFECTIVE DATE.**

**SECTION 7. Penalty.** Any person,  
firm, entity or corporation who  
violates any provision of this  
Ordinance, as they exist or may  
be amended, shall be deemed  
guilty of a misdemeanor, and  
upon conviction therefore, shall  
be fined in a sum not exceeding  
Two Thousand and No/100  
Dollars (\$2,000.00). Each  
continuing day's violation shall  
constitute a separate offense.  
The penalty provisions imposed  
under this Ordinance shall not  
preclude the City from filing suit  
to enjoin the violation. The City  
retains all legal rights and  
remedies available to it  
pursuant to local, state, and  
federal law.

**SECTION 8. Publication and  
Effective Date.** This Ordinance  
shall become effective  
immediately upon its adoption  
and its publication as required  
by law.

The City of Denison, Texas  
Christine Wallentine, City Clerk

**PUBLIC NOTICE**  
ORDINANCE NO. 5179  
AN ORDINANCE OF THE CITY OF  
DENISON, TEXAS, AMENDING  
CHAPTER 28 OF THE CODE OF  
ORDINANCES OF THE CITY, THE  
SAME BEING THE ZONING  
COMPREHENSIVE ZONING  
ORDINANCE OF THE CITY, AND  
AMENDING THE OFFICIAL  
ZONING MAP OF THE CITY BY  
CHANGING THE ZONING  
CLASSIFICATION OF APPROXIMATELY 2.53 ACRES OF  
LAND IN THE SPENCER RICE  
SURVEY, ABSTRACT NO. 1156,  
COUNTY, TEXAS, LOCATED AT  
3540 W. CRAWFORD ST., AND  
MORE PARTICULARLY DESCRIBED  
AND DEPICTED IN EXHIBIT "A"  
FROM ITS ZONING  
CLASSIFICATION OF AGRICULTURAL  
DISTRICT TO COMMERCIAL  
DISTRICT, PROVIDING THAT  
SUCH TRACT OF LAND SHALL BE  
USED IN ACCORDANCE WITH THE  
REQUIREMENTS OF THE  
COMPREHENSIVE ZONING  
ORDINANCE AND ALL OTHER  
APPLICABLE ORDINANCES OF  
THE CITY, PROVIDING THAT THE  
ZONING MAP SHALL REFLECT  
THE COMMERCIAL DISTRICT FOR  
THE PROPERTY; PROVIDING A  
PENALTY; PROVIDING  
REPEALING, SEVERABILITY, AND  
SAVINGS CLAUSES; PROVIDING  
FOR PUBLICATION AND AN  
EFFECTIVE DATE.

**SECTION 7. Penalty.** Any person,  
firm, entity or corporation who  
violates any provision of this  
Ordinance, as they exist or may  
be amended, shall be deemed  
guilty of a misdemeanor, and  
upon conviction therefore, shall  
be fined in a sum not exceeding  
Two Thousand and No/100  
Dollars (\$2,000.00). Each  
continuing day's violation shall  
constitute a separate offense.  
The penalty provisions imposed  
under this Ordinance shall not  
preclude the City from filing suit  
to enjoin the violation. The City  
retains all legal rights and  
remedies available to it  
pursuant to local, state, and  
federal law.

## Legal Notices

remedies available to it  
pursuant to local, state, and  
federal law.

**SECTION 8. Publication and  
Effective Date.** This Ordinance  
shall become effective  
immediately upon its adoption  
and its publication as required  
by law.

The City of Denison, Texas  
Christine Wallentine, City Clerk

**PUBLIC NOTICE**  
ORDINANCE NO. 5179  
AN ORDINANCE OF THE CITY OF  
DENISON, TEXAS, AMENDING  
CHAPTER 28 OF THE CODE OF  
ORDINANCES OF THE CITY, THE  
SAME BEING THE ZONING  
COMPREHENSIVE ZONING  
ORDINANCE OF THE CITY, AND  
AMENDING THE OFFICIAL  
ZONING MAP OF THE CITY BY  
CHANGING THE ZONING  
CLASSIFICATION OF APPROXIMATELY 2.53 ACRES OF  
LAND IN THE SPENCER RICE  
SURVEY, ABSTRACT NO. 1156,  
COUNTY, TEXAS, LOCATED AT  
3540 W. CRAWFORD ST., AND  
MORE PARTICULARLY DESCRIBED  
AND DEPICTED IN EXHIBIT "A"  
FROM ITS ZONING  
CLASSIFICATION OF AGRICULTURAL  
DISTRICT TO COMMERCIAL  
DISTRICT, PROVIDING THAT  
SUCH TRACT OF LAND SHALL BE  
USED IN ACCORDANCE WITH THE  
REQUIREMENTS OF THE  
COMPREHENSIVE ZONING  
ORDINANCE AND ALL OTHER  
APPLICABLE ORDINANCES OF  
THE CITY, PROVIDING THAT THE  
ZONING MAP SHALL REFLECT  
THE COMMERCIAL DISTRICT FOR  
THE PROPERTY; PROVIDING A  
PENALTY; PROVIDING  
REPEALING, SEVERABILITY, AND  
SAVINGS CLAUSES; PROVIDING  
FOR PUBLICATION AND AN  
EFFECTIVE DATE.

**SECTION 7. Penalty.** Any person,  
firm, entity or corporation who  
violates any provision of this  
Ordinance, as they exist or may  
be amended, shall be deemed  
guilty of a misdemeanor, and  
upon conviction therefore, shall  
be fined in a sum not exceeding  
Two Thousand and No/100  
Dollars (\$2,000.00). Each  
continuing day's violation shall  
constitute a separate offense.  
The penalty provisions imposed  
under this Ordinance shall not  
preclude the City from filing suit  
to enjoin the violation. The City  
retains all legal rights and  
remedies available to it  
pursuant to local, state, and  
federal law.

**SECTION 8. Publication and  
Effective Date.** This Ordinance  
shall become effective  
immediately upon its adoption  
and its publication as required  
by law.

The City of Denison, Texas  
Christine Wallentine, City Clerk

The City of Denison, Texas  
Christine Wallentine, City Clerk

**MOVING TO A smaller home?**

Set those extra items you no  
longer use with a CLASSIFIED  
AD. Call 803.893.8181 or  
903.465.7171 to place your ad.

## Legal Notices

**PUBLIC NOTICE**  
ORDINANCE NO. 5182

**AN ORDINANCE OF THE CITY  
COUNCIL OF THE CITY OF  
DENISON, TEXAS, REPEALING  
SECTION 3 OF ORDINANCE NO.  
5163 AND AMENDING SECTION 30-  
4 (CERTIFICATE OF  
APPROPRIATENESS), SECTION 30-  
6 (APPEALS), SECTION 30-  
7 (APPEALS), SECTION 30-  
8 (HISTORIC PRESERVATION OF  
THE DENISON CODE OF  
ORDINANCES TO REQUIRE THE  
HISTORIC PRESERVATION BOARD  
TO APPROVE A CERTIFICATE OF  
APPROPRIATENESS TO CHANGE  
THE PAINT COLOR OF BUILDINGS  
IN HISTORIC DISTRICTS;  
PROVIDING FOR PAINT COLOR  
STANDARDS; PROVIDING FOR  
APPEALS; PROVIDING THAT  
SECTIONS OF ORDINANCE NO.  
5163 NOT AMENDED OR  
REPEALED STILL IN EFFECT;  
PROVIDING FOR SAVINGS,  
REPEALING AND SEVERABILITY  
CLAUSES; PROVIDING A PENALTY  
CLAUSE; FINDING AND  
DETERMINING THE MEETING AT  
WHICH THIS ORDINANCE IS  
ADOPTED TO BE OPEN TO THE  
PUBLIC AS REQUIRED BY LAW; PROVIDING  
FOR PUBLICATION AND AN  
EFFECTIVE DATE.**

**SECTION 10. Penalty.** Any  
person, firm, entity or  
corporation who violates any  
provision of this Ordinance shall  
be deemed guilty of a  
misdemeanor, and upon  
conviction, therefore, shall be a  
fine in a sum not exceeding  
hundred dollars (\$100.00). Each  
continuing day's violation shall  
constitute a separate offense.  
This provision shall not prevent  
an action on behalf of the city to  
enjoin and/or prevent any  
violation of the ordinance or  
for mandatory injunction to  
remove any previous violation  
of the ordinance and/or any  
rights and remedies available to  
it pursuant to local, state, and  
federal law.

**SECTION 12. Publication and  
Effective Date.** This Ordinance  
shall become effective upon its  
passage and publication as  
required by law.

The City of Denison, Texas  
Christine Wallentine, City Clerk

**PUBLIC NOTICE**  
ORDINANCE NO. 5181

**AN ORDINANCE OF THE CITY  
COUNCIL OF THE CITY OF  
DENISON, TEXAS, AMENDING  
CHAPTER 28 OF THE CODE OF  
ORDINANCES AT ARTICLE  
"ZONING" DISTRICTS BY  
REPEALING SECTION 28-2A "B-  
RESIDENTIAL INFILL OVERLAY"  
AND AMENDING SECTION 28-2B  
"SEVERABILITY, REPEALING AND  
SAVINGS CLAUSES; PROVIDING  
FOR PUBLICATION AND AN  
EFFECTIVE DATE; FINDING AND  
DETERMINING THE MEETING AT  
WHICH THIS ORDINANCE IS  
ADOPTED TO BE OPEN TO THE  
PUBLIC AS REQUIRED BY LAW."**

**Section 6. Penalty.** Any person,  
firm, entity or corporation who  
violates any provision of this  
Ordinance, as they exist or may  
be amended, shall be deemed  
guilty of a misdemeanor, and  
upon conviction, therefore, shall be  
a fine in a sum not exceeding  
Two Thousand and No/100  
Dollars (\$2,000.00). Each  
continuing day's violation shall  
constitute a separate offense.  
The penalty provisions imposed  
under this Ordinance shall not  
preclude Denison from filing suit  
to enjoin the violation. Denison  
retains all legal rights and  
remedies available to it  
pursuant to local, state and  
federal law.

**Section 7. Publication and  
Effective Date.** This Ordinance  
shall become effective  
immediately upon its adoption  
and its publication as required  
by law.

The City of Denison, Texas  
Christine Wallentine, City Clerk

The City of Denison, Texas  
Christine Wallentine, City Clerk

**CITY OF DENISON, TEXAS  
REQUEST FOR PROPOSALS (RFP)**

**Mobile Restroom Trailer**

## Legal Notices

**NOTICE OF SHERIFF'S SALE  
(REAL ESTATE)**

BY VIRTUE OF AN ORDER OF SALE  
issued out of the 37th District  
Court of Grayson County, Texas,  
in a certain cause numbered T-  
20-3107. On the 9th day of  
November A.D. 2021, styled:  
Ovation Services, LLC vs. Daryl  
Gross, to me, as Deputy Sheriff  
directed and delivered, I have  
levied upon this 2nd day of  
December A.D. 2021 and will  
between the hours of 10:00 A.M.  
and 4:00 P.M. at approximately  
10am on the first Tuesday in  
January A.D. 2022, it being the  
4th of said month, at 100 W.  
Houston in the Assembly Room  
(Annex 2) on the Second Floor  
Sherman, TX 75090 of said  
Grayson County, proceed to sell  
at public auction to the highest  
bidder, for cash in hand, all  
right title and interest, if any,  
which the defendant had on the  
2nd day of December A.D. 2021  
or at any time thereafter, of and  
in the following described  
property:

ALL THAT CERTAIN TRACT OF  
TEN (10) ACRE OF LAND OUT OF  
ROBERT MCCARLEY SURVEY  
BOUGHT BY MARY BEATTY FROM  
W. T. CUTLER, BEING MORE FULLY  
DESCRIBED IN DEED BARBARA J.  
DONIHOO TO DARYL GROSS, ON  
THE 10TH OF DECEMBER 1999,  
AND RECORDED IN VOLUME  
02868, PAGE 00349, IN THE  
OFFICIAL PUBLIC RECORDS OF  
GRAYSON COUNTY, TEXAS.

Said property is levied on as the  
property of Daryl Gross and will  
be sold to satisfy the judgment for  
\$30,116.25 Dollars.

GIVEN UNDER MY HAND ON this  
2nd day of December A.D. 2021.

Tom Watt-Sheriff  
Grayson County Texas  
By /s/ Sergeant Donald Bowling  
Sergeant Donald Bowling

**NO. 2021-510P**

**ESTATE OF MARY LOUISE  
RICKETTS, DECEASED**

**IN THE COUNTY COURT OF  
GRAYSON COUNTY, TEXAS**

**NOTICE TO ALL PERSONS HAVING  
CLAIMS AGAINST THE ESTATE OF  
MARY LOUISE RICKETTS,  
DECEASED**

Notice is hereby given that  
original Letters Testamentary  
for the Estate of Mary Louise  
Ricketts, were issued on  
December 15, 2021, in Cause No.  
2021-510P, in the County Court  
of Grayson County, Texas, to  
Bank of Texas, N.A. dba  
The address of the Attorney  
representing the Independent  
Executor is:

James E. Walker  
Attorney at Law  
Graber & Walker, LLP  
200 North Travis Street, Ste. 212  
Sherman, Texas 75090

All persons having claims  
against the Estate, who are  
currently being administered  
are required to present them  
to the Estate in the manner  
prescribed by law.  
DATED this 15th day of  
December, 2021.

James E. Walker  
Graber & Walker, LLP  
200 North Travis Street, Ste. 212  
Sherman, Texas 75090  
(903) 851-2128 Telephone  
(903) 891-1034 Facsimile  
[jimewalker@graberlaw.org](mailto:jimewalker@graberlaw.org)

By: James E. Walker /s/  
James E. Walker  
Texas State Bar No. 20760500

Attorney for the Personal  
Representative of the Estate of  
Mary Louise Ricketts, Deceased

**NO. 2021-546P**

**ESTATE OF HARVEY T.  
MCCROSKEY, JR., DECEASED**

**IN THE COUNTY COURT OF  
GRAYSON COUNTY, TEXAS**

**NOTICE TO ALL PERSONS HAVING  
CLAIMS AGAINST THE ESTATE OF  
HARVEY T. MCCROSKEY, JR.,  
DECEASED**

Notice is hereby given that  
original Letters Testamentary  
for the Estate of Harvey T.  
McCroskey, Jr., were issued on  
December 14, 2021, in Cause No.  
2021-546P, pending in the County  
Court of Grayson County, Texas,  
to James S. McCroskey.  
The address of the Attorney  
representing the Independent  
Executor is:

Samuel W. Graber  
Attorney at Law  
Graber & Walker, LLP  
200 North Travis Street, Ste. 212  
Sherman, Texas 75090

All persons having claims  
against this Estate which are  
currently being administered  
are required to present them  
to the Estate in the manner  
prescribed by law.  
DATED this 15th day of  
December, 2021.

SAMUEL W. GRABER

## Legal Notice

property of  
Cotnam, Et Al  
to satisfy a  
\$201,30.85 Dollar

GIVEN UNDER  
2nd day of Dec

Tom Watt-Sheriff  
Grayson County  
By /s/ Sergeant  
Sergeant Dona

**LEGAL NOTI  
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Decem

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(1) 603 S. Tr  
Texas 75090  
SAMUEL A-G  
Abe Y. Young, S

(2) 423 S. Char  
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(3) 1424 W. S  
150 S. 4th St  
Defendant:

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Hearing, I  
neighborhood  
superintendent  
Ext. 5988,  
chm@cityof

Neighborhood  
Department  
City of Sherma  
100 N. Rusk  
Sherman, Texas

**PUBLI**

**AN ORDINANCE**

**COUNCIL OF**

**DENISON, TEX**

**TO REPEAL**

**CITY'S 2018**

**PLAN TO DEPH**

**AS THE**

**TOLLWAY AT**

**AND RELATED**

**PROVISIONS**

**REPEALING A**

**CLAUSES; I**

**PUBLICATION**

**DATE.**

**SECTION 5.**

This Ordinance

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Ordinance No

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**LEGA**

**Advertisement**

**and Transp**

## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

### NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN AIR PERMIT

PROPOSED AIR QUALITY PERMIT NUMBER 167047, GHGSDTX212, AND PSDTX1602

APPLICATION Ben Dorchester LLC, has applied to the Texas Commission on Environmental Quality (TCEQ) for:  
Issuance of Permit 167047  
Issuance of Prevention of Significant Deterioration (PSD) Permit PSDTX1602  
Issuance of Greenhouse Gas (GHG) Prevention of Significant Deterioration (PSD) Permit GHGSDTX212.

This application would authorize construction of the Dorchester Plant located from the intersection of Highway 288 and Highway 802 east of Dorchester, head west on Highway 802 for approximately 0.8 miles. The site will be located directly north of Highway 802 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75068. This application is being processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application, <http://www.tceq.texas.gov/locationspublicinfo/locations.htm#75-3381174&lang=en>. The facility will emit the following contaminants: carbon monoxide, inorganic air pollutants, sulfuric acid, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, lead and sulfur dioxide. The proposed facility will also emit greenhouse gases.

For more information on the TCEQ on November 8, 2021. The application will be available for viewing and copying at the TCEQ central office, 1400 North Central Expressway, Suite 1000, Dallas, Texas 75201, and the House Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas beginning the first day of publication of this notice. The facility's compliance plan, if any exists, is available for public review in the Dallas/Fort

APP-1243







## LOCAL

## Man gets 80 years for sexually abusing teen boys

Sherman Herald Democrat  
USA TODAY NETWORK

Joe Richard Cortez, 55, of Denison, was sentenced to 80 years in prison this week after being found guilty of one count of continuous sexual abuse of a child, three counts of aggravated sexual assault of a child, and nine counts of sexual assault of a child following a week-long jury trial in the 15th District Court.

Judge Jim Fallon conducted the sentencing phase of the trial. Cortez must serve the entire sentence, day for day, without any chance of parole due to the Continuous conviction. Cortez also must be registered as a sex offender.

In an email after the sentencing, Grayson County District Attorney Brett Smith said police identified seven teens Cortez had abused and five of them testified at trial. Smith said Cortez's behavior is believed to have gone on for 20 years off and on.

In a news release about the trial, Smith's office said the case began in late 2019 when investigators with the Grayson County Sheriff's Office began receiving information about young boys being given drugs and alcohol by Joe Cortez.

"Cortez would then sexually abuse the boys. Investigators began the process of locating and interviewing several victims. One by one the victims came forward and started to reveal a pattern. The victims would hang out with Cortez at his home in Denison and be provided drugs. Eventually, Cortez would sexually abuse the boys, typically starting when they were 12 or 13 years of age. Sometimes the abuse would continue for years. Investigators eventually obtained a search warrant for the residence belonging to the defendant. There they found some drugs and other evidence consistent with information provided by the victims. A search of a phone belonging to the defendant revealed search histories about "drugging," "teens," and abusive sexual content," the statement said.

In the statement, Assistant District Attorney Michael Sissney said, "This defendant preyed on vulnerable young boys. He used drugs, alcohol, and fear as his tools of manipulation. He probably never thought he would face these kids again, but we brought each and every one of them into the courtroom to tell their story."

Smith said his office routinely provides victims services, with assistance from the Texas Crime Victim's Compensation Fund, which can cover counseling, transportation, funeral costs, moving, reimbursement for uninsured medical expenses, etc. which means the youngsters who were victimized by Cortez were offered counseling to help them move forward with their lives.

Sissney was assisted in the case by ADA Don Hoover and Investigator Mike Ditto.

Cortez was represented in the case by Sherman attorney Rick Dunn.



In November 2020, the Salvation Army was making plans for its 2020 toy run. HERALD DEMOCRAT

## Angel Tree distribution brings hope for the holiday

Michael Hutchins Sherman Herald Democrat  
USA TODAY NETWORK

The Salvation Army of Grayson County and community volunteers worked to spread holiday cheer to families in need Thursday as the charity held its annual angel tree gift distribution. Each year, the charity helps ensure that less fortunate children across the region have a gift under the Christmas tree through its angel tree program, which allows individuals, families and businesses to "adopt" a child in need and purchase gifts for them.

Cars lined up early on the street surrounding the Salvation Army's building on Armstrong in Denison Thursday morning in order to collect donations. As each car snaked its way through the parking lot, volunteers manning shopping carts met them and loaded up the food, toys and gifts that were being distributed.

"I think it is an opportunity to bring back hope who might not get it otherwise," Salvation Army Maj. Tex Ellis said. "It helps bring back the magic of Christmas to families who otherwise might not be able to afford it, and I think that is important given the day and times we live in."

Salvation Army Major Tex Ellis said the charity was following the same procedures it used in 2020 during the middle of the COVID-19 pandemic and did not allow families to enter the distribution center itself. However, Ellis said the system proved more efficient and quicker which led organizers to continue it into 2021.

Inside the former retail space, shelves full of red plastic bags filled the back half of the storefront. A white piece of paper with the name of a family on each bag helped volunteers play Santa and ensure that each package would get to its destination in time for the Christmas holiday.

The Angel Tree campaign itself starts near the beginning of October as the Salvation Army opens up

applications for families. This year, the of Grayson County is assisting about 7

Each year, trees decorated with paper representing a child in need, were put on cars and other businesses. Each angel that the child wanted and needed for the son. Visitors were able to "adopt" and chase some of these gifts for them.

Many area businesses also have to where the employer and its employees gels for the season.

This year, fidget toys, including ones that glow, bubble wrap, were a hot and often. Meanwhile, some of the perennial favorites like Barbie and dolls, were in demand for the children.

These past two years have been difficult for many families. The pandemic and other impacts have increased the need for assistance and led some families to be in need for the first time.

"It has just been different," she said. "Some families who may not have needed assistance before are now having to get out and ask for help. Many are not used to it."

In addition to the gifts, the Salvation Army also distributed food bags so that each family would have a Christmas meal on the holiday. Tyson donated 2,700 lbs of Cornish hen.

For the Salvation Army, Christmas season begins in June. Planning for the holiday season begins in the summer months as officials run the numbers to determine what the needs for the upcoming year will look like.

"Christmas season for the Salvation Army starts in June," Tex Ellis said. "That is when the planning gets started and all of the agreements are made and we start looking at numbers to see how many toys or food to make up the

### TO ALL INTERESTED PERSONS AND PARTIES:

Bm Dorchester LLC, has applied to the Texas Commission on Environmental Quality (TCEQ) for:

Issuance of Permit 167047

Issuance of Prevention of Significant Deterioration (PSD) Permit PSDTX1602

Issuance of Greenhouse Gas (GHG) Prevention of Significant Deterioration (PSD) Permit GHGPSDTX212

This application would authorize construction of the Dorchester Plant located north of the intersection of Highway 289 and Highway 902 east of Dorchester, head east on Highway 902 for approximately 0.80 miles the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application is being processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. Additional information concerning this application is contained in the public notice section of this newspaper.

## Model train set entertains, educates

SID

With whistle piercing the air and smoke billowing from its smokestack, a 1952 post-war Lionel locomotor chugs down the track, and then disaster strikes. A car derails in seconds and tilts precariously.

A small laugh rings out, and a hand picks up

the car. Donald Jung aligns the model car to the track and reconnects it to the rest of the train, and the audience of children at Perrin Early Childhood Center watch with growing intensity.

"There wasn't hardly one child who was looking around," Donald said. "They were all watching and looking at this, looking at that."

Handed down from principal Nancy Jung's



Perrin ECC students scan the train set



**AR-27**

**TCEQ Health Effects Review and Supporting Documentation**

**From:** Joel Stanford  
**Sent:** Wednesday, January 31, 2024 1:40 PM  
**To:** Joel Stanford  
**Subject:** FW: Health effects review of air emissions from BM Dorchester LLC, (Tox Control No. 7807).  
**Attachments:** 7807 BM Dorchester LLC 167047 (Initial 335160) Memo.pdf

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**From:** Stanley Aniagu <[Stanley.Aniagu@tceq.texas.gov](mailto:Stanley.Aniagu@tceq.texas.gov)>  
**Sent:** Wednesday, January 31, 2024 1:31 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** Allison Jenkins <[allison.jenkins@tceq.texas.gov](mailto:allison.jenkins@tceq.texas.gov)>; Angela Curry <[Angela.Curry@tceq.texas.gov](mailto:Angela.Curry@tceq.texas.gov)>; Anthony Tran <[Anthony.Tran@tceq.texas.gov](mailto:Anthony.Tran@tceq.texas.gov)>; Caroline Emery <[Caroline.Emery@tceq.texas.gov](mailto:Caroline.Emery@tceq.texas.gov)>; Darrell McCant <[Darrell.McCant@tceq.texas.gov](mailto:Darrell.McCant@tceq.texas.gov)>; Joseph Haney <[Joseph.Haney@tceq.texas.gov](mailto:Joseph.Haney@tceq.texas.gov)>; Lisa Westbrook <[Lisa.Westbrook@tceq.texas.gov](mailto:Lisa.Westbrook@tceq.texas.gov)>; Mike Aplin <[Mike.Aplin@tceq.texas.gov](mailto:Mike.Aplin@tceq.texas.gov)>; Mingyuan Wei <[Michael.Wei@Tceq.Texas.Gov](mailto:Michael.Wei@Tceq.Texas.Gov)>; Nnamdi Nnoli <[Nnamdi.Nnoli@tceq.texas.gov](mailto:Nnamdi.Nnoli@tceq.texas.gov)>; Sabine Lange <[Sabine.Lange@tceq.texas.gov](mailto:Sabine.Lange@tceq.texas.gov)>; Stony Lo <[Stony.Lo@tceq.texas.gov](mailto:Stony.Lo@tceq.texas.gov)>; Tracie Phillips <[tracie.phillips@tceq.texas.gov](mailto:tracie.phillips@tceq.texas.gov)>; Tony Estrada <[Tony.Estrada@tceq.texas.gov](mailto:Tony.Estrada@tceq.texas.gov)>  
**Subject:** Health effects review of air emissions from Black Mountain Dorchester LLC, Dorchester, Grayson County, TX (Permit No. 167047 and Tox Control No. 7807).

Good afternoon, Joel,

As requested, we have completed a health effects review of air emissions from **Black Mountain Dorchester LLC, Dorchester**, Grayson County, TX (Permit No. 167047 and Tox Control No. 7807).

If you have any further questions, please do not hesitate to contact me at your earliest convenience.

Take care and best regards,



Stanley O. Aniagu, MSc., Ph.D., RPh., DABT  
Senior Toxicologist, Toxicology, Risk Assessment and Research Division  
**Texas Commission on Environmental Quality**  
12015 Park 35 Cir, Austin, TX 78753  
Office: (512)239-0558  
Fax: (512)239-1794  
E-Mail: [stanley.aniagu@tceq.texas.gov](mailto:stanley.aniagu@tceq.texas.gov)  
<https://www.tceq.texas.gov/toxicology>

# **Texas Commission on Environmental Quality**

## **INTEROFFICE MEMORANDUM**

**To:** Joel Stanford  
Air Permits Division  
Office of Air

Date: January 30, 2024

**From:** Stanley Aniagu, MSc., Ph.D., DABT  
Toxicology, Risk Assessment, and Research Division  
Office of the Executive Director



**Subject:** Health effects review of air emissions from Black Mountain Dorchester LLC, Dorchester, Grayson County, TX (Permit No. 167047 and Tox Control No. 7807).

As requested, the Toxicology, Risk Assessment, and Research Division conducted a health effects review of air emissions from Black Mountain Dorchester, LLC. The company has requested the authorization of a greenfield cement kiln to be located in Dorchester, TX. Portland cement is the primary focus of this review because it is the main product from the kiln operations. Hence, for the purposes of health effects evaluation and modeling, 100% of the emissions from each source downstream of the kiln was assumed to be Portland cement.

The goal of the following health effects review is to evaluate the modeled emissions predicted to occur at this facility, and to ascertain whether these emissions would be of concern to human health or welfare (odor and vegetation). The Black Mountain facility is located in a mixed-use area consisting of strips of agricultural, undeveloped land, and residential buildings, primarily to the west and south of the property line. A church and some residences are also located very close to the southern property line, and the town of Dorchester is near the southern property line as well. On the eastern property line is an aerodrome, while a quarry is located on the northern part of the property. All facilities in this new source review (NSR) permit will be located at the southern part of the property (see attached maps).

Site-wide refined modeling (AERMOD, Version 22112) was used to predict the impacts of on-site operations at this facility. The maximum ground level receptor concentration ( $GLC_{max}$ ) of Portland cement as well as the maximally affected non-industrial ground level receptor concentration ( $GLC_{ni}$ ) are predicted to occur directly on the south property line, on non-industrial, undeveloped, rural land. Therefore, the  $GLC_{max}$  was conservatively reviewed as the  $GLC_{ni}$  i.e.,  $GLC_{max} = GLC_{ni} = GLC_{max/ni}$ . The predicted ground level concentrations of Portland cement were compared to its short-term and annual ESLs.

Modeling predicts that the short-term  $GLC_{max/ni}$  for routine emissions of Portland cement will exceed its short-term ESL of  $50 \mu g/m^3$  by 1.1 times, with a predicted corresponding frequency of one-times ESL exceedance at the  $GLC_{max/ni}$  of 1 hour per year. However, the modeled long-term  $GLC_{max/ni}$  for Portland cement was far below its annual ESL of  $5 \mu g/m^3$ . Therefore, considering the magnitude and frequencies of the short-term ESL exceedances at the  $GLC_{max/ni}$ , the conservative nature of the modeling

Joel Stanford  
Page 2  
January 30, 2024

assumptions using worst-case scenarios and meteorological conditions, that public exposure is unlikely at this site, and the fact that the long-term ESL was never exceeded at any receptors, the predicted short- and long-term emissions of Portland cement are allowable.

In conclusion, based on the modeled representations presented to us, we do not anticipate any short- or long-term adverse health effects to occur among the general public as a result of exposure to the proposed emissions from this facility.

If you have any further questions, please do not hesitate to contact me at the following phone number: 512-239-0558 or e-mail address: [stanley.aniagu@tceq.texas.gov](mailto:stanley.aniagu@tceq.texas.gov).

## Request for Comments – TCEQ Toxicology Division

Date Submitted	January 26, 2024	RUSH?	Expedite
Toxicology Control No.	7807/Aniagu		
Company Name	BM Dorchester LLC		
Physical Location	from the intersection of HWY 289 and HWY 902 E of Dorchester head E on HWY 902 for approx 0.80 mi the site will be located directly N of HWY 902 after the intersection of Taylor Rd		
City / County / Region	Dorchester	Grayson	Dfw Metroplex-R4
Facility Type	Portland Cement Plant		
Map Location	<a href="#">Location Mapper (texas.gov)</a>		
Customer No. (CN)	CN605952373	Permit No.	167047
Regulated Entity No. (RN)	RN111368437	Project Number	335160
Modeling Software Used	Refined	Permit Review Type	Initial
Air Pollutant Watch List Area	No	Permit Reviewer	Joel Stanford
Watch List Pollutants Involved	N/A		

### Project Overview

The Applicant has requested authorization of a greenfield cement kiln to be located near Dorchester, Grayson County, TX.

### Emission Calculation Approach

Portland cement is the focus of this RFC. Accordingly, all discussion will be focused on those sources from the kiln and downstream, as Portland cement is the product produced by the kiln. 100% of the emissions from each source downstream of the kiln are considered to be Portland cement for purposes of the health effects review and modeling.

Baghouse sources other than the cement kiln are calculated using outlet grain loading. Outlet grain loading gives conservative results because it assumes full loading of the baghouse for 8,760 hours per year. This is considered the most conservative PM emission calculation methodology for baghouse controlled sources. 100% of the emissions from each source downstream of the kiln were considered to be Portland cement for purposes of the health effects review and modeling.

The kiln emissions are based on NSPS limitations in terms of emissions pounds per ton of clinker produced. These emissions are not inherently conservative, but instead function as a limitation and operational constraint. Emissions will be monitored with a CEMS on this source and validated by stack testing to ensure compliance.

### Emission Controls

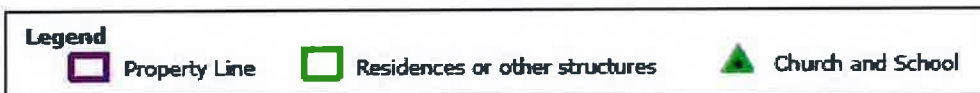
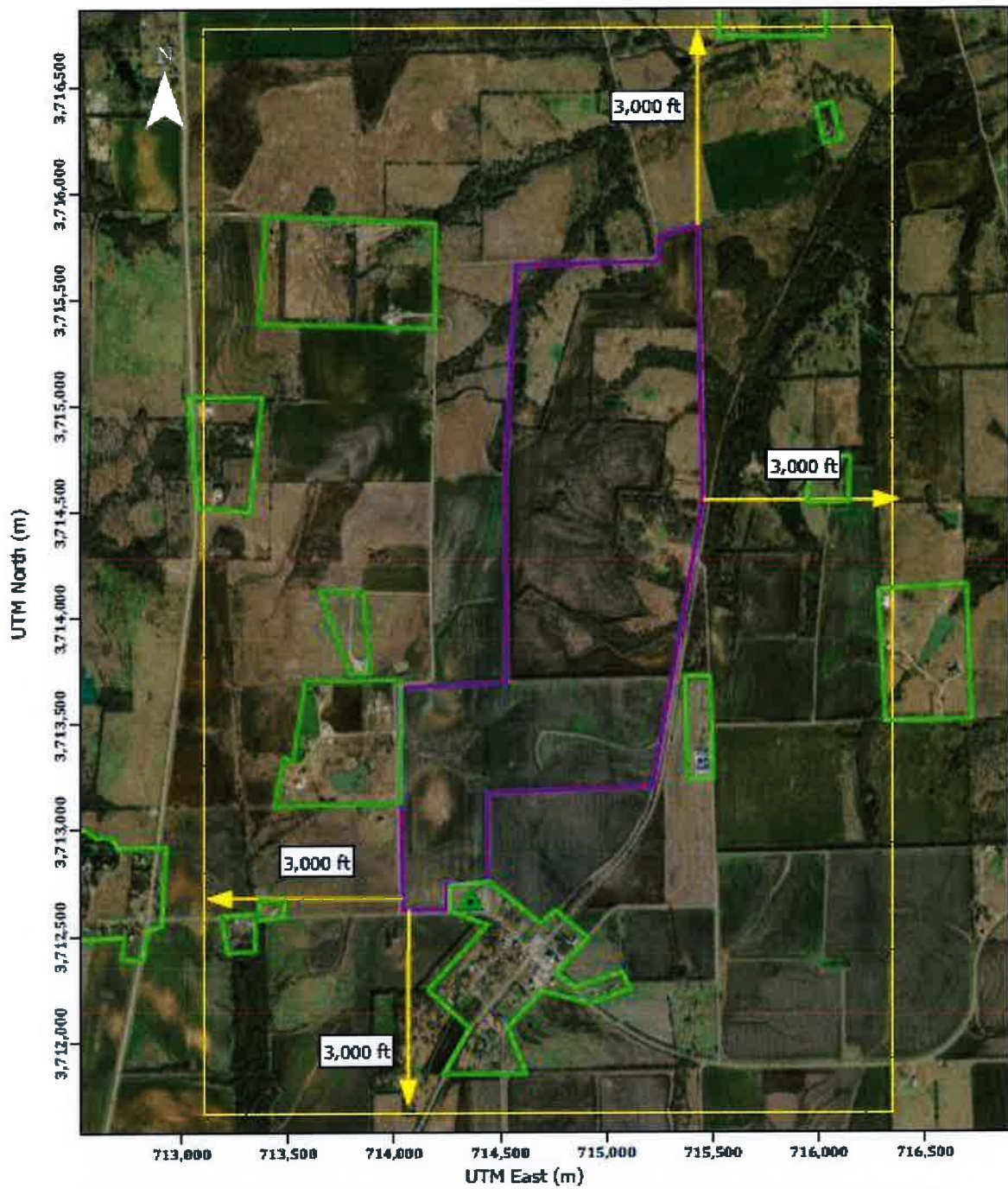
All sources which handle Portland cement are controlled by baghouses. All baghouses are required to have efficiencies of at least 0.005 gr/dscf, which represents BACT. The kiln emission limitations are not based directly on baghouse efficiency and outlet grain loading, but are instead based on a relevant



NSPS limitation.

**Surrounding Land Use**

The surrounding land is a mixture of strips of agricultural undeveloped land, residences – primarily to the west and south of the property line – with some directly bordering and nearby the property line (outlined in purple, below), a church and some residences are located very close to the southern property line, the town of Dorchester is near the southern property line, and an aerodrome is located on the eastern property line. All facilities in the NSR permit will be located to the southern part of the property (see the MaxMap, below), with a quarry located on the northern part of the property. Many of the facilities will be located about 0.3 - 0.5 miles from the church and residence directly to the south.



January 2022

### **Sources Included in the Impacts Analysis**

Site-wide modeling was conducted given that this is an initial permit.

### **Modeling Approach and Worst-Case Scenarios**

AERMOD (Version 22112) was used in a refined screening mode.

Sources of Portland cement were modeled directly with all emissions assumed to be such.

Sources emitting Portland cement are classified as point sources due to them being baghouses.

The Applicant did not identify a specific GLC<sub>ni</sub> for modeling purposes. Instead, they assumed that all receptors would be non-industrial based on the project site location. From that perspective, the GLC<sub>max</sub> = GLC<sub>ni</sub>. They represented 1 hour of predicted exceedance at this location (for Portland cement).

### **Facility Operating Limitations and Scenarios**

The Special Conditions include a limitation on the kiln production rate, which effectively limits facilities upstream and downstream of the kiln. The kiln utilizes CPMS and CEMs for compliance with emission rates and opacity limitations, and all baghouses have daily pressure drop monitoring in addition to weekly to monthly visible emissions checks.

### **Complaints**

This is an initial permit and is therefore unconstructed. The local Regional Office has indicated a high nuisance potential in a site review.

## **Location of Maximum Impacts**

Constituents and CAS No.	Receptors	Distance from Property line (ft)	Cardinal Direction	Receptor Type
<b>CAS</b> Constituent	GLC <sub>MAX</sub>	0	South	Property line, undeveloped land with proximity to sensitive receptors.
	GLC <sub>ni</sub>	0	South	The GLC <sub>MAX</sub> is assumed to be the GLC GLC <sub>ni</sub> .

Note that the below map shows some GLC<sub>MAX</sub> locations to the north, however please note that this map is for all pollutants. The Portland cement GLC<sub>MAX</sub> is reported in the audit to be located to the at the south property line.





**BM Dorchester LLC  
NSR Project #335160**

0 325 650 1,300 1,950 2,600  
Meters

**Legend**

- Independent Site
- SPLD
- AIR\_MODEL\_AREAS
- AIR\_MODEL\_BUILDINGS

- AIR\_MODEL\_POINTS
- AIR\_MODEL\_VOLUMES
- HE\_GLCmax
- RECEPTORS\_PSD\_CLASS2SIL\_MINOR



This map was generated by the Air Permits Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Air Permits Division at (512) 239-1250.

## IMPACTS SUMMARY - REFINED

Table 1. Portland Cement Exceedance Scenarios Modeled.

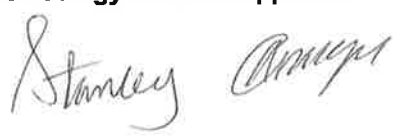
<b>CAS No.</b>	65997-15-1
<b>Constituent</b>	Portland cement
<b>Routine or MSS?</b>	Routine
<b>GLCmax Location</b>	Property line
<b>Exceedance Scenarios</b>	Routine, 1 hour of exceedance per year.
<b>Short Term</b>	
<b>ESL</b>	50
<b>GLCMAX</b>	53
<b>1*λMAX</b>	1
<b>2*λMAX</b>	0
<b>4*λMAX</b>	0
<b>10*λMAX</b>	0
<b>GLCni</b>	53*
<b>Ani</b>	1
<b>Annual</b>	
<b>ESL</b>	5
<b>GLCMAX</b>	1
<b>GLCni</b>	1

\*The Applicant did not identify a specific GLCni for modeling purposes. Instead, they assumed that all receptors would be non-industrial based on the project site location. From that perspective, the GLCmax = GLCni. They represented 1 hour of predicted exceedance at this location (for Portland cement).

- The term *nonindustrial* or the letters *ni* are used to identify any receptor on nonindustrial property or land not zoned as industrial. A receptor on the property line is considered to be the same type of receptor as the nearest receptor off property. For example, if the land adjacent to an industrial property line is unzoned, then a receptor on the property line would be identified as nonindustrial.
- **ESL** - effects screening level in  $\mu\text{g}/\text{m}^3$ .
- **GLC<sub>MAX</sub>** - Maximum off-property ground-level concentration in  $\mu\text{g}/\text{m}^3$ .



- **2\* $\lambda_{MAX}$**  - (same value as 2xGLC<sub>MAX</sub> as stated by Air Dispersion Modeling Team) number of hours per year that the GLC<sub>MAX</sub> exceeds two times the ESL at an industrial receptor, other 1\* $\lambda_{MAX}$  should apply if GLC<sub>MAX</sub> is at a non-industrial receptor.
- **4\* $\lambda_{MAX}$**  - (same value as 4xGLC<sub>MAX</sub> as stated by Air Dispersion Modeling Team) number of hours per year that the GLC<sub>MAX</sub> exceeds four times the ESL at an industrial receptor, other 1\* $\lambda_{MAX}$  should apply if GLC<sub>MAX</sub> is at a non-industrial receptor.
- **10\* $\lambda_{MAX}$**  - (same value as 10xGLC<sub>MAX</sub> as stated by Air Dispersion Modeling Team) number of hours per year that the GLC<sub>MAX</sub> exceeds ten times the ESL at an industrial receptor, other 1\* $\lambda_{MAX}$  should apply if GLC<sub>MAX</sub> is at a non-industrial receptor.
- **GLC<sub>ni</sub>** - ground-level concentration in  $\mu\text{g}/\text{m}^3$  at maximally affected nonindustrial receptor. Supply this information only if the GLC<sub>max</sub> is greater than the ESL and is at an industrial receptor.
- **$\lambda_{ni}$**  - (same value as 1xGLC<sub>ni</sub> as stated by Air Dispersion Modeling Team) number of times the ESL is exceeded (hours/year) at GLC<sub>ni</sub>.

<b>Toxicology Division Comments:</b>	<b>Toxicology Division Approval</b>  January 30, 2024
--------------------------------------	--

**AR-28**

**Supporting Documentation for Modifications to Draft Permit**

**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Thursday, February 8, 2024 8:59 AM  
**To:** Joel Stanford  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

BM Dorchester agrees with the update.


---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Wednesday, February 7, 2024 11:24 AM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

I've converted the provided information into a table

16. The following material handling operations shall utilize the specified controls:

**Table 3: Material Handling Operation Controls**

 <b>EPN</b>	<b>Source Name</b>	<b>Controls</b>
TRK_MH	Additive - Material Handling Truck Unloading	Three-sided walls and fogging nozzles.
RR_MH	Additive - Material Handling Rail Unloading	Two-sided walls and fogging nozzles.
LSCRSBBD_MH	Limestone – Material Handling LS Crusher Building	Three-sided walls and fogging nozzles.

Special Conditions  
Permit Numbers 167047, PSDTX1602, and GHGPSDTX212  
Page 6

Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.

While doing this I also noticed that the NH3 fugitive language for 28 AVO was incorrect. These programs are based on rigid requirements to get the associated credit. The language – which I pulled from a different permit rather than the library (apparently) had 24 hours rather than every 4 hours. The time to fix issues was also incorrectly set at 24 hours. Ammonia handling systems for SCRs can actually be set at “once per shift” based on historical permitting practices, despite our guidance saying 4 hours for the use of 28AVO credits. The 4 hours is really for *everything else*. The once per shift combined with 1 hour to address issues represents BACT for ammonia components in SCR service and allows for the full credits as used in the application.

I’ve corrected this in the attached.

## Ammonia Handling

### Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO

27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made **once per shift**.
  - B. Immediately, but no later than **1 hour** upon detection of a leak, plant personnel shall take at least one of the following actions:

One final issue! The new PM2.5 standard was published (more information is available [here](#) and [here](#)). You'll want to look at how this will be met for this project, as the effective date looks to be 60 days from following publication today. I was ready to issue 2<sup>nd</sup> notice by tomorrow, but this complicates issues. The clearest path I can see is this:

- Publish based on the permit now, announcing the meeting and with the current standard reflected in the permit documents. There is a 60-day window before actual implementation, so we could be working towards updating the modeling and controls if necessary (baghouse efficiencies could be an easy path to this?) to get below the new PM2.5 standard (9  $\mu\text{g}/\text{m}^3$  annual arithmetic mean, averaged over three years). Once completed this could require re-publication if the draft permit was updated as a result. If it was just an update to the audit? Unlikely based on previous legal guidance as substantial changes to the permit itself is what counts on re-triggering notice, rather than something like an additional line on a modeling audit.

We can definitely have a call about all this, though of course I'm waiting some broader policy implementation from management to have details clarified – which should be soon.

Thanks,

**Joel Stanford**

Team Leader - Expedited Team  
Air Permits Division  
Texas Commission on Environmental Quality  
Mail Code: MC-163, PO Box 13087  
Austin, Texas 78711-3087



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---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>

**Sent:** Tuesday, February 6, 2024 4:52 PM

**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>

**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs



More from Penta. I don't know if it's necessary to go activity by activity in the condition, but wanted to provide verbatim what the design engineers are telling us.

Mike,

Yes, it should be the same. Please see below:

- Limestone crusher building: three side walls and fogging nozzles.
- Additive unloading by truck: three side walls and fogging nozzles.
- Additive unloading by rail: two side walls and fogging nozzles.
- Bypass dust bin: dustless telescopic spouts.
- SO2 scrubbing waste silo: dustless telescopic spouts.
- Cement silos loadout: dustless telescopic spouts.

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Tuesday, February 6, 2024 3:35 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

Ok, thank you. The changes to CND 15 are accepted.

On CND 16 – I just based that on drawings included with the deficiency response. Are the controls exactly the same for the LS Crusher building dump as for the truck and rail loading?

---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Tuesday, February 6, 2024 3:22 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

I received this from Penta:

Condition 15 – Limestone Stockpiles 1 and 2, the Gypsum Stockpile, the High-Grade Limestone Stockpile, and the Sand Stockpile, and in general, all incoming raw materials shall be stored in an-fully enclosed buildings.

Condition 16 – We trust that our current approach of dust suppression with the walls with fogging nozzles or peripheral dusty air suction nozzles is sufficient to comply with the regulations. We believe curtains are unnecessary and won't last very long; additionally, they could be a potential hazard because we will be using quarry-size dump trucks.

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Monday, February 5, 2024 3:21 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

Hopefully the last finds.

- The stockpiles CND only referenced the limestone stockpiles. However, all stockpiles were represented as being in buildings in the initial application.
- The material handling CND relating to enclosure had omitted the crusher building operations. I added these in with the description from the original deficiency response.

### **Material Handling and Housekeeping**

15. Limestone Stockpiles 1 and 2, the Gypsum Stockpile, the High Grade Limestone Stockpile, and the Sand Stockpile shall be stored in an enclosed storage building.
16. Raw material truck and rail loading operations (EPNs RR\_MH and TRK\_MH) shall utilize partial enclosure defined as consisting of two or three-sided walls with fogging nozzles or peripheral dusty air suction nozzles on the perimeter of the hoppers for unloading by rail or truck. Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos. The Limestone - Material Handling LS Crusher Building (EPN LSCRSHBD\_MH) shall utilize a dust enclosure with rubber curtains above the hopper.
17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.

All good?

Thanks,

**Joel Stanford**

Team Leader - Expedited Team  
Air Permits Division  
Texas Commission on Environmental Quality  
Mail Code: MC-163, PO Box 13087  
Austin, Texas 78711-3087



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---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Monday, February 5, 2024 2:51 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

I'll be generally around today and tomorrow, so shoot them over as you identify them.

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Monday, February 5, 2024 2:50 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

Thanks! There may or may not be a couple more small (final?) issues heading your way shortly.

---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Monday, February 5, 2024 2:48 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

We concur. No issues.

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Monday, February 5, 2024 2:17 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

I'm sorry to keep finding these little issues! In the April 11, 2022 def letter response (Page 2), 0.002 gr/dscf was given as the efficiency of the kiln baghouse. However, when I drafted these it appears that I accidentally left the kiln at 0.005 like the rest of the bagfilters. I've corrected this in Table 2.

### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.002
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005

Acceptable?

Thanks!

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

Mail Code: MC-163, PO Box 13087

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---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>

**Sent:** Friday, February 2, 2024 3:42 PM

**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>

**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

Joel,

All looks good. No further comments.

Thanks,  
Mike

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Friday, February 2, 2024 3:11 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

Ok, I've re-baked in the 30-day into the records section (good point!) while keeping the bit pointing to the 1-hour records. I also added an allowance for sorbent traps for Hg, as I found an orphan comment that I never addressed directly in a previous CND version. I used the word validation – which mirrors a description in Performance Specification 12B.

- A. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;

You are correct on the 0.40 lb/ton of clinker vs. 0.60 in NSPS F. I fixed that as well.

---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Friday, February 2, 2024 2:34 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

This is fairly complicated, lots of moving parts in the permit, so no problem with catching last minute things. That said, for the 2<sup>nd</sup> item we think the 30 day rolling average language should remain in there because Black Mountain will need to demonstrate compliance with the permit limits on a 1-hour average basis and then with the NSPS/MACT standards on a 30 day rolling average basis. They could have to report a deviation for the hourly limit for the permit but not the NSPS/MACT standard because of the different averaging times.

And for the sake of alignment – we think that in Table 1 for SO<sub>2</sub> the 2<sup>nd</sup> column should state 0.4 lb/ton of clinker. That is the NSPS Subpart F (30 day rolling average limit), but check me on that.

SO <sub>2</sub>	0.60 lb/ton of clinker	0.640 lb/ton of clinker	0.40 lb/ton of clinker
-----------------	------------------------	-------------------------	------------------------

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Friday, February 2, 2024 1:11 PM



**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>

**Subject:** A Couple of Small Fixes to BM Dorchester CNDs

While working on the TRV I noticed a couple small issues that I've corrected.

1. On page 3, the H<sub>2</sub>SO<sub>4</sub> limits – Moved the 1.10 lb/ton of clinker figure over into the 1-hour column to match the application. I removed the 30-day limit since none was represented, and of course left the annual.
2. Page 14/CND 51 (Records) – Made the B reference CND 42C. Previously this had the 30 day averaging focused language.

Hopefully this should be the last changes! Sorry for the last minute nature of these.

Thanks,

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

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Austin, Texas 78711-3087



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**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Thursday, February 1, 2024 5:14 AM  
**To:** Joel Stanford  
**Subject:** RE: CAM, BM Dorchester Kiln

Joel,

We are generally in agreement with your comments, so how about the following:

*The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).*

Mike

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Tuesday, January 30, 2024 1:24 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** RE: CAM, BM Dorchester Kiln

Sorry , also add the Finish Mill Baghouse (EPN 51-SK-250) to this query about bypasses.

I do know that CAM for PM is achieved through inspections and pressure drop readings on all baghouses – including the Kiln and Finish Mill, but wanted to check on the bypass issue.

---

**From:** Joel Stanford  
**Sent:** Tuesday, January 30, 2024 11:28 AM  
**To:** Michael Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** CAM, BM Dorchester Kiln

Hi Mike,

We had discussed this during the draft period, but do you agree that the Kiln is subject to CAM for PM? If so, are you OK if I add it to the list of sources forbidden from having a bypass? That requirement is standard CAM language and when I updated to add all of the individual baghouses, it seems I forgot to include the kiln EPN in the list of “shall not have a bypass” (CND 51).

Per 30 TAC 122.604(c)(6) the CEMS on the cement kiln exempts this unit from CAM on NOx, but the CPMS for PM is more of a grey area where it could potentially exempt it, but it’s less clear based on the rule.

FYI – I’m hoping to have NAPD issued by the end of this week. We’re currently working with OCC to draft language relating to the meeting and get it plugged into the NAPD draft. I’ll also send you that for Spanish translation once it’s all baked in.

Thanks!

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

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**From:** Joel Stanford  
**Sent:** Friday, February 2, 2024 1:11 PM  
**To:** Michael Meister  
**Subject:** A Couple of Small Fixes to BM Dorchester CNDs  
**Attachments:** CND-BM Dorchester- 167047-335160\_Comments-V4\_TCEQ.docx

While working on the TRV I noticed a couple small issues that I've corrected.

1. On page 3, the H2SO4 limits – Moved the 1.10 lb/ton of clinker figure over into the 1-hour column to match the application. I removed the 30-day limit since none was represented, and of course left the annual.
2. Page 14/CND 51 (Records) – Made the B reference CND 42C. Previously this had the 30 day averaging focused language.

Hopefully this should be the last changes! Sorry for the last minute nature of these.

Thanks,

**Joel Stanford**  
Team Leader - Expedited Team  
Air Permits Division  
Texas Commission on Environmental Quality  
Mail Code: MC-163, PO Box 13087  
Austin, Texas 78711-3087



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**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Friday, February 2, 2024 3:42 PM  
**To:** Joel Stanford  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

Joel,

All looks good. No further comments.

Thanks,  
Mike

---

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Friday, February 2, 2024 3:11 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

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A. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;

You are correct on the 0.40 lb/ton of clinker vs. 0.60 in NSPS F. I fixed that as well.

---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Friday, February 2, 2024 2:34 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Subject:** RE: A Couple of Small Fixes to BM Dorchester CNDs

This is fairly complicated, lots of moving parts in the permit, so no problem with catching last minute things. That said, for the 2<sup>nd</sup> item we think the 30 day rolling average language should remain in there because Black Mountain will need to demonstrate compliance with the permit limits on a 1-hour average basis and then with the NSPS/MACT standards on a 30 day rolling average basis. They could have to report a deviation for the hourly limit for the permit but not the NSPS/MACT standard because of the different averaging times.

And for the sake of alignment – we think that in Table 1 for SO<sub>2</sub> the 2<sup>nd</sup> column should state 0.4 lb/ton of clinker. That is the NSPS Subpart F (30 day rolling average limit), but check me on that.



SO <sub>2</sub>	0.60 lb/ton of clinker	0.640 lb/ton of clinker	0.40 lb/ton of clinker
-----------------	------------------------	-------------------------	------------------------

**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Friday, February 2, 2024 1:11 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Subject:** A Couple of Small Fixes to BM Dorchester CNDs

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1. On page 3, the H<sub>2</sub>SO<sub>4</sub> limits – Moved the 1.10 lb/ton of clinker figure over into the 1-hour column to match the application. I removed the 30-day limit since none was represented, and of course left the annual.
2. Page 14/CND 51 (Records) – Made the B reference CND 42C. Previously this had the 30 day averaging focused language.

Hopefully this should be the last changes! Sorry for the last minute nature of these.

Thanks,

**Joel Stanford**  
Team Leader - Expedited Team  
Air Permits Division  
Texas Commission on Environmental Quality  
Mail Code: MC-163, PO Box 13087  
Austin, Texas 78711-3087



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**AR-28A**

**Modifications to Draft Permit**

## **Special Conditions**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.60 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	--	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	--	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The following additional requirements apply:
- A. The engine shall be equipped with a non-resettable hour meter.
  - B. Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.005
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005



EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements:

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Crushed limestone stockpiles shall be stored in an enclosed storage building.
16. Raw material truck and rail loading operations (EPNs RR\_MH and TRK\_MH) shall utilize partial enclosure defined as consisting of two or three-sided walls with fogging nozzles or peripheral dusty air suction nozzles on the perimeter of the hoppers for unloading by rail or truck. Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.
17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.

20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

#### **Cement Kiln Selective Catalytic Reduction**

22. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

#### **Planned Maintenance, Startup, and Shutdown**

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:
  - A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.
25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:

- A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
- A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### Ammonia Handling

Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO

27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per 24 hours.
  - B. Immediately, but no later than 24 hours upon detection of a leak, plant personnel shall take at least one of the following actions:
    - (1) Isolate the leak.
    - (2) Commence repair or replacement of the leaking component.
    - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### **Initial Demonstration of Compliance**

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 43. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### **Sampling Requirements**

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.
31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
- A. Date for pretest meeting;
  - B. Date sampling will occur;
  - C. Points or sources to be sampled;



- D. Name of firm conducting sampling;
- E. Type of sampling equipment to be used; and
- F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

- 32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
- 33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
- 34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
- 35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
- 36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
- 37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
  - One copy to the TCEQ Regional Office with jurisdiction.
  - One copy to the TCEQ Office of Air, Air Permits Division in Austin.
  - One copy to each appropriate local air pollution control program with jurisdiction.
- 38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
- 39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily

records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

#### **Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with in 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
  - A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
    - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
    - (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on

weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
  - F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 42, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.
  - B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).  
  
Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.  
  
Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.
  - C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.

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44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.
45. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
  - A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
  - B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
    - (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
    - (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> stack concentration or greater.
  - C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - E. The permit holder may establish a correlation between the maximum NH<sub>3</sub> stack concentration limit and maximum NH<sub>3</sub> injection rate or other surrogate parameter that may be monitored to determine compliance with NH<sub>3</sub> stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - F. Other alternative methods used for measuring NH<sub>3</sub> stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control

efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.

- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:
- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
  - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.



48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).

#### **Recordkeeping Requirements**

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
  - A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification, CEMS data as specified in Special Condition No. 42 C;
  - C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;

- H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 23-26 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### **Reporting Requirements**

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.
  - D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.

54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

#### Greenhouse Gases Special Conditions

55. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 28 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 28, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### **Greenhouse Gases Recordkeeping Requirements**

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.
59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
  - C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
    - (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.

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- (2) Calculate total nitrous oxide ( $\text{N}_2\text{O}$ ) and methane ( $\text{CH}_4$ ) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
- (3) Convert  $\text{CO}_2$ ,  $\text{N}_2\text{O}$  and  $\text{CH}_4$  monthly emissions to  $\text{CO}_{2e}$  emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of  $\text{CO}_{2e}$  to demonstrate compliance with emissions limits in the MAERT.

Date:



**Attachment A**

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**Inherently Low Emitting (ILE) Maintenance Activities**

<b>Planned Maintenance Activity</b>	<b>Pollutant</b>					
	<b>VOC</b>	<b>NOx</b>	<b>CO</b>	<b>PM</b>	<b>SO2</b>	<b>CO2</b>
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:

**AR-28B**

**Modifications to Draft Permit**

## **Special Conditions**

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### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	--	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	--	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The following additional requirements apply:
- A. The engine shall be equipped with a non-resettable hour meter.
  - B. Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.002
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005



EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements:

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Crushed limestone stockpiles shall be stored in an enclosed storage building.
16. Raw material truck and rail loading operations (EPNs RR\_MH and TRK\_MH) shall utilize partial enclosure defined as consisting of two or three-sided walls with fogging nozzles or peripheral dusty air suction nozzles on the perimeter of the hoppers for unloading by rail or truck. Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.
17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.

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20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

**Cement Kiln Selective Catalytic Reduction**

22. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

**Planned Maintenance, Startup, and Shutdown**

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:
  - A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.
25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:

- A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
- A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### **Ammonia Handling**

Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO

27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per 24 hours.
  - B. Immediately, but no later than 24 hours upon detection of a leak, plant personnel shall take at least one of the following actions:
    - (1) Isolate the leak.
    - (2) Commence repair or replacement of the leaking component.
    - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### **Initial Demonstration of Compliance**

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 43. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### **Sampling Requirements**

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.
31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
- A. Date for pretest meeting;
  - B. Date sampling will occur;
  - C. Points or sources to be sampled;



- D. Name of firm conducting sampling;
- E. Type of sampling equipment to be used; and
- F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

- 32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
- 33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
- 34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
- 35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
- 36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
- 37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
  - One copy to the TCEQ Regional Office with jurisdiction.
  - One copy to the TCEQ Office of Air, Air Permits Division in Austin.
  - One copy to each appropriate local air pollution control program with jurisdiction.
- 38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
- 39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily

records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

#### **Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with in 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
  - A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
    - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
    - (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on

weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
  - F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 42, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.
  - B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).  
  
Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.  
  
Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.
  - C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.

44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.
45. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
  - B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
    - (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
    - (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> stack concentration or greater.
  - C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - E. The permit holder may establish a correlation between the maximum NH<sub>3</sub> stack concentration limit and maximum NH<sub>3</sub> injection rate or other surrogate parameter that may be monitored to determine compliance with NH<sub>3</sub> stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - F. Other alternative methods used for measuring NH<sub>3</sub> stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control

efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.

- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:
- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
  - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.



48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).

#### Recordkeeping Requirements

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
  - A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;
  - C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;

- F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;
  - H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 23-26 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### **Reporting Requirements**

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.
  - D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.

- H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.
54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

#### Greenhouse Gases Special Conditions

55. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 28 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 28, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance

Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### **Greenhouse Gases Recordkeeping Requirements**

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.
59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and

C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:

- (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
- (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
- (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:



**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

**Inherently Low Emitting (ILE) Maintenance Activities**

<b>Planned Maintenance Activity</b>	<b>Pollutant</b>					
	<b>VOC</b>	<b>NOx</b>	<b>CO</b>	<b>PM</b>	<b>SO2</b>	<b>CO2</b>
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:

**AR-28C**

**Modifications to Draft Permit**

## **Special Conditions**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	—	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	--	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The following additional requirements apply:
- A. The engine shall be equipped with a non-resettable hour meter.
  - B. Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.002
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005



EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements:

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Limestone Stockpiles 1 and 2, the Gypsum Stockpile, the High Grade Limestone Stockpile, the Sand Stockpile, and in general all incoming raw materials shall be stored in fully enclosed storage buildings.

16. The following material handling operations shall utilize the specified controls:

**Table 3: Material Handling Operation Controls**

EPN	Source Name	Controls
TRK_MH	Additive - Material Handling Truck Unloading	Three-sided walls and fogging nozzles.
RR_MH	Additive - Material Handling Rail Unloading	Two-sided walls and fogging nozzles.
LSCRSHBD_MH	Limestone – Material Handling LS Crusher Building	Three-sided walls and fogging nozzles.

Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.

17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.
20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

#### **Cement Kiln Selective Catalytic Reduction**

22. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

#### **Planned Maintenance, Startup, and Shutdown**

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:

- A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.
25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
- A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
- A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### **Ammonia Handling**

##### **Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO**

27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made **once per shift**.
  - B. Immediately, but no later than **1 hour** upon detection of a leak, plant personnel shall take at least one of the following actions:

- (1) Isolate the leak.
- (2) Commence repair or replacement of the leaking component.
- (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### **Initial Demonstration of Compliance**

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 43. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### **Sampling Requirements**

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate



sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

- A. Date for pretest meeting;
- B. Date sampling will occur;
- C. Points or sources to be sampled;
- D. Name of firm conducting sampling;
- E. Type of sampling equipment to be used; and
- F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

One copy to each appropriate local air pollution control program with jurisdiction.

38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

#### **Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:



- (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
  - F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 42, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.

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- B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).
- Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.
- Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.
- C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.
44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.
45. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
- B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
- (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
- (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> stack concentration or greater.
- C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
- D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings

- (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
- E. The permit holder may establish a correlation between the maximum  $\text{NH}_3$  stack concentration limit and maximum  $\text{NH}_3$  injection rate or other surrogate parameter that may be monitored to determine compliance with  $\text{NH}_3$  stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - F. Other alternative methods used for measuring  $\text{NH}_3$  stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the

emission point. If visible emissions are observed from the emission point, the owner or operator shall:

- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
  - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).

#### **Recordkeeping Requirements**

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;

- C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;
  - H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 23-26 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### **Reporting Requirements**

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.

- D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.
54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

**Greenhouse Gases Special Conditions**

55. Emissions from the Kiln exhaust shall not exceed the following limits:



Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 28 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 28, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of ±15 percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### Greenhouse Gases Recordkeeping Requirements

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require

authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.

59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.

- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
- B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
- C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
  - (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
  - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
  - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

**Inherently Low Emitting (ILE) Maintenance Activities**

Planned Maintenance Activity	Pollutant					
	VOC	NOx	CO	PM	SO2	CO2
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:

**AR-28D**

**Modifications to Draft Permit**

### **Special Conditions**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

#### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

#### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

#### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	--	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>



Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	--	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The following additional requirements apply:
- A. The engine shall be equipped with a non-resettable hour meter.
  - B. Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.002
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements:

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Limestone Stockpiles 1 and 2, the Gypsum Stockpile, the High Grade Limestone Stockpile, the Sand Stockpile, and in general all incoming raw materials shall be stored in fully enclosed storage buildings.

16. The following material handling operations shall utilize the specified controls:

**Table 3: Material Handling Operation Controls**

EPN	Source Name	Controls
TRK_MH	Additive - Material Handling Truck Unloading	Three-sided walls and fogging nozzles.
RR_MH	Additive - Material Handling Rail Unloading	Two-sided walls and fogging nozzles.
LSCRSHBD_MH	Limestone – Material Handling LS Crusher Building	Three-sided walls and fogging nozzles.

Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.

17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.
20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

#### **Cement Kiln Selective Catalytic Reduction**

22. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

#### **Planned Maintenance, Startup, and Shutdown**

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:



- A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.
25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
- A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
- A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### **Ammonia Handling**

##### **Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO**

27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made **once per shift**.
  - B. Immediately, but no later than **1 hour** upon detection of a leak, plant personnel shall take at least one of the following actions:

- (1) Isolate the leak.
- (2) Commence repair or replacement of the leaking component.
- (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### **Initial Demonstration of Compliance**

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 43. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### **Sampling Requirements**

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate



sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

- A. Date for pretest meeting;
- B. Date sampling will occur;
- C. Points or sources to be sampled;
- D. Name of firm conducting sampling;
- E. Type of sampling equipment to be used; and
- F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

One copy to each appropriate local air pollution control program with jurisdiction.

38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

#### **Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with in 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
  - A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:

- (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
  - F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 42, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.

- B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).
- Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.
- Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.
- C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.
44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.
45. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
- B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
- (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
- (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> stack concentration or greater.
- C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
- D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings

- (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
- E. The permit holder may establish a correlation between the maximum  $\text{NH}_3$  stack concentration limit and maximum  $\text{NH}_3$  injection rate or other surrogate parameter that may be monitored to determine compliance with  $\text{NH}_3$  stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - F. Other alternative methods used for measuring  $\text{NH}_3$  stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the

emission point. If visible emissions are observed from the emission point, the owner or operator shall:

- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
  - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).

#### **Recordkeeping Requirements**

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;



- C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;
  - H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 23-26 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### **Reporting Requirements**

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.

- D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.
54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

**Greenhouse Gases Special Conditions**

55. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 28 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 28, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### Greenhouse Gases Recordkeeping Requirements

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require

authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.

59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.

- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
- B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
- C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
  - (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
  - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
  - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

**Inherently Low Emitting (ILE) Maintenance Activities**

Planned Maintenance Activity	Pollutant					
	VOC	NOx	CO	PM	SO2	CO2
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:

**AR-29**

**TCEQ Preliminary Decision and Notice of Application and Preliminary  
Decision (NAPD) Notice Package**



Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 8, 2024

MR JACOB BENDER  
CHIEF FINANCIAL OFFICER  
BM DORCHESTER LLC  
1008 SOUTHVIEW CIR  
CENTER TX 75935-4537

Re: Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bender:

The Texas Commission on Environmental Quality (TCEQ) has made a preliminary decision on the above-referenced application. In accordance with Title 30 Texas Administrative Code § 39.419(b), you are now required to publish Notice of Application and Preliminary Decision. You must provide a copy of this preliminary decision letter with the draft permit at the public place referenced in the public notice.

If you have any questions, please call Mr. Joel Stanford at (512) 239-0270, or write to the TCEQ, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a long horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

cc: Air Section Manager, Region 4 - Dallas/Fort Worth

Project Number: 335160

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bender:

The Texas Commission on Environmental Quality (TCEQ) has completed the technical review of your application and has prepared a preliminary decision and draft permit.

You are now required to publish notice of your proposed activity. To help you meet the regulatory requirements associated with this notice, we have included the following items:

- Notices for Newspaper Publication (Examples A and B)
- Public Notice Checklist
- Instructions for Public Notice
- Affidavit of Publication for Air Permitting (Form TCEQ-20533) and Alternative Language Affidavit of Publication for Air Permitting (Form TCEQ-20534)
- Web link to download Public Notice Verification Form (refer to Public Notice Instructions)
- Notification List
- Draft Permit

Please note that it is **very important** that you follow **all** directions in the enclosed instructions. If you do not, you may be required to republish the notice. A common mistake is the unauthorized changing of notice wording or font. If you have any questions, please contact us before you proceed with publication.

A "Public Notice Checklist" is enclosed which notes the time limitations for each step of the public notice process. **The processing of your application may be delayed if these time limitations are not met (i.e.; submitting proof of publication within 10 business days after publication, affidavits of publication within 30 calendar days after the date of publication, and public notice verification form within 10 business days after the end of the designated comment period).** This checklist should be used as a tool in conjunction with the enclosed, detailed instructions.

If you do not comply with **all** requirements described in the instructions, further processing of your application may be suspended or the agency may take other actions.

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • [tceq.texas.gov](http://tceq.texas.gov)

How is our customer service? [tceq.texas.gov/customersurvey](http://tceq.texas.gov/customersurvey)  
printed on recycled paper

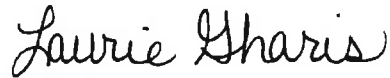
APP-1354

Mr. Jacob Bender  
Page 2  
February 8, 2024

Re: Permit: 167047, PSDTX1602

If you have any questions regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300. If you have any other questions, please contact Mr. Joel Stanford at (512) 239-0270.

Sincerely,



Laurie Gharis  
Chief Clerk  
Office of the Chief Clerk  
Texas Commission on Environmental Quality

Enclosure

cc: Air Section Manager, Region 4 - Dallas/Fort Worth  
Air Permits Section Chief, New Source Review Section (6MM-AP), U.S. Environmental Protection  
Agency, Region 6, Dallas

Project Number: 335160

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## EXAMPLE A

### NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR AN AIR QUALITY PERMIT

#### PROPOSED AIR QUALITY PERMIT NUMBERS: 167047 AND PSDTX1602

**APPLICATION AND PRELIMINARY DECISION.** BM Dorchester LLC, 1008 Southview Circle, Center, TX 75935-4537, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047 and Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. This application was submitted to the TCEQ on November 8, 2021. The proposed facility will emit the following air contaminants in a significant amount: carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide and sulfuric acid. In addition, the facility will emit the following air contaminants: hazardous air pollutants and lead.

The degree of PSD increment predicted to be consumed by the proposed facility and other increment-consuming sources in the area is as follows:

#### Sulfur Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
3-hour	12	512
24-hour	4.5	91
Annual	0.3	20

#### PM<sub>10</sub>

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
24-hour	29	30
Annual	3	17

#### Nitrogen Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
Annual	0.4	25

PM<sub>2.5</sub>

Maximum Averaging Time	Maximum Increment Consumed (µg/m <sup>3</sup> )	Allowable Increment (µg/m <sup>3</sup> )
24-hour	8.7	9
Annual	2.7	4

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Dallas/Fort Worth regional office, and at the Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Dallas/Fort Worth Regional Office, 2309 Gravel Drive, Fort Worth, Texas.

**INFORMATION AVAILABLE ONLINE.** These documents are accessible through the Commission's Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, the air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.689632,33.538174&level=13>.

**PUBLIC COMMENT / PUBLIC MEETING.** You may submit public comments to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments in developing a final decision on the application. A public meeting will be held and will consist of two parts, an Informal Discussion Period and a Formal Comment Period. A public meeting is not a contested case hearing under the Administrative Procedure Act. During the Informal Discussion Period, the public will be encouraged to ask questions of the applicant and TCEQ staff concerning the permit application. The comments and questions submitted orally during the Informal Discussion Period will not be considered before a decision is reached on the permit application, and no formal response will be made. Responses will be provided orally during the Informal Discussion Period. During the Formal Comment Period on the permit application, members of the public may state their formal comments orally into the official record. At the conclusion of the comment period, all formal comments will be considered before a decision is reached on the permit application. A written response to all formal comments will be prepared by the executive director and will be sent to each person who submits a formal comment or who requested to be on the mailing list for this permit application and provides a mailing address. Only relevant and material issues raised during the Formal Comment Period can be considered if a contested case hearing is granted on this permit application.

**The Public Meeting is to be held:**

**Monday, March 25, 2024 at 7:00 PM  
Hilton Garden Inn Denison/Sherman/At Texoma Event Center  
5015 South US 75  
Denison, Texas 75020**

Persons with disabilities who need special accommodations at the meeting should call the Office of the Chief Clerk at 512-239-3300 or 1-800-RELAY-TX (TDD) at least five business days prior to the meeting.

**You may submit additional written public comments within 30 days of the date of newspaper publication of this notice or by the date of the public meeting, whichever is later.  
in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

After the deadline for public comment, the executive director will consider the comments and prepare a response to all public comment. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application.**

**OPPORTUNITY FOR A CONTESTED CASE HEARING.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court. **A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; (6) a description of how you use the property which may be impacted by the facility; and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.**

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decisions on the application. The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. Issues that are not submitted in public comments may not be considered during a hearing.

**EXECUTIVE DIRECTOR ACTION.** If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the CID. If any timely hearing requests are received and not withdrawn, the executive director will not issue final approval of the permit and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

**MAILING LIST.** You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

**AGENCY CONTACTS AND INFORMATION.** Public comments and requests must be submitted either electronically at [www14.tceq.texas.gov/epic/eComment/](http://www14.tceq.texas.gov/epic/eComment/), or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from BM Dorchester LLC at the address stated above or by calling Mr. Michael Meister, Trinity Consultants at (361) 883-1668.

Notice Issuance Date: February 8, 2024



## Example B

### Publication Elsewhere in the Newspaper:

#### TO ALL INTERESTED PERSONS AND PARTIES:

BM Dorchester LLC, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit Number 167047 and Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, which would authorize construction of a Portland Cement at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. Additional information concerning this application is contained in the public notice section of this newspaper.

3"  
minimum

← Minimum 2 column widths or 4 inches →

**Public Notice Checklist**  
**Notice of Application and Preliminary Decision for an Air Quality Permit**  
**(2nd Notice)**

The following tasks must be completed for public notice. If publication in an alternative language is required, please complete the tasks for both the English and alternative language publications. Detailed instructions are included in the "Instructions for Public Notice" section of this package.

<b>Within 33 calendar days after date of this letter</b>
<p>Publish <i>Notice of Application and Preliminary Decision for an Air Quality Permit</i> in the same newspaper(s) in which you published <i>Notice of Receipt of Intent to Obtain Permit</i> for this application.</p> <ul style="list-style-type: none"><li>- Example A must be published in "public notice" section of newspaper. Review for accuracy prior to publishing.</li><li>- Example B (if applicable) must be published in prominent location (other than "public notice") in same issue of newspaper</li><li>- As part of the expedited permitting process, it is recommended that you publish immediately.</li></ul> <p>Provide copy of the complete application, the executive director's preliminary decision (including the draft permit), and the executive director's preliminary determination summary and executive director's air quality analysis, including any revisions, at a public place for review and copying. Keep them there for duration of the designated comment period. The public place should provide public access to the internet.</p>
<b>First day of newspaper publication</b>
<p>Review published newspaper notice for accuracy. If errors, contact Air Permits Division.</p> <p>Ensure copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) are at the public place.</p> <p>It is recommended that the signs from the first notice be in place and the lettering must remain legible and visible until 30 days after publication of the <i>Notice of Application and Preliminary Decision</i> (either English or alternative language notice, whichever is later).</p>
<b>Within 10 business days after date of publication</b>
<p>Proof of publication showing publication date and newspaper name should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="padding-left: 40px;">Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of newspaper clippings showing publication date and newspaper name to persons listed on <i>Notification List</i>.</p>
<b>Within 30 calendar days after date of publication</b>
<p>Affidavit of publication for air permitting and alternative language affidavit of publication for air permitting (if applicable) should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="padding-left: 40px;">Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of affidavits to persons listed on <i>Notification List</i>.</p>
<b>Within 10 business days after end of the designated comment period</b>
<p>Public Notice Verification Form should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="padding-left: 40px;">Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of Public Notice Verification Form to persons listed on <i>Notification List</i>.</p>

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## Instructions for Public Notice For New Source Review & Prevention of Significant Deterioration Air Permit

### Notice of Application and Preliminary Decision

We have completed the technical review of your application and issued a preliminary decision. You must comply with the following instructions:

#### Review Notice

Included in the notice is all of the information which the commission believes is necessary to effectuate compliance with applicable public notice requirements. Please read it carefully and notify the Texas Commission on Environmental Quality (TCEQ) immediately if it contains any errors or omissions. You are responsible for ensuring the accuracy of all information published. You may not change the text of the notice without prior approval from the TCEQ.

#### Newspaper Notice

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* within **33 calendar days** after the date this information was mailed to you (see date of letter). As part of the expedited permitting process, it is recommended that you publish immediately.
- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* at your expense, in the same newspaper(s) in which you published the *Notice of Receipt and Intent to Obtain Permit* for this application. The newspaper must be a newspaper that is of general circulation in the municipality where the facility is or will be located. If the facility is not located within a municipality, the newspaper must be of general circulation in the municipality nearest the location.
- You must publish this notice in one issue of any applicable newspaper.
- You will find two example notices enclosed in this package. *Example A* must be published in the "public notice" section of the newspaper. The phrase "Example A" is not required to be published. *Example B* must be published in the **same issue** of the newspaper as *Example A*; however, it must be published in a prominent location (other than the public notice section). *Example B* refers the public to the "public notice" section of the newspaper where *Example A* provides more information regarding the permit application.
- *Example B* must be a total of at least **6 column inches (standard advertising units)** with a height of at least **3 inches** and a horizontal dimension of **2 column widths**. If the newspaper chosen does not use standard advertising units for measurement, the notice must be at least **12 square inches** with the shortest side of at least **3 inches**.
- The bold text of the enclosed notice **must** be printed in the newspaper in a font style or size that distinguishes it from the rest of the notice (i.e., **bold, italics**). **Failure to do so may require re-notice.**

## Alternative Language Notice

In certain circumstances, applicants for air permits must complete notice in alternative languages.

- Public notice rules require the applicant to determine whether a bilingual program is required at either the elementary or middle school nearest to the facility or proposed facility location. Bilingual education programs are determined on a district-wide basis. When students who are required to attend either school are eligible to be enrolled in a bilingual education program, some alternative language notice is required (newspaper notice).
- Since the school district, and not the schools, must provide the bilingual education program, these programs do not have to be located at the elementary or middle school nearest to the facility or proposed facility to trigger the alternative language notice requirement. If there are students who would normally attend the nearest schools eligible to be taught in a bilingual education program at a different location, alternative language notice is required.
- If triggered, publications of alternative language notices must be made in a newspaper or publication printed primarily in each language taught in the bilingual education program. The same newspaper(s) used for *Notice of Receipt and Intent to Obtain Permit* must be used for publication of the *Notice of Application and Preliminary Decision for an Air Quality Permit*. This notice is required if such a newspaper or publication exists in the municipality or the county where the facility is or will be located.
- The applicant must demonstrate a good faith effort to identify a newspaper or publication in the required language. If a newspaper or publication of general circulation published at least once a month in such language cannot be found, publishing in that language is not required, but signs must remain posted in the same location(s) utilized during the *Notice of Receipt of Intent to Obtain Permit (1<sup>st</sup> public notice)*.
- Publication in an alternative language section or insertion within an English language newspaper does not satisfy these requirements.
- The applicant has the burden to demonstrate compliance with these requirements. You must fill out the ***Public Notice Verification Form (Form TCEQ-20244)*** indicating your compliance with the requirements regarding publication in an alternative language. **This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).**
- It is suggested the applicant work with the local school district to do the following:
  - (a) determine if a bilingual program is required in the district;
  - (b) determine which language is required by the bilingual program;
  - (c) locate the nearest elementary and middle schools; and
  - (d) determine if any students attending either school are entitled to be enrolled in a bilingual educational program.
- **If you determine that you must meet the alternative language notice requirements after receipt of the full public notice package, you are responsible for ensuring that the publication in the alternative language is complete and accurate in that language. Spanish notice templates are available through the Air Permits Division Web site at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html). All italic notes should be replaced with the corresponding Spanish translations for the specific application and published in the alternative language publication. Email a copy to Air Permits Division staff.**
- If you are required to publish notice in a language other than Spanish, you must translate the entire public notice at your own expense.

### Public Comment Period

- The public comment period will last at least **30 calendar days after publication of the last notice**.
- The comment period will be longer if the last day of the public comment period ends on a weekend or a holiday. In this case, the comment period will end on the next business day.
- The comment period for the permit may lengthen depending on whether a public meeting is held. If a public meeting is held, the comment period will be extended to the later of either the date of the public meeting or the end of the second notice period.

### Proof of Publication

- Check each publication to ensure that the articles were accurately published. If a notice was not published correctly you may be required to republish.
- For each newspaper in which you published, you must submit proof of publication that shows the notice, the date of publication, and the name of the newspaper to the Office of the Chief Clerk within **10 business days** after the date of publication. Acceptable proofs of publication are 1) copies of the published notice or 2) the newspaper clippings of the published notice. If you choose to submit copies of the published notice to the Office of the Chief Clerk, copies must be on standard-size 8½" x 11" paper and must show the actual size of the published notice (do not reduce the image when making copies). Published notices longer than 11" must be copied onto multiple 8½" x 11" pages. Please note, submitting a copy of your published notice could result in faster processing of your application. It is recommended that you maintain newspaper clippings or tear sheets of the notice for your records.
- You must submit an **affidavit of publication for air permitting and alternate language affidavit of publication for air permitting (if applicable)** to the Office of the Chief Clerk within **30 calendar days** after the date of publication. **You must use the enclosed affidavits of publication.** The affidavits must clearly identify the applicant's name and permit number. You are encouraged to submit the affidavit with the proof of publication described above.
- You must submit the **Public Notice Verification Form (Form TCEQ-20244)** to the Office of the Chief Clerk within **10 business days** of the end of this public comment period. You must use this form to certify that you have met alternative language notice requirements. **This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).**
- The **affidavits of publication, Public Notice Verification Form, and acceptable proof of publication of the published notices** should be emailed to [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov) or mailed to:

Texas Commission on Environmental Quality  
Office of the Chief Clerk, MC-105  
Attn: Notice Team / AIR Expedited Permitting  
P.O. Box 13087  
Austin, Texas 78711-3087

- Please ensure that the affidavit(s) you send to the Chief Clerk have all blanks filled in correctly.
- Photocopies of newspaper clippings, affidavits, and verifications must also be sent to those listed on the enclosed *Notification List* within the deadlines specified above.

### Failure to Publish and Submit Proof of Publication

You must meet all publication requirements. **If you fail to publish the notice or submit proof of publication on time**, the TCEQ may suspend further processing on your application or take other actions.

### **Sign Posting**

It is recommended that the signs that were put in place prior to publication of the first notice remain in place and be legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).

### **Application in a Public Place**

- You must provide a copy of the complete application, the executive director's preliminary decision (including the draft permit), the executive director's preliminary determination summary and the executive director's air quality analysis, (including any subsequent revisions), at a public place for review and copying by the public. This place must be in the county in which the facility is located or proposed to be located.
- A public place is one that is publicly owned or operated (ex: libraries, county courthouses, or city halls). Location selected must provide public access to the internet.
- This copy must be accessible to the public for review and copying. The copy must be available beginning on the first day of newspaper publication and remain in place until the commission has taken action on the application or the commission refers issues to the State Office of Administrative Hearings.
- If the application is submitted to the TCEQ with information marked as "CONFIDENTIAL," you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: "Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the Texas Commission on Environmental Quality, Public Information Coordinator, MC-197, P.O. Box 13087, Austin, Texas 78711-3087."
- You must submit verification of file availability using the ***Public Notice Verification Form (Form TCEQ-20244)*** within **10 business days** after end of the publications' designated comment period. Do not submit the form verifying that the application was in a public place until after the comment period is complete. If a public meeting is held or second notice is required causing the public comment period to be extended, at a later date you will be required to verify that the application was in a public place during the entire public comment period. **This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).**

### **General Information**

When contacting the Commission regarding this application, please refer to the permit number at the top of the *Notice of Application and Preliminary Decision*.

If you have questions or need assistance regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300 or the project reviewer listed in the cover letter.



TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

### AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §

COUNTY OF \_\_\_\_\_ §

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_, who being by me duly sworn, deposes and says that (s)he is *(Name of Person Representing Newspaper)*

the \_\_\_\_\_ of the \_\_\_\_\_  
*(Title of Person Representing Newspaper)* *(Name of the Newspaper)*

that said newspaper is generally circulated in \_\_\_\_\_, Texas;  
*(The municipality or nearest municipality to the location of the facility or the proposed facility)*

that the enclosed notice was published in said newspaper on the following date(s):

\_\_\_\_\_  
*(Newspaper Representative's Signature)*

Subscribed and sworn to before me this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
to certify which witness my hand and seal of office.

[Affix Seal]

\_\_\_\_\_  
Notary Public in and for the State of Texas

\_\_\_\_\_  
Print or Type Name of Notary Public

\_\_\_\_\_  
My Commission Expires

TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

## ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §

COUNTY OF \_\_\_\_\_ §

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_, who being by me duly sworn, deposes and says that (s)he is (*Name of Person Representing Newspaper*)

the \_\_\_\_\_ of the \_\_\_\_\_;  
(*Title of Person Representing Newspaper*) (*Name of the Newspaper*)

that said newspaper is generally circulated in \_\_\_\_\_, Texas;  
(*The municipality or county in which the facility or proposed facility is located*)

that the enclosed notice was published in said newspaper on the following date(s):

\_\_\_\_\_  
(*Newspaper Representative's Signature*)

Subscribe and sworn to before me this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
to certify which witness my hand and seal of office.

[Affix Seal]

\_\_\_\_\_  
Notary Public in and for the State of Texas

\_\_\_\_\_  
Print or Type Name of Notary Public

\_\_\_\_\_  
My Commission Expires

## Notification List

It is the responsibility of the applicant to furnish the following offices with copies of the notices published, the *Affidavit of Publication for Air Permitting*, the *Alternative Language Affidavit of Publication for Air Permitting (if applicable)*, and a completed copy of the *Public Notice Verification Form (Form TCEQ-20244)*. Acceptable proof of publication and any affidavits and Form TCEQ-20244 should be emailed to [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov) or mailed to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, AIR Expedited Permitting, P.O. Box 13087, Austin, Texas 78711-3087.

**Electronic copies** should be submitted via email to the U.S. Environmental Protection Agency (EPA), **Region 6** at [R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov). Please contact Ms. Aimee Wilson ([wilson.aimee@epa.gov](mailto:wilson.aimee@epa.gov)) at (214) 665-7596 if you have any questions pertaining to electronic submittals to the EPA.

**Email copies to Mr. Joel Stanford** at [Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov)

**Hard copies** should be sent to the following:

Texas Commission on Environmental Quality  
Dallas/Fort Worth Regional Office  
2309 Gravel Dr  
Fort Worth, Texas 76118-6951

Texas General Land Office  
Upland Leasing Team Leader  
Professional Services  
P.O. Box 12873  
Austin, Texas 78711-2873

The Honorable Bruce Dawsey  
County Judge  
County Courthouse  
100 West Houston  
Sherman, TX 75090

The Honorable David Smith  
Mayor of Dorchester  
373 Main Street  
Dorchester, TX 75459

**AR-30**  
**Draft Permit**

### **Special Conditions**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

#### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

#### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

#### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	–	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>



Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	--	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The following additional requirements apply:
  - A. The engine shall be equipped with a non-resettable hour meter.
  - B. Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

**Bagfilters, Scrubber, and Dry Sorbent Injection System**

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.002
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements:

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Limestone Stockpiles 1 and 2, the Gypsum Stockpile, the High Grade Limestone Stockpile, the Sand Stockpile, and in general all incoming raw materials shall be stored in fully enclosed storage buildings.
16. The following material handling operations shall utilize the specified controls:

**Table 3: Material Handling Operation Controls**

EPN	Source Name	Controls
TRK_MH	Additive - Material Handling Truck Unloading	Three-sided walls and fogging nozzles.
RR_MH	Additive - Material Handling Rail Unloading	Two-sided walls and fogging nozzles.
LSCRSHBD_MH	Limestone – Material Handling LS Crusher Building	Three-sided walls and fogging nozzles.

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Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.

17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.
20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

**Cement Kiln Selective Catalytic Reduction**

22. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

**Planned Maintenance, Startup, and Shutdown**

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:

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- A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.
- 25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
  - A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
- 26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
  - A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

**Ammonia Handling**

**Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO**

- 27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
  - A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per shift.
  - B. Immediately, but no later than 1 hour upon detection of a leak, plant personnel shall take at least one of the following actions:

- (1) Isolate the leak.
- (2) Commence repair or replacement of the leaking component.
- (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### **Initial Demonstration of Compliance**

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 43. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### **Sampling Requirements**

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate



sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
- A. Date for pretest meeting;
  - B. Date sampling will occur;
  - C. Points or sources to be sampled;
  - D. Name of firm conducting sampling;
  - E. Type of sampling equipment to be used; and
  - F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

One copy to each appropriate local air pollution control program with jurisdiction.

38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

#### **Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with in 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
  - A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:

- (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
  - F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 42, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.

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- B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).

Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.

Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.

- C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.

44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.

45. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.

- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.

- B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.

(1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.

(2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> stack concentration or greater.

- C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.

- D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings

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- (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
- E. The permit holder may establish a correlation between the maximum  $\text{NH}_3$  stack concentration limit and maximum  $\text{NH}_3$  injection rate or other surrogate parameter that may be monitored to determine compliance with  $\text{NH}_3$  stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - F. Other alternative methods used for measuring  $\text{NH}_3$  stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the

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emission point. If visible emissions are observed from the emission point, the owner or operator shall:

- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
  - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).

**Recordkeeping Requirements**

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;



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- C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;
  - H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 23-26 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

**Reporting Requirements**

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.

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- D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.
54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

**Greenhouse Gases Special Conditions**

55. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 28 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 28, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of ±15 percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### Greenhouse Gases Recordkeeping Requirements

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require

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authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.

59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
  - C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
    - (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
    - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
    - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

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**Inherently Low Emitting (ILE) Maintenance Activities**

<b>Planned Maintenance Activity</b>	<b>Pollutant</b>					
	<b>VOC</b>	<b>NOx</b>	<b>CO</b>	<b>PM</b>	<b>SO2</b>	<b>CO2</b>
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:

# Emission Sources - Maximum Allowable Emission Rates

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This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	NO <sub>x</sub>	75.34	289.00
		SO <sub>2</sub>	83.33	213.31
		H <sub>2</sub> SO <sub>4</sub>	152.76	58.66
		HCl	2.38	10.41
		CO	1249.88	1599.84
		PM	41.66	159.98
		PM <sub>10</sub>	41.66	159.98
		PM <sub>2.5</sub>	41.66	159.98
		Pb	0.01	0.04
		Hg	<0.01	0.01
		VOC	25.24	100.49
		NH <sub>3</sub>	12.95	56.72
51-SK-250	Finish Mill Baghouse Stack	NO <sub>x</sub>	0.16	0.70
		SO <sub>2</sub>	<0.01	0.04
		CO	1.31	5.74
		PM	3.23	14.13
		PM <sub>10</sub>	3.23	14.13
		PM <sub>2.5</sub>	3.23	14.13
		VOC	0.09	0.38
10-BF-035	Crusher Building Baghouse Stack	PM	1.36	5.97
		PM <sub>10</sub>	1.36	5.97
		PM <sub>2.5</sub>	1.36	5.97
10-BF-140	Material Transfer (LS to Storage) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11

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Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.25	1.11
12-BF-140	Additive Unloading (Rail) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11
		PM <sub>2.5</sub>	0.25	1.11
11-BF-270	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
11-BF-285	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-315	Truck Unloading Baghouse Stack	PM	0.76	3.31
		PM <sub>10</sub>	0.76	3.31
		PM <sub>2.5</sub>	0.76	3.31
12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-030	Raw Mill Feed (Top of Bin Baghouse) Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-500	Raw Mill Feed Bin Building Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
20-BF-010	Raw Mill Building Baghouse Stack	PM	0.30	1.33
		PM <sub>10</sub>	0.30	1.33

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.30	1.33
20-BF-182	Raw Mill Building Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
20-BF-360	Raw Mill Building Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
21-BF-330	Top of CKD Bin Baghouse Stack	PM	0.08	0.33
		PM <sub>10</sub>	0.08	0.33
		PM <sub>2.5</sub>	0.08	0.33
22-BF-060	Bottom of Raw Meal Silo Baghouse Stack	PM	0.23	0.99
		PM <sub>10</sub>	0.23	0.99
		PM <sub>2.5</sub>	0.23	0.99
22-BF-080	Preheater Tower Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
22-BF-160	Top of Raw Meal Silo Baghouse Stack	PM	0.38	1.66
		PM <sub>10</sub>	0.38	1.66
		PM <sub>2.5</sub>	0.38	1.66
22-BF-385	Top of Surge Bin (RM Silo) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
30-BF-260	Bottom of Preheater Tower Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
30-BF-320	Top of Preheater Tower Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.11	0.50
42-BF-270	Cooler Discharge Baghouse Stack	PM	0.16	0.72
		PM <sub>10</sub>	0.16	0.72
		PM <sub>2.5</sub>	0.16	0.72
41-BF-130	Top of Bin (Bypass Dust) Baghouse Stack	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22
44-BF-030	Top of Clinker Silo Baghouse Stack	PM	0.63	2.76
		PM <sub>10</sub>	0.63	2.76
		PM <sub>2.5</sub>	0.63	2.76
44-BF-185	Transfer Tower (Clinker Storage and Handling) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
50-BF-050	Top of Clinker Feed Bin Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
50-BF-020	Top of Gypsum Feed Bin Baghouse Stack	PM	0.09	0.39
		PM <sub>10</sub>	0.09	0.39
		PM <sub>2.5</sub>	0.09	0.39
50-BF-350	Cement Feed Bin Extraction Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
51-BF-050	Cement Mill Building Baghouse Stack	PM	0.30	1.32
		PM <sub>10</sub>	0.30	1.32
		PM <sub>2.5</sub>	0.30	1.32
51-BF-140	Cement Mill Building Baghouse Stack	PM	0.23	1.01
		PM <sub>10</sub>	0.23	1.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.23	1.01
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse Stack	PM	0.14	0.61
		PM <sub>10</sub>	0.14	0.61
		PM <sub>2.5</sub>	0.14	0.61
52-BF-110	Top of Cement Silo 1 Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
53-BF-110	Top of Cement Silo 2 Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
52-BF-270	Loadout System (CM Silo-1) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
53-BF-270	Loadout System (CM Silo-2) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
LSCRSBBD_MH	Limestone - Material Handling LS Crusher Building (5)	PM	0.04	0.15
		PM <sub>10</sub>	0.02	0.07
		PM <sub>2.5</sub>	<0.01	0.01
TRK_MH	Additive - Material Handling Truck Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
RR_MH	Additive - Material Handling Rail Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
LS_STKPL	Limestone Stockpile 1 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
LS_STKPL	Limestone Stockpile 2 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
ADD_STKPL	Gypsum Stockpile (5)	PM	0.03	0.11
		PM <sub>10</sub>	0.01	0.06
		PM <sub>2.5</sub>	0.002	0.01
ADD_STKPL	High Grade Limestone Stockpile (5)	PM	0.05	0.20
		PM <sub>10</sub>	0.02	0.10
		PM <sub>2.5</sub>	<0.01	0.02
ADD_STKPL	Sand Stockpile (5)	PM	0.02	0.09
		PM <sub>10</sub>	0.01	0.05
		PM <sub>2.5</sub>	<0.01	0.01
EG-1	Emergency Generator Engine	NO <sub>x</sub>	8.87	0.44
		SO <sub>2</sub>	<0.01	<0.01
		CO	17.74	0.89

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM	0.14	0.01
		PM <sub>10</sub>	0.14	0.01
		PM <sub>2.5</sub>	0.14	0.01
		VOC	4.58	0.23
NH3FUG	NH3 Fugitives (5)	NH <sub>3</sub>	0.06	0.28
MSSFUG	ILE MSS Activities	NO <sub>x</sub>	<0.01	<0.01
		SO <sub>2</sub>	<0.01	<0.01
		CO	<0.01	<0.01
		PM	0.81	0.77
		PM <sub>10</sub>	0.66	0.76
		PM <sub>2.5</sub>	0.28	0.38
		VOC	<0.01	<0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
SO<sub>2</sub> - sulfur dioxide  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
HCl - hydrogen chloride  
H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
Pb - Lead  
Hg - Mercury  
NH<sub>3</sub> - ammonia  
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.  
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: \_\_\_\_\_ DRAFT



Emission Sources - Maximum Allowable Emission Rates  
Permit Number GHGPSDTX212

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities authorized by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	CO <sub>2e</sub>	-	981,402.53
51-SK-250	Finish Mill Baghouse Stack	CO <sub>2e</sub>	-	8,210.12
EG-1	Emergency Generator Engine	CO <sub>2e</sub>	-	42.25

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO<sub>2e</sub> - carbon dioxide equivalents based on the following Global Warming Potentials (GWP) found in Table A-1 of Subpart A 40 CFR Part 98 (78 FR 71904) for each pollutant: CO<sub>2</sub> (1), N<sub>2</sub>O (298), CH<sub>4</sub>(25)
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.

Date: DRAFT

**AR-31**

**Preliminary Determination Summary**

## Preliminary Determination Summary

Bm Dorchester LLC  
Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

### I. Applicant

BM Dorchester LLC  
1008 Southview Cir  
Center, TX 75935-4537

### II. Project Location

Portland Cement Plant

Located at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road

Dorchester, Grayson County, Texas 75459

### III. Project Description

The Applicant has requested initial authorization of a cement kiln. Emissions from planned startup and shutdown activities will be authorized by this permit. Startup and shutdown emissions are virtually indistinguishable from productions emissions. Although there may be minor emissions associated with startup and shutdown, emission factors used to quantify production emissions are considered to have enough conservatism to include any incidental increases that may be attributed to startup and shutdown (see the kiln BACT discussion for more on this for that source).

### IV. Emissions

Air Contaminant	Proposed Allowable Emission Rates (tpy)
PM	217.72
PM <sub>10</sub>	217.06
PM <sub>2.5</sub>	216.17
VOC	101.11
NO <sub>x</sub>	290.15
CO	1606.48
SO <sub>2</sub>	213.37
Pb	0.04
NH <sub>3</sub>	57.00
H <sub>2</sub> SO <sub>4</sub>	58.66
HCl	10.41
CO <sub>2</sub> e*	989,654.90

\*CO<sub>2</sub>e - carbon dioxide equivalents based on global warming potentials of  
CH<sub>4</sub> = 25, N<sub>2</sub>O = 298, SF<sub>6</sub>=22,800.

## V. Federal Applicability

The proposed site is located in Greyson County, which is classified as attainment for all criteria pollutants. Cement kilns are a PSD named source. Therefore, the PSD review threshold is 100 tpy for criteria pollutants. Once this threshold has been exceeded, each criteria pollutant and GHGs are compared against the PSD Significant Emission Rate (SER) to determine if the project triggers PSD review for these pollutants. The emissions of PM, PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, VOC, CO<sub>2e</sub> (GHGs), and H<sub>2</sub>SO<sub>4</sub> are greater than their corresponding SERs.

The following chart illustrates the annual project emissions for each pollutant and whether this pollutant triggers PSD review.

Pollutant	Project Emissions (tpy)	PSD Triggered Y/N
VOC	101.11	Y
NO <sub>x</sub>	290.15	Y
SO <sub>2</sub>	213.37	Y
CO	1606.48	Y
PM	217.72	Y
PM <sub>10</sub>	217.06	Y
PM <sub>2.5</sub>	216.17	Y
H <sub>2</sub> SO <sub>4</sub>	58.66	Y

The site is a major source for a non-GHG pollutant. In addition, the site has a potential to emit of more than 100,000 tpy CO<sub>2e</sub> which makes it a major source of GHG and PSD review is triggered.

Pollutant	Project Emissions (tpy)	Major Source or Major Mod Trigger Level (tpy)	PSD Triggered Y/N
CO <sub>2e</sub>	989,654.90	75,000	Y

The proposed emissions include MSS scenarios, which are not expected to exceed normal operational emissions.

## VI. Control Technology Review

The proposed control technology is consistent with PSD BACT for PSD pollutants and state minor BACT for non-PSD pollutants. A control technology review was conducted for all pollutants. The controls described in this section were determined to satisfy BACT requirements based on a review of recently issued permits from Texas and other states, and consideration of the RACT/BACT/LAER Clearinghouse (RBLC) data provided by the applicant. MSS emissions are not expected to exceed normal operation given the nature of most of the sources at this facility (baghouse controlled or fugitive emissions). The section on the kiln below contains information relating to startup scenarios provided by the Applicant which describe why startup emissions for the kiln are not expected to exceed normal operational scenarios.

Source Name	EPN	Best Available Control Technology Description
Kiln System	21-SK-230	<p><b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b>            Add on control: Baghouse at 0.002 grains per dry standard cubic foot (gr/dscf). 5% opacity.</p> <p>PM, PM<sub>10</sub>, PM<sub>2.5</sub> (filterable): 0.02 lbs. PM per ton of clinker on a 1-hour average and a rolling 12-month average</p> <p>PM, PM<sub>10</sub>, PM<sub>2.5</sub> (condensable): 0.28 lbs. PM per ton of clinker on a 1-hour average, 30-day rolling average, and a rolling 12-month average.</p> <p><b>CO:</b>            No add on controls.</p> <p>BACT determination based on other kilns. 9.0 lbs of CO/ton of clinker on a 1-hour average and 30-day rolling average. 3.0 lbs. of CO/ton of clinker on a rolling 12-month average.</p> <p><b>NO<sub>x</sub>:</b>            Add on and other control: Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system, staged combustion, low NO<sub>x</sub> burners, good combustion practices. Notably the proposed NO<sub>x</sub> rate exceeds RBLC PSD and state BACT, which is typically 1.5 lb/ton of clinker compared to the 0.54 lb/ton of clinker proposed.</p> <p>0.54 lbs. of NO<sub>x</sub> per ton of clinker on a 1-hour rolling average, 30-day rolling average, and 12 month rolling average.</p> <p><b>SO<sub>2</sub>:</b>            Add on and other control: Scrubber with a represented control efficiency of 90%, the alkali absorption inherent in the pre-calciner kiln, and</p>

Source Name	EPN	Best Available Control Technology Description
		<p>the use of low sulfur content natural gas as fuel.</p> <p>0.60 lbs. SO<sub>2</sub> per ton of clinker on a 1-hour rolling average, 0.40 lb per ton of clinker on a 30-day and 12 month rolling average.</p> <p><b>VOC:</b>          No add on controls. Good combustion practices. 24 ppmv at 7% O<sub>2</sub> for THC on a 1-hour average, 30-day rolling average, and 12 month rolling average. Note that VOC levels are related to composition and concentration of organic materials in the quarry and BACT determinations are driven by this.</p> <p><b>O-HAP</b>          No add on controls. 12 ppmvd total organic HAP on a 30-day rolling average and 12 month rolling average. Note that this rate is based on preliminary organic information from the quarry.</p> <p><b>Dioxins and Furans</b>          No add on controls. 0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O<sub>2</sub> on a 30-day rolling average and 12 month rolling average.</p> <p><b>H<sub>2</sub>SO<sub>4</sub>:</b>          Add on and other control: scrubber. The control efficiency of the scrubber will be specified in an as-built modification.          1.10 lbs. per ton of clinker on an hourly basis when the in-line raw mill and scrubber are not operating. 0.11 lbs. per ton of clinker on a 12-month rolling average basis.</p> <p><b>HCl:</b>          No add on controls. 3 ppmvd corrected to 7% O<sub>2</sub> on a 30-day rolling average and 12 month rolling average.</p> <p><b>Hg</b>          No add on controls. 0.000021 lb/ton of clinker on a 30-day rolling average and 12 month rolling average.</p> <p><b>Pb</b>          7.50E-05 lb/ton of clinker on a 30-day rolling average and 12 month rolling average.</p>



Source Name	EPN	Best Available Control Technology Description
		<p><b>GHG:</b>            No add on controls. Proper design and operation.            0.92 lbs. per ton of clinker on a 30 day rolling average.</p> <p><b>NH<sub>3</sub> (SCR):</b>            No add on controls. Operation in a manner to minimize ammonia slip.            35 ppmv at 7% O<sub>2</sub> on a 30-day rolling average.</p> <p><b>MSS:</b> The Applicant has represented the following in relation to kiln startup and shutdown:</p> <p>The SCR will be operating at all times when fuel is being fired in the kiln/pre-heater except during kiln heat-ups at the beginning of startup. During these times, no raw materials will be fed into the kiln. During a cold startup after major refractory work, it will take about 36 hours to heat up the kiln. This operation is expected to only occur once per year. During the kiln heat-up process, NO<sub>x</sub> emissions are estimated to range from 3 to 12 lb/hr based the AP-42 Table 1.4-1 NO<sub>x</sub> emission factor for a large (&gt;100 MMBtu/hr) boiler equipped with a low NO<sub>x</sub> burner*.</p> <p>This NO<sub>x</sub> emission rate range is well below the proposed MAERT NO<sub>x</sub> limit for normal kiln operations of 75.34 lb/hr, which is less than the kiln emission rate of 143.7 lb/hr evaluated in the Air Quality Analysis (AQA) submitted along with the initial application materials. During these kiln heat-up periods, supplemental air will be added to ensure that any combustion emissions are being exhausted. Although stack flow and temperature during these kiln heat-up periods have not been quantified, any reduction in dispersion due to stack flow and/or temperature is not expected to offset the ~13X lower NO<sub>x</sub> emissions expected during planned kiln MSS periods shown in the example below.</p> <p>In addition, the total planned kiln MSS operating hours per year are expected to be not more than 72 hr/yr, which would qualify as an intermittent source under TCEQ and US EPA modeling guidance. The expected planned MSS hours are listed below:</p> <p>Case 1 - Kiln heat-up from cold after major refractory work - estimated to occur once per year at main maintenance stoppage (36 hrs per event)</p>

Source Name	EPN	Best Available Control Technology Description
		<p>Case 2 - Kiln heat-up from cold after maintenance work w/o refractory work - estimated to occur once per year at secondary maintenance stoppage (12 hrs per event)</p> <p>Case 3 - Kiln heat-up from short stoppage for secondary maintenance work not requiring a full cool-down - estimated to occur about four times per year (6 hrs per event)</p> <p>Example Calculation - Maximum heat input during any warm-up case is not expected to exceed 81 MMBtu/hr. Therefore, the maximum NO<sub>x</sub> emissions during warm-up periods are estimated as follows:</p> $81 \text{ MMBtu/hr} * 140 \text{ lb NO}_x/10^6 \text{ scf} / 1020 \text{ Btu/scf} = 11.15 \text{ lb/hr NO}_x$ <p>* It should be noted that the factor used for the qualitative comparison above is conservative in that it reflects a low NO<sub>x</sub> burner for a large (&gt;100 MMBtu/hr) combustion unit; however, given that the kiln burner is a low NO<sub>x</sub> burner rated at less than 100 MMBtu/hr (peak heat input during a start-up is expected to be approximately 81 MMBtu/hr), the NO<sub>x</sub> emissions from the kiln burner during start-up could be as much as 36X lower than the emissions modeled in the AQA.</p>
Clinker Cooler	42-SK-370	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> Baghouse with an outlet grain loading of 0.005 gr/dscf. 5% opacity.
Finish Mill and Air Heater	51-SK-250	15.9 MMBtu/hr heater: <b>NO<sub>x</sub>:</b> 0.01 lb/MMBtu based on the higher heating value of the fuel and the use of a low NO <sub>x</sub> burner.
Crusher, Milling, Raw Material Handling, and Product Handling	BF-Series EPNs (Numerous)	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> Add on control: Baghouse at 0.005 gr/dscf. 5% opacity.
Limestone, Gypsum, High Grade Limestone, and Sand Stockpiles	LS STKPL, ADD STKPL	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> 90% reduction. Stockpiles will be required to be stored within a fully enclosed building.
Ammonia handling	NH3FUG	<b>NH<sub>3</sub>:</b> AVO checks once per shift (28AVO). A control efficiency of 93-97% - dependent on the piping component type.
Emergency Generator Engine	EG-1	<b>Products of combustion:</b>

Source Name	EPN	Best Available Control Technology Description
		Limited to pipeline quality natural gas. Subject to 40 CFR Part 60 JJJJ and Part 63 ZZZZ. Operation is limited to 100 hours per year. A non-resettable hour meter is required in the Special Conditions.
Raw Material Loading	RR_MH, TRK_MH	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> 85% reduction. Partial enclosure defined as consisting of two sided (rail loading) or three-sided walls (truck loading) with fogging nozzles. Dustless telescopic spouts are required be used for loading trucks or rail from bins or silos. 85% is conservative given the additional controls and aspiration on this system.
Raw Material Handling (Crusher Building)	LSCRSHBD_MH	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> 85% reduction. The actual crusher is controlled by a baghouse, this EPN is the dump into the crushing system. Partial enclosure is defined as three-sided walls with fogging nozzles. The operation is represented as taking place within the crusher's building, and the crusher loading hopper will be located below-grade to accommodate trucks dumping mined limestone. Therefore, 85% is expected to be a conservative control efficiency.
Silo Loading	N/A	Dustless telescoping spouts are required for these. This removes the units as potential fugitive dust sources, and emissions would be associated with the baghouses/dust collectors which control these units.
ILE MSS Activities	MSS FUG	<b>Refractory Removal:</b> <b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> Refractory (a bricklike material) is removed as needed for repairs or replacement. Operations taking place inside the kiln or cooler will be enclosed by nature, resulting in a 90% reduction in emissions. Drop into trucks was accounted for with no controls.  <b>Vacuum Truck Loading and Unloading:</b> <b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> Partial enclosure will be utilized for an 85% reduction on loadouts. The trucks have a filter with an outlet grain loading of 0.01 gr/dscf for loading operations.  <b>CEMS Calibration</b> <b>NO<sub>x</sub>, CO, THC, SO<sub>2</sub></b> Emissions are due to the release of calibration gas from the feed analyzers and CEMS unit. No add on controls.

## VII. Air Quality Analysis

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

### A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results indicate that 1-hr SO<sub>2</sub>, 24-hr and annual PM<sub>10</sub>, 24-hr and annual PM<sub>2.5</sub> (NAAQS), 24-hr and annual PM<sub>2.5</sub> (Increment), and 1-hr NO<sub>2</sub> exceed the respective de minimis concentrations and require a full impacts analysis. The De Minimis analysis modeling results for 3-hr, 24-hr, and annual SO<sub>2</sub>, annual NO<sub>2</sub>, and 1-hr and 8-hr CO indicate that the project is below the respective de minimis concentrations and no further analysis is required.

The justification for selecting the EPA's interim 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> De Minimis levels is based on the assumptions underlying EPA's development of the 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> De Minimis levels. As explained in EPA guidance memoranda<sup>1,2</sup>, the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> NAAQS.

The PM<sub>2.5</sub> and ozone De Minimis levels are the EPA recommended De Minimis levels. The use of the EPA recommended De Minimis levels is sufficient to conclude that a proposed source will not cause or contribute to a violation of an ozone and PM<sub>2.5</sub> NAAQS or PM<sub>2.5</sub> PSD increments based on the analyses documented in EPA guidance and policy memoranda<sup>3</sup>.

While the De Minimis levels for both the NAAQS and increment are identical for PM<sub>2.5</sub> in the table below, the procedures to determine significance (that is, predicted concentrations to compare to the De Minimis levels) are different. This difference occurs because the NAAQS for PM<sub>2.5</sub> are statistically-based, but the corresponding increments are exceedance-based.

**Table 1. Modeling Results for PSD De Minimis Analysis  
in Micrograms Per Cubic Meter (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	12	7.8
SO <sub>2</sub>	3-hr	12	25
SO <sub>2</sub>	24-hr	4.5	5
SO <sub>2</sub>	Annual	0.3	1

<sup>1</sup> [www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf](http://www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf)

<sup>2</sup> [www.tceq.texas.gov/assets/public/permitting/air/memos/guidance\\_1hr\\_no2naaqs.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf)

<sup>3</sup> [www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html](http://www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html)

Pollutant	Averaging Time	GLCmax ( $\mu\text{g}/\text{m}^3$ )	De Minimis ( $\mu\text{g}/\text{m}^3$ )
PM <sub>10</sub>	24-hr	10	5
PM <sub>10</sub>	Annual	3	1
PM <sub>2.5</sub> (NAAQS)	24-hr	7.2	1.2
PM <sub>2.5</sub> (NAAQS)	Annual	2.5	0.2
PM <sub>2.5</sub> (Increment)	24-hr	8.7	1.2
PM <sub>2.5</sub> (Increment)	Annual	2.7	0.2
NO <sub>2</sub>	1-hr	19	7.5
NO <sub>2</sub>	Annual	0.4	1
CO	1-hr	769	2000
CO	8-hr	276	500

The GLCmax for 1-hr SO<sub>2</sub>, 1-hr NO<sub>2</sub>, and 24-hr and annual PM<sub>2.5</sub> (NAAQS) are based on the highest five-year averages of the maximum predicted concentrations determined for each receptor. The GLCmax for all other pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

Intermittent guidance was relied on for the 1-hr SO<sub>2</sub> and 1-hr NO<sub>2</sub> PSD De Minimis analyses.

Note the updated NO<sub>x</sub> emission rates for the kiln (EPN 21-SK-230) are less than the representations made in the original modeling demonstration. The applicant did not update the NO<sub>2</sub> modeling for this demonstration. The NO<sub>2</sub> results reported above in Table 1 are conservative.

To evaluate secondary PM<sub>2.5</sub> impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutants impacts from a source. Using data associated with the 500 tpy Parker County source, the applicant estimated 24-hr and annual secondary PM<sub>2.5</sub> concentrations of 0.18949  $\mu\text{g}/\text{m}^3$  and 0.00231  $\mu\text{g}/\text{m}^3$ , respectively. Since the combined direct and secondary 24-hr and annual PM<sub>2.5</sub> impacts are above the De minimis levels, a full impacts analysis is required.

**Table 2. Modeling Results for Ozone PSD De Minimis Analysis  
 in Parts per Billion (ppb)**

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O <sub>3</sub>	8-hr	0.997	1

The applicant performed an O<sub>3</sub> analysis as part of the PSD AQA. The applicant evaluated project emissions of O<sub>3</sub> precursor emissions (NO<sub>x</sub> and VOC) based on a Tier 1 demonstration approach consistent with the EPA's GAQM referred to as MERPs. Using data associated with the 500 tpy and 1000 tpy Parker County source, the applicant estimated an 8-hr O<sub>3</sub> concentration of 0.99718 ppb. When the estimates of ozone concentrations from the project emissions are added together, the results are less than the De Minimis level.

#### **B. Air Quality Monitoring**

The De Minimis analysis modeling results indicate that 24-hr PM<sub>10</sub> exceeds the respective monitoring significance level and requires the gathering of ambient monitoring information.

The De Minimis analysis modeling results indicate that 24-hr SO<sub>2</sub>, annual NO<sub>2</sub>, and 8-hr CO are below their respective monitoring significance level.

**Table 3. Modeling Results for PSD Monitoring Significance Levels**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Significance (µg/m <sup>3</sup> )
SO <sub>2</sub>	24-hr	4.5	13
PM <sub>10</sub>	24-hr	10.1	10
NO <sub>2</sub>	Annual	0.4	14
CO	8-hr	276	575

The GLCmax for all pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

Note the updated NO<sub>x</sub> emission rates for the kiln (EPN 21-SK-230) are less than the representations made in the original modeling demonstration. The applicant did not update the NO<sub>2</sub> modeling for this demonstration. The annual NO<sub>2</sub> result reported above in Table 3 is conservative.

The applicant evaluated ambient PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data to satisfy the requirements for the pre-application air quality analysis.

A background concentration for PM<sub>10</sub> was obtained from the EPA AIRS monitor 481130050 located at 717 South Akard St. Dallas, Dallas County. The high, second high monitored concentration from 2020-2022 was used for the 24-hr value (82 µg/m<sup>3</sup>). The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the



monitor site relative to the project site. The background concentration was also used in the NAAQS analysis.

Background concentrations for PM<sub>2.5</sub> were obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The applicant calculated the three-year average (2020-2022) of the 98<sup>th</sup> percentile of the annual distribution of the 24-hr concentrations for the 24-hr value (20 µg/m<sup>3</sup>). The applicant used a three-year average (2020-2022) of the annual concentrations for the annual value (7.5 µg/m<sup>3</sup>). The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site. The background concentrations were also used in the NAAQS analysis.

Since the project has a net emissions increase of 100 tpy or more of VOC or NO<sub>x</sub>, the applicant evaluated ambient O<sub>3</sub> monitoring data to satisfy the requirements for the pre-application air quality analysis.

The applicant identified the Pilot Point ozone monitor (EPA AQS 481211032) as a conservative monitor for the proposed project site location. The applicant further noted how the Pilot Point monitor is located within the Dallas-Fort Worth (DFW) ozone non-attainment area and summarized the 2020-2022 ozone design value for the monitor without further refinement. The ADMT has reviewed the ozone monitoring data for further refinement and this review is discussed below.

Initially, during the modeling protocol development, the applicant had proposed using the Greenville ozone monitor (EPA AQS 482311006) for the proposed project site location. The ADMT had commented that the proposed project site location is likely to be located downwind of the DFW ozone non-attainment area more often than the selected Greenville monitor, based on wind data, and it is likely that the Greenville monitor would not be representative of the proposed project site location for all wind directions and should not be exclusively used in the pre-application analysis.

The ADMT reviewed monitoring data from two additional ozone monitors to identify ozone concentrations during times when the proposed project site location could have been located downwind of the DFW ozone non-attainment area – the above-mentioned Pilot Point monitor and the Frisco monitor (EPA AQS 480850005). Collectively, the information from these two monitors, along with the Greenville monitor, gives a complete analysis for the proposed project site location.

The Pilot Point ozone monitor is located to the southwest of the proposed project site location. A sector was defined with an origin at the Pilot Point monitor and that covered the extent of the modeled receptor grid surrounding the proposed project site location. The sector was then used to identify wind directions favorable for transport towards the proposed project site location (220–265 degrees). Ozone data were reviewed during these wind directions for years 2020-2022 and the highest fourth highest daily maximum hourly value from all three years was 64 ppb. This would be a conservative metric for the ozone design value; the ozone design value is based on a three-year average of the fourth highest daily maximum rolling 8-hr average.

The Frisco ozone monitor is located to the south-southwest of the proposed project site location. Similar to the Pilot Point ozone monitor described above, a sector was defined with an origin at the Frisco monitor and that covered the extent of the modeled receptor grid surrounding the proposed project site location. The sector was then used to identify wind directions favorable for transport towards the proposed project site location (178–215

degrees). Ozone data were reviewed during these wind directions for years 2020-2022 and the highest fourth highest daily maximum rolling 8-hr average value from all three years was 69 ppb. This would be a conservative metric for the ozone design value; the ozone design value is based on a three-year average of the fourth highest daily maximum rolling 8-hr average.

The Greenville ozone monitor has an ozone design value of 63 ppb for the years 2020-2022.

### C. National Ambient Air Quality Standards (NAAQS) Analysis

The De Minimis analysis modeling results indicate 1-hr SO<sub>2</sub>, 24-hr and annual PM<sub>10</sub>, 24-hr and annual PM<sub>2.5</sub>, and 1-hr NO<sub>2</sub> exceed the respective de minimis concentration and require a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentrations will not result in an exceedance of the NAAQS.

**Table 4. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLCmax] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	11	16	27	196
PM <sub>10</sub>	24-hr	10	82	92	150
PM <sub>2.5</sub>	24-hr	6	20	26	35
PM <sub>2.5</sub>	Annual	2.6	7.5	10.1	12
NO <sub>2</sub>	1-hr	87	see discussion below	87	188

The 1-hr SO<sub>2</sub> GLCmax is the highest five-year average of the 99<sup>th</sup> percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor.

The 24-hr PM<sub>10</sub> GLCmax is the maximum predicted concentration over five years of meteorological data.

The 24-hr PM<sub>2.5</sub> GLCmax is the highest five-year average of the 98<sup>th</sup> percentile of the annual distribution of predicted 24-hr concentrations determined for each receptor.

The annual PM<sub>2.5</sub> GLCmax is the maximum five-year average of the annual concentrations determined for each receptor.

The 1-hr NO<sub>2</sub> GLCmax is the highest five-year average of the 98<sup>th</sup> percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor.

Note the updated NO<sub>x</sub> emission rates for the kiln (EPN 21-SK-230) are less than the representations made in the original modeling demonstration. The applicant did not update the NO<sub>2</sub> modeling for this demonstration. The 1-hr NO<sub>2</sub> result reported above in Table 4 is conservative.

A background concentration for SO<sub>2</sub> was obtained from the EPA AIRS monitor 481390016 located at 2725 Old Fort Worth Rd., Midlothian, Ellis County. A three-year average (2019-2021) of the 99<sup>th</sup> percentile of the annual distribution of daily maximum 1-hr concentrations was used for the 1-hr value. The applicant reviewed more recent monitoring data from EPA AIRS monitor 482570005 and determined the outcome of the analysis would not change. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

A background concentration for NO<sub>2</sub> was obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The applicant determined the 98<sup>th</sup> percentile of the annual distribution of the maximum 1-hr concentrations for each hour of the day (using data from 2020-2022), consistent with EPA guidance. These background values were then used in the model (as hourly background scalars) with the BACKGRND keyword to be combined with model predictions, giving a total predicted concentration. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

As stated above, to evaluate secondary PM<sub>2.5</sub> impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with the 500 tpy Parker County source, the applicant estimated 24-hr and annual secondary PM<sub>2.5</sub> concentrations of 0.18949 µg/m<sup>3</sup> and 0.00231 µg/m<sup>3</sup>, respectively. When these estimates are added to the GLCmax listed in Table 4 above, the results are less than the NAAQS.

#### D. Increment Analysis

The De Minimis analysis modeling results indicate that 24-hr and annual PM<sub>10</sub> and 24-hr and annual PM<sub>2.5</sub> exceed the respective de minimis concentrations and require a PSD increment analysis.

**Table 5. Results for PSD Increment Analysis**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Increment (µg/m <sup>3</sup> )
PM <sub>10</sub>	24-hr	29	30
PM <sub>10</sub>	Annual	3	17
PM <sub>2.5</sub>	24-hr	8.7	9
PM <sub>2.5</sub>	Annual	2.7	4

The GLCmax for 24-hr PM<sub>2.5</sub> and 24-hr PM<sub>10</sub> are the maximum high, second high (H2H) predicted concentrations across five years of meteorological data. The GLCmax for annual PM<sub>10</sub> and PM<sub>2.5</sub> are the maximum predicted concentrations over five years of meteorological data.

The GLCmax for 24-hr and annual PM<sub>2.5</sub> reported in the table above represent the total predicted concentrations associated with modeling the direct PM<sub>2.5</sub> emissions and the

contributions associated with secondary PM<sub>2.5</sub> formation (discussed above in the NAAQS Analysis section).

#### E. Additional Impacts Analysis

The applicant performed an Additional Impacts Analysis as part of the PSD AQA. The applicant conducted a growth analysis and determined that population will not significantly increase as a result of the proposed project. The applicant conducted a soils and vegetation analysis and determined that all evaluated criteria pollutant concentrations are below their respective secondary NAAQS. The applicant meets the Class II visibility analysis requirement by complying with the opacity requirements of 30 TAC Chapter 111. The Additional Impacts Analyses are reasonable and possible adverse impacts from this project are not expected.

The ADMT evaluated predicted concentrations from the proposed project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Wichita Mountains Wilderness, is located approximately 225 kilometers (km) from the proposed site.

The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration of 7 µg/m<sup>3</sup> occurred approximately 243 meters from the property line towards the west. The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration occurring at the edge of the receptor grid, 10.6 km from the proposed sources, in the direction of the Wichita Mountains Wilderness Class I area is 0.526 µg/m<sup>3</sup>. The Wichita Mountains Wilderness Class I area is an additional 214.4 km from the edge of the receptor grid. Therefore, emissions of H<sub>2</sub>SO<sub>4</sub> from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

The predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times, are all less than de minimis levels at a distance of 7.3 km from the proposed sources in the direction of the Wichita Mountains Wilderness Class I area. The Wichita Mountains Wilderness Class I area is an additional 217.7 km from the location where the predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

#### F. Minor Source NSR and Air Toxics Review

**Table 6. Site-wide Modeling Results for State Property Line**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	12	1021
H <sub>2</sub> SO <sub>4</sub>	1-hr	22	50
H <sub>2</sub> SO <sub>4</sub>	24-hr	7	15

**Table 7. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax ( $\mu\text{g}/\text{m}^3$ )	Background ( $\mu\text{g}/\text{m}^3$ )	Total Conc. = [Background + GLCmax] ( $\mu\text{g}/\text{m}^3$ )	Standard ( $\mu\text{g}/\text{m}^3$ )
Pb	3-mo	0.0001	0.02	0.0201	0.15

The 3-mo Pb GLCmax is based on the maximum monthly predicted concentration over a one-year period.

A background concentration for Pb was obtained from the EPA AIRS monitor 480850029 located at 7202 Stonebrook Parkway, Frisco, Collin County. The highest 3-month rolling average from 2020-2022 was used for the 3-month value. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

**Table 8. Minor NSR Site-wide Modeling Results for Health Effects**

Pollutant	CAS#	Averaging Time	GLCmax ( $\mu\text{g}/\text{m}^3$ )	GLCmax Location	ESL ( $\mu\text{g}/\text{m}^3$ )
ammonia	7664-14-7	1-hr	17	Eastern Property Line	180
hydrogen chloride	7647-01-0	1-hr	0.3	--	190
hydrogen chloride	7647-01-0	Annual	0.01	--	7.9
mercury	7439-97-6	1-hr	0.0004	--	0.25
portland cement	65997-15-1	1-hr	53	Southern Property Line	50
portland cement	65997-15-1	Annual	1	15m N	5
silica, crystalline (quartz)	14808-60-7	1-hr	2	Northern Property Line	14
silica, crystalline (quartz)	14808-60-7	Annual	0.07	Southern Property Line	0.27

**Table 9. Minor NSR Hours of Exceedance for Health Effects**

Pollutant	Averaging Time	1 X ESL GLCni
portland cement	1-hr	1

The GLCmax locations are listed in Table 8 above by their approximate distance and direction from the property line of the project site. The GLCmax also represents the GLCni. The GLCmax locations for hydrogen chloride and mercury are not available since the applicant relied on generic modeling (see discussion below).

**G. Greenhouse Gases**

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no National Ambient Air Quality Standard (NAAQS) for GHGs, including no PSD increment. The global climate-change inducing effects of GHG emissions, according to the "Endangerment and Cause or Contribute Finding", are far-reaching and multi-dimensional (75 FR 66497). Climate change modeling and evaluations of risks and impacts are typically conducted for changes in emissions that are orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible [EPA's PSD and Title V Permitting Guidance for GHGs at 48]. Thus, EPA has concluded in other GHG PSD permitting actions it would not be meaningful to evaluate impacts of GHG emissions on a local community in the context of a single permit.

The TCEQ has determined that an air quality analysis would provide no meaningful data and has not required the applicant to perform one. As stated in the preamble to TCEQ's adoption of the GHG PSD program, the impacts review for individual air contaminants will continue to be addressed, as applicable, in the state's traditional minor and major NSR permits program per 30 TAC Chapter 116.

**VIII. Conclusion**

As described above, the applicant has demonstrated that the project meets all applicable rules, regulations and requirements of the State of Texas and the Federal Clean Air Act. The Executive Director's preliminary determination is that the permits should be issued.



**AR-32**

**NAPD Mailing Documentation**

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## EXAMPLE A

### NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR AN AIR QUALITY PERMIT

#### PROPOSED AIR QUALITY PERMIT NUMBERS: 167047 AND PSDTX1602

**APPLICATION AND PRELIMINARY DECISION.** BM Dorchester LLC, 1008 Southview Circle, Center, TX 75935-4537, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047 and Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. This application was submitted to the TCEQ on November 8, 2021. The proposed facility will emit the following air contaminants in a significant amount: carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide and sulfuric acid. In addition, the facility will emit the following air contaminants: hazardous air pollutants and lead.

The degree of PSD increment predicted to be consumed by the proposed facility and other increment-consuming sources in the area is as follows:

#### Sulfur Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
3-hour	12	512
24-hour	4.5	91
Annual	0.3	20

#### PM<sub>10</sub>

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
24-hour	29	30
Annual	3	17

#### Nitrogen Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
Annual	0.4	25

PM<sub>2.5</sub>

Maximum Averaging Time	Maximum Increment Consumed (µg/m <sup>3</sup> )	Allowable Increment (µg/m <sup>3</sup> )
24-hour	8.7	9
Annual	2.7	4

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Dallas/Fort Worth regional office, and at the Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Dallas/Fort Worth Regional Office, 2309 Gravel Drive, Fort Worth, Texas.

**INFORMATION AVAILABLE ONLINE.** These documents are accessible through the Commission's Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, the air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.689632,33.538174&level=13>.

**PUBLIC COMMENT / PUBLIC MEETING.** You may submit public comments to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments in developing a final decision on the application. A public meeting will be held and will consist of two parts, an Informal Discussion Period and a Formal Comment Period. A public meeting is not a contested case hearing under the Administrative Procedure Act. During the Informal Discussion Period, the public will be encouraged to ask questions of the applicant and TCEQ staff concerning the permit application. The comments and questions submitted orally during the Informal Discussion Period will not be considered before a decision is reached on the permit application, and no formal response will be made. Responses will be provided orally during the Informal Discussion Period. During the Formal Comment Period on the permit application, members of the public may state their formal comments orally into the official record. At the conclusion of the comment period, all formal comments will be considered before a decision is reached on the permit application. A written response to all formal comments will be prepared by the executive director and will be sent to each person who submits a formal comment or who requested to be on the mailing list for this permit application and provides a mailing address. Only relevant and material issues raised during the Formal Comment Period can be considered if a contested case hearing is granted on this permit application.

**The Public Meeting is to be held:**

**Monday, March 25, 2024 at 7:00 PM**  
**Hilton Garden Inn Denison/Sherman/At Texoma Event Center**  
**5015 South US 75**  
**Denison, Texas 75020**

Persons with disabilities who need special accommodations at the meeting should call the Office of the Chief Clerk at 512-239-3300 or 1-800-RELAY-TX (TDD) at least five business days prior to the meeting.

You may submit additional written public comments within 30 days of the date of newspaper publication of this notice or by the date of the public meeting, whichever is later.  
in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.

After the deadline for public comment, the executive director will consider the comments and prepare a response to all public comment. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application.**

**OPPORTUNITY FOR A CONTESTED CASE HEARING.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court. **A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; (6) a description of how you use the property which may be impacted by the facility; and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.**

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decisions on the application. The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. Issues that are not submitted in public comments may not be considered during a hearing.

**EXECUTIVE DIRECTOR ACTION.** If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the CID. If any timely hearing requests are received and not withdrawn, the executive director will not issue final approval of the permit and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

**MAILING LIST.** You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

**AGENCY CONTACTS AND INFORMATION.** Public comments and requests must be submitted either electronically at [www14.tceq.texas.gov/epic/eComment/](http://www14.tceq.texas.gov/epic/eComment/), or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from BM Dorchester LLC at the address stated above or by calling Mr. Michael Meister, Trinity Consultants at (361) 883-1668.

Notice Issuance Date: February 8, 2024

THE HONORABLE DREW SPRINGER  
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167047 - PSDTX 1602

STATE

2/9/24

APP-1417

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CITY OF DORCHESTER  
MAYOR  
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DORCHESTER TX 75459-2475

CITY

GRAYSON COUNTY HEALTH DEPARTME  
515 N WALNUT ST  
SHERMAN TX 75090-4952

GRAYSON COUNTY JUDGE  
COUNTY COURTHOUSE - JUSTICE  
100 W HOUSTON ST STE 15  
SHERMAN TX 75090-5958

RED RIVER AUTHORITY OF TEXAS  
PO BOX 240  
WICHITA FALLS TX 76307-0240

PUBLIC HEALTH REGION 2/3  
TEXAS DEPARTMENT OF STATE HEAL  
1301 S BOWEN RD STE 200  
ARLINGTON TX 76013-2262

TEXOMA COUNCIL OF GOVERNMENTS  
1117 GALLAGHER DR STE 100  
SHERMAN TX 75090-3107

US ARMY CORPS OF ENGINEERS  
TULSA DISTRICT - CESWT  
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TULSA OK 74137-4290

FIELD SUPERVISOR  
US FISH & WILDLIFE SERVICE  
STE 1105  
501 W FELIX ST  
FORT WORTH TX 76115-3400

GLENN C CLINGENPEEL  
TRINITY RIVER AUTHORITY OF TEX  
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ARLINGTON TX 76018-1710

CAROLYN FRUTHALER MD DIR  
GRAYSON COUNTY HEALTH AUTHORIT  
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SHERMAN TX 75090-4952

JOHN R PIPES  
COOKE COUNTY ENVIRO HEALTH  
COOKE CO COURTHOUSE  
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GAINESVILLE TX 76240-4717

DREW SATTERWHITE PE GENERA  
RED RIVER GROUNDWATER CONSERVA  
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MS JESSICA STAGGS SUPERVISO  
DALLAS WATER UTILITIES  
4334 SCOTTSDALE DR  
DALLAS TX 75227-4044

COUNTY

THE HONORABLE REGGIE SMITH STATE  
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WILLIES BALLOU  
6007 HWY 289  
HOWE TX 75459-2079

DOUGLAS GLENN BANNER  
146 MIDWAY ACRES DR  
HOWE TX 75459-2482

KELLY DENISE BARNES  
2569 FORD RD  
HOWE TX 75459-2427

ROBERT BAUER  
645 CHOCTAW EST CIR  
SHERMAN TX 75092-7929

HEATHER BEAVER  
245 ROCKPORT RD  
SHERMAN TX 75092-7933

NELSON BEAVER  
245 ROCKPORT RD  
SHERMAN TX 75092-7933

JENNIFER BEECROFT  
861 DERRICK LN  
PROSPER TX 75078-8851

167047-PSD TX 1602  
APP-1418

IP/PROT

2/9/24



DARALD BERGER  
1128 MACGREGOR LN  
GUNTER TX 75058-4253

CLIFF BLACKSTOCK  
1281 VINEYARD RD  
GUNTER TX 75058-3142

MR JAMES C BOLES  
1378 PRESTON MEADOWS RD  
SHERMAN TX 75092-6917

NANCY BOND  
1499 ROCKPORT RD  
SHERMAN TX 75092-7060

NOLAN E BOND  
1499 ROCKPORT RD  
SHERMAN TX 75092-7060

JAN BROOMALL  
ILLUMINED CROSSING LLC  
500 GARVER RD  
MANSFIELD OH 44903-7554

LAFFEL BROWN  
262 MORMAN GROVE RD  
SHERMAN TX 75092-6912

JAMIE BUCKALEW  
1558 WATSON RD  
WHITESBORO TX 76273-5544

CLINT CATCHING  
HOWE ISD  
105 W TUTT ST  
HOWE TX 75459-4702

KRISTIN CHANDLER  
6575 MACKEY RD  
DORCHESTER TX 75459-2467

BOBBY LUKE CHANDLER  
6575 MACKEY RD  
DORCHESTER TX 75459-2467

JERRY W CHAPMAN GENERAL MANAGER  
GREATER TEXOMA UTILITY AUTHORITY  
5100 AIRPORT DR  
DENISON TX 75020-8448

WAYMAN W CHILCUTT  
PO BOX 86  
WHITESBORO TX 76273-0086

JAMES MATT COOPER  
252 FOREST HILLS CIR  
GUNTER TX 75058-3195

CHARLI COTTEN  
75 LAUGHLIN RD  
SHERMAN TX 75092-6942

MATTHEW CRAIN  
13011 FM 902  
DORCHESTER TX 75459-2015

MR JAMES CREWS  
385 MAIN ST  
DORCHESTER TX 75459-2475

MS MELISSA GAIL CRONEY  
327 PRESTON MEADOWS RD  
SHERMAN TX 75092-6955

BRIAN CULP  
657 HIDDEN LAKES BLVD  
GUNTER TX 75058-3242

CHANEL ANN DAVIS  
6123 STATE HIGHWAY 289  
DORCHESTER TX 75459-2081

JEREMY DEVORE  
CITY OF ALLEN  
6386 MACKEY RD  
DORCHESTER TX 75459-2504

MRS BETHANY DEVORE  
6386 MACKEY RD  
DORCHESTER TX 75459-2504

MARY GAIL DEVORE  
11015 FM 902  
DORCHESTER TX 75459-2413

DEIRDRE DIAMOND  
2105 BLEDSOE RD  
GUNTER TX 75058-3015

ROBERT E DRYDEN  
4627 CHEROKEE TRL  
DALLAS TX 75209-1915

JUDY SEARCY DRYDEN  
JJ TRUST  
6 RUE DU LAC ST  
DALLAS TX 75230-2834

BOYD DUNN  
11831 FM 902  
DORCHESTER TX 75459-2421

MICHAEL JOSEPH ELLIOTT  
7V RANCH MICHAEL ELLIOTT  
20975 FM 902  
COLLINSVILLE TX 76233-3739

WILLIAM ENGLE  
2020 PARK RDG  
DENISON TX 75020-7361

LAURA FINCHER  
1549 TIMBERCREEK DR  
HOWE TX 75459-2887

167047 - PSD TX 1602  
APP-1419

IP/PROT

2/9/24

LISA FLAGGERT  
GRACE FARMS MINITURE THERAPY  
130 GREENE RD  
SHERMAN TX 75092

WILLIAM FOSTER  
13044 FM 902  
DORCHESTER TX 75459-2014

LORI GARDNER  
721 LOGANS WAY DR  
PROSPER TX 75078-2529

CHRIS GARDNER  
721 LOGANS WAY DR  
PROSPER TX 75078-2529

LORA GORDON  
607 SPERRY RD  
DORCHESTER TX 75459-2117

MR RICHARD ORAN GROSS  
306 TEE TAW CIR  
SHERMAN TX 75092-7900

MATT GUDGEL  
13006 FM 902  
DORCHESTER TX 75459-2014

GINGER HAM  
1330 FORD RD  
SHERMAN TX 75092-7012

BILLY & CATHEY HAMILTON  
104 GOLDEN RD  
SHERMAN TX 75090-7514

SUNNI HAYES  
497 RIDDELS RD  
SHERMAN TX 75092-7936

MOSES HEJNY  
PO BOX 3298  
SHERMAN TX 75091-3298

MRS LISA HEJNY  
813 SPERRY RD  
DORCHESTER TX 75459-2061

BRYAN HEMMAN  
2100 DEER RUN  
GUNTER TX 75058-4222

JOANN HENSLEY  
224 OLD GUNTER HWY  
SHERMAN TX 75092-7944

DONNA HEPNER  
4304 MACKEY RD  
HOWE TX 75459-2452

AMY HERTEL  
APT 3613  
5001 PAR DR  
DENTON TX 76208-6739

KATERINA HESS  
3405 PORTSMOUTH PL  
SHERMAN TX 75092-6261

JERRY DEAN HESTAND  
BOBCAT UNIVERSE  
PO BOX 883  
HOWE TX 75459-0883

MICHAEL S HIGNIGHT  
600 MORMAN GROVE RD  
SHERMAN TX 75092-7072

CAROL HILL  
1422 HANGING ROCK TRCE  
GUNTER TX 75058-4270

AMY HOLLY  
2400 W SMITH AVE  
BOISE ID 83702-0328

SUZANNE HOOKS  
1501 WOLF RIDGE RUN  
GUNTER TX 75058-4216

JOYCE A HUFF  
1966 OLD SCOGGINS RD  
DORCHESTER TX 75459-1785

ALICE HUGHES  
6733 CALLEJO RD  
GARLAND TX 75044-2803

LINDA K HUNTER  
1273 WALL STREET RD  
GUNTER TX 75058-2041

COLIN DREW HUNTER  
1273 WALL STREET RD  
GUNTER TX 75058-2041

HEATHER JACQUES  
1600 BEARPATH WAY  
GUNTER TX 75058-4209

MIKE JACQUES  
1600 BEARPATH WAY  
GUNTER TX 75058-4209

MR MICHAEL JEFFERSON  
352 WD HILL RD  
SHERMAN TX 75092-7953

SUZANNA DRYDEN JENSEN  
DRYDEN DORCHESTER  
PO BOX 2189  
ADDISON TX 75001-2189

167047-PS DTX 1602  
APP-1420

IP/PART

2/9/24

BRANDON JOHNSON  
999 CYPRESS POINT DR  
GUNTER TX 75058-3235

CARRIE JONES  
1535 PIONEER VLY  
HOWE TX 75459-2826

ELIZABETH JONES  
HWY 289 MORMON GROVE RD  
DORCHESTER TX 75459

ELIZABETH JONES  
PO BOX 331190  
CORPUS CHRISTI TX 78463-1190

DR. RAY M JOSEPH  
KERATEX LP  
STE 100  
7920 PRESTON RD  
PLANO TX 75024-2343

MRS DEBBIE ELAINE JUDKINS  
PO BOX 1168  
HOWE TX 75459-1168

KIMBERLY G KELLEY  
BLDG 1, STE 300  
3711 S MOPAC EXPY  
AUSTIN TX 78746-8013

DINA KENEMORE  
736 CHOCTAW EST CIR  
SHERMAN TX 75092-7930

JAMES KIMBREL  
282 ROCKPORT RD  
SHERMAN TX 75092-6966

LAURA L KING  
1671 TAYLOR RD  
HOWE TX 75459-2517

CODY M KING  
1671 TAYLOR RD  
HOWE TX 75459-2517

KEN KING  
49 HEFLEY RD  
DORCHESTER TX 75459-2436

MRS GERI V KING  
49 HEFLEY RD  
DORCHESTER TX 75459-2436

DEBBIE KIRKPATRICK  
2217 CHIPPEWA HLS  
GUNTER TX 75058-4221

CINDY KVAAL  
500 WD HILL RD  
SHERMAN TX 75092-7964

JASON R LANKFORD  
52 WHITE MOUND RD  
SHERMAN TX 75090-5662

JASON LANKFORD  
11831 FM 902  
DORCHESTER TX 75459-2421

PATSY LEMASTER  
2101 FOX BEND TRCE  
GUNTER TX 75058-4204

TRUDY LUCAS  
LUCAS RANCH  
7322 HWY 289  
DORCHESTER TX 75459-2118

MR BRIAN MAI  
FURIZON LIMITED  
PO BOX 3328  
SHERMAN TX 75091-3328

MICHAEL GENE MARSH  
109 TEE TAW CIR  
SHERMAN TX 75092-6997

MONICA MARTIN  
3000 PRESTON CLUB DR  
SHERMAN TX 75092-8369

MRS PATSY MAULDIN  
310 TEE TAW CIR  
SHERMAN TX 75092-7900

MRS KATHLEEN MCCLURE  
180 CYPRESS POINT DR  
GUNTER TX 75058-3256

LES MCCONNELL  
5202 WILDER TRL  
SHERMAN TX 75092-6411

DIANA MCMAHAN  
10455 COUNTY ROAD 497  
PRINCETON TX 75407-2363

DUSTY MELTON  
1037 SMITH RD  
HOWE TX 75459-2851

JOYCE L MOORE  
1302 LOUROCK ST  
GARLAND TX 75040-4548

JASON MORIN  
100 BURGHLEY CT  
BARTONVILLE TX 76226-6958

MRS SHANDI MORRIS  
1088 PRESTON MEADOWS RD  
SHERMAN TX 75092-6930

167047\_PSB TX 1602  
APP-1421

IP/PROT

2/9/24

KAREN MURPHY  
1321 VINEYARD RD  
GUNTER TX 75058-3111

RICK MYER  
89 HARMON CIR  
HOWE TX 75459-2430

LUCY MYER  
APT 8306  
870 BLASSINGAME AVE  
VAN ALSTYNE TX 75495-2844

MRS SHARON NELSON  
886 LYNCH CROSSING BLVD  
WHITESBORO TX 76273-7106

MS ANDEE LEA ANDERSON NICHOLS  
294 MAIN ST  
DORCHESTER TX 75459-2472

DANNY THOMAS NICHOLS  
294 MAIN ST  
DORCHESTER TX 75459-2472

CHRIS NICOLOFF  
3774 RANGE CREEK RD  
HOWE TX 75459-2050

MARIE NIXON  
361 BLUEBONNET LN  
SHERMAN TX 75092-7919

MARGIE NOEL  
293 NOEL RD  
HOWE TX 75459-2495

BRIAN E NORRIS  
47 TEE TAW CIR  
SHERMAN TX 75092-9511

TERA NORRIS  
47 TEE TAW CIR  
SHERMAN TX 75092-9511

BRANDON NORRIS  
47 TEE TAW CIR  
SHERMAN TX 75092-9511

MR DUNCAN C NORTON  
STE 1900  
816 CONGRESS AVE  
AUSTIN TX 78701-2442

BONITA L OVERBEY  
57 GREEN RD  
SHERMAN TX 75092-7945

TIM OVERBEY  
11831 FM 902  
DORCHESTER TX 75459-2421

BOBBY N OVERBEY SR  
11831 FM 902  
DORCHESTER TX 75459-2421

JEFF OVERSTREET  
995 SPERRY RD  
HOWE TX 75459-2100

NIKOLAUS OWEN  
1901 W SHEPHERD DR  
SHERMAN TX 75092-7047

MRS MARTHA PABEN  
1821 BLEDSOE RD  
GUNTER TX 75058-3216

JAMES PARRISH  
180 TEE TAW CIR  
SHERMAN TX 75092-6998

MRS HOLLAND PAULA  
101 BLUEBONNET LN  
SHERMAN TX 75092-6918

JAVI PINTO  
5315 HIDDEN TRAILS DR  
ARLINGTON TX 76017-2171

ZACH POLING  
FIRST BAPTIST CHURCH DORCHESTER  
11831 FM 902  
DORCHESTER TX 75459-2421

HEATHER PORTSCHE  
FIRST CLASS NORTH TEXAS  
11831 FM 902  
DORCHESTER TX 75459-2421

SHELLY PREWITT  
1525 WATSON RD  
WHITESBORO TX 76273-5542

MR RAY H. PURDOM  
PO BOX 2931  
SHERMAN TX 75091-2931

CYNTHIA REYES  
161 KENNEDY RD  
SHERMAN TX 75092-6949

CINDY & NAIF J RISK  
445 RIDDELS RD  
SHERMAN TX 75092-7936

JUDY CAROL ROBISON  
303 PRIMROSE LN  
SHERMAN TX 75092-6922

DOUGLAS RAY ROBISON  
303 PRIMROSE LN  
SHERMAN TX 75092-6922

167047-PSDTX 1602  
APP-1422

JP/PRAT

2/9/24

KAYLI RUSHING  
313 PRESTON MEADOWS RD  
SHERMAN TX 75092-6955

BETTYE RUSSELL  
219 W WILSON AVE  
SHERMAN TX 75090-9007

MRS LINDA SUE RUSSELL  
9016 MAGUIRES BRIDGE DR  
DALLAS TX 75231-4017

BRIAN RUSSELL  
7308 GREENHAVEN DR  
AUSTIN TX 78757-2151

RUSSELL RUTHERFORD  
708 S CHEROKEE DR  
TIOGA TX 76271-2532

CARRIE SAINDON  
104 MALLARD CT  
GUNTER TX 75058-3270

JOANN SCHNITKER  
179 WEBER DR  
HOWE TX 75459-2093

MS MARY J SCOTT  
448 MORMAN GROVE RD  
SHERMAN TX 75092-6911

ROSA SHELTON  
12944 FM 902  
HOWE TX 75459-2012

LINDA SIMS  
428 PRESTON GLN  
GUNTER TX 75058-9511

SHARON SLAUGHTER  
PO BOX 3204  
SHERMAN TX 75091-3204

THE HONORABLE REGGIE SMITH STATE  
TEXAS HOUSE OF REPRESENTATIVES  
STE 3  
300 N TRAVIS ST  
SHERMAN TX 75090-5925

DAVID SMITH  
QUALITY GRAIN LLC  
PO BOX 151  
HOWE TX 75459-0151

DAVID SMITH  
QUALITY GRAIN LLC  
11652 FM 902  
DORCHESTER TX 75459-2416

DAVID SMITH  
CITY OF DORCHESTER  
373 MAIN ST  
DORCHESTER TX 75459-2475

MR JEFF RANDALL SPENCER  
CLAY PRECISION  
1102 FM 1417 NE  
SHERMAN TX 75090-2704

FRANCES SPRABARY  
94 MIDWAY ACRES DR  
HOWE TX 75459-2481

JAMES STEWART  
269 MAIN ST  
DORCHESTER TX 75459-2473

MRS ALICE STEWART  
269 MAIN ST  
DORCHESTER TX 75459-2473

ROBERT & SHIRLEY STEWART  
1171 ROCKPORT RD  
SHERMAN TX 75092-6907

ROBERT STEWART  
1171 ROCKPORT RD  
SHERMAN TX 75092-6907

STEPHANIE STRAWN  
6334 OB GRONER RD  
SHERMAN TX 75092-7966

DANA STRONG  
PO BOX 829  
GUNTER TX 75058-0829

SATHAPPUN SUBBIAH  
VIVID PARTNERS LLC  
5573 FM 1461  
MCKINNEY TX 75071-3044

JAMES SUTHERLAND  
161 BLUEBONNET LN  
SHERMAN TX 75092-6918

KENNETH & SUE SVEHLAK  
309 CENTRAL HIGH RD  
ENNIS TX 75119-0899

GRIFFIN TAMMY  
451 FARMINGTON RD  
SHERMAN TX 75092-7006

BETTY JEAN TAYLOR  
177 TAYLOR RD  
DORCHESTER TX 75459-2501

MR THOMAS LELAND TAYLOR III  
11451 FM 902  
DORCHESTER TX 75459-2415

CRISTI TENANT  
565 STEWART RD  
SHERMAN TX 75092-6504

167047-PSD TX 1602  
APP-1423

JP/PROT

2/9/24

KRISTI UTLEY  
1716 MACKEY RD  
HOWE TX 75459-2444

DIANA VANBUSKIRK  
1106 N GRANT DR  
SHERMAN TX 75092-5330

DR. RONALD VANBUSKIRK  
1106 N GRANT DR  
SHERMAN TX 75092-5330

DENISE VAWTER  
916 RICKETTS ST  
HOWE TX 75459-4529

MRS MARILYN SUE VEST  
2514 STATE HIGHWAY 289  
SHERMAN TX 75092-6510

LARRY VINCENT  
1471 TAYLOR RD  
HOWE TX 75459-2511

BECKY VINCENT  
1495 TAYLOR RD  
HOWE TX 75459-2511

LARRY VINCENT  
11831 FM 902  
DORCHESTER TX 75459-2421

JIMMY VINCENT  
11831 FM 902  
DORCHESTER TX 75459-2421

JAYMISON BELLA VOTO  
1717 TAYLOR RD  
HOWE TX 75459-2500

MR LEONARD G WALDRUM JR  
1502 PLEASANT HOME RD  
SHERMAN TX 75092-7908

BORMING WANG  
6719 RUTLEDGE RD  
GARLAND TX 75044-2821

BIHFANG WANG  
6719 RUTLEDGE RD  
GARLAND TX 75044-2821

BRIAN WANG  
6719 RUTLEDGE RD  
GARLAND TX 75044-2821

MANUAL WATSON  
200 JARESH LN  
HOWE TX 75459-2120

CYNTHIA WEEMS  
60 TEE TAW CIR  
SHERMAN TX 75092-9510

RUDY WEEMS  
60 TEE TAW CIR  
SHERMAN TX 75092-9510

ROBERT WELCH  
11831 FM 902  
DORCHESTER TX 75459-2421

JOSEPH WHITE  
PO BOX 967  
VAN ALSTYNE TX 75495-0967

JIM WHITTEN  
1303 BIRDS FORT TRL  
ARLINGTON TX 76005-1251

CAROLYN WILDMAN  
6225 STATE HIGHWAY 289  
DORCHESTER TX 75459-2083

TERESA WILDMAN  
5W RANCH  
13852 FM 902  
DORCHESTER TX 75459-2115

KEVIN WILSON  
HOWE INDEPENDENT SCHOOL DISTRICT  
105 W TUTT ST  
HOWE TX 75459-4702

KRISTA LUCAS WYNN  
PO BOX 411  
WHITESBORO TX 76273-0411

ANGELA ZARALLO  
1117 MACGREGOR LN  
GUNTER TX 75058-4246

MRS REBECCA ZEY  
171 GREEN MEADOW CT  
GUNTER TX 75058-3184

167047 PSD TX 1602  
APP-1424

IP/PROT

2/9/24



Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 8, 2024

THE HONORABLE BRUCE DAWSEY  
COUNTY JUDGE  
COUNTY COURTHOUSE  
100 WEST HOUSTON  
SHERMAN TX 75090

Re: Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Judge Dawsey:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. Bm Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 8, 2024

THE HONORABLE DAVID SMITH  
MAYOR OF DORCHESTER  
373 MAIN STREET  
DORCHESTER TX 75459

Re: Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mayor Smith:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. Bm Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at

[www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a long horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

Jon Niermann, *Chairman*  
Emily Lindley, *Commissioner*  
Bobby Janecka, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 8, 2024

MR ERIC BRIDGES  
TEXOMA COUNCIL OF GOVERNMENTS  
1117 GALLAGHER DRIVE, SUITE 470  
SHERMAN TX 75090

Re: Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bridges:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. Bm Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a long horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

**AR-33**

**Amended TCEQ Preliminary Decision and NAPD Notice Package (adding  
clarification of combined NAPD and Public Meeting)**

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 12, 2024

MR JACOB BENDER  
CHIEF FINANCIAL OFFICER  
BM DORCHESTER LLC  
1008 SOUTHVIEW CIR  
CENTER TX 75935-4537

Re: Amended Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bender:

The Texas Commission on Environmental Quality (TCEQ) has made a preliminary decision on the above-referenced application. In accordance with Title 30 Texas Administrative Code § 39.419(b), you are now required to publish Notice of Application and Preliminary Decision. You must provide a copy of this preliminary decision letter with the draft permit at the public place referenced in the public notice.

If you have any questions, please call Mr. Joel Stanford at (512) 239-0270, or write to the TCEQ, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a long horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

cc: Air Section Manager, Region 4 - Dallas/Fort Worth

Project Number: 335160

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 12, 2024

MR JACOB BENDER  
CHIEF FINANCIAL OFFICER  
BM DORCHESTER LLC  
1008 SOUTHVIEW CIR  
CENTER TX 75935-4537

Re: Amended Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bender:

The Texas Commission on Environmental Quality (TCEQ) has completed the technical review of your application and has prepared a preliminary decision and draft permit.

You are now required to publish notice of your proposed activity. To help you meet the regulatory requirements associated with this notice, we have included the following items:

- Notices for Newspaper Publication (Examples A and B)
- Public Notice Checklist
- Instructions for Public Notice
- Affidavit of Publication for Air Permitting (Form TCEQ-20533) and Alternative Language Affidavit of Publication for Air Permitting (Form TCEQ-20534)
- Web link to download Public Notice Verification Form (refer to Public Notice Instructions)
- Notification List
- Draft Permit

Please note that it is **very important** that you follow **all** directions in the enclosed instructions. If you do not, you may be required to republish the notice. A common mistake is the unauthorized changing of notice wording or font. If you have any questions, please contact us before you proceed with publication.

A "Public Notice Checklist" is enclosed which notes the time limitations for each step of the public notice process. **The processing of your application may be delayed if these time limitations are not met (i.e.; submitting proof of publication within 10 business days after publication, affidavits of publication within 30 calendar days after the date of publication, and public notice verification form within 10 business days after the end of the designated comment period).** This checklist should be used as a tool in conjunction with the enclosed, detailed instructions.

If you do not comply with **all** requirements described in the instructions, further processing of your application may be suspended or the agency may take other actions.

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • [tceq.texas.gov](http://tceq.texas.gov)

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printed on recycled paper

APP-1430




Mr. Jacob Bender  
Page 2  
February 12, 2024

Re: Permit: 167047, PSDTX1602

If you have any questions regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300. If you have any other questions, please contact Mr. Joel Stanford at (512) 239-0270.

Sincerely,



Laurie Gharis  
Chief Clerk  
Office of the Chief Clerk  
Texas Commission on Environmental Quality

Enclosure

cc: Air Section Manager, Region 4 - Dallas/Fort Worth  
Air Permits Section Chief, New Source Review Section (6MM-AP), U.S. Environmental Protection  
Agency, Region 6, Dallas

Project Number:335160

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## EXAMPLE A

**AMENDED COMBINED  
NOTICE OF PUBLIC MEETING  
AND  
NOTICE OF APPLICATION AND PRELIMINARY DECISION  
FOR AN AIR QUALITY PERMIT**

**PROPOSED AIR QUALITY PERMIT NUMBERS: 167047 AND PSDTX1602**

**APPLICATION AND PRELIMINARY DECISION.** BM Dorchester LLC, 1008 Southview Circle, Center, TX 75935-4537, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047 and Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. This application was submitted to the TCEQ on November 8, 2021. The proposed facility will emit the following air contaminants in a significant amount: carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide and sulfuric acid. In addition, the facility will emit the following air contaminants: hazardous air pollutants and lead.

The degree of PSD increment predicted to be consumed by the proposed facility and other increment-consuming sources in the area is as follows:

**Sulfur Dioxide**

<b>Maximum Averaging Time</b>	<b>Maximum Increment Consumed (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Allowable Increment (<math>\mu\text{g}/\text{m}^3</math>)</b>
3-hour	12	512
24-hour	4.5	91
Annual	0.3	20

**PM<sub>10</sub>**

<b>Maximum Averaging Time</b>	<b>Maximum Increment Consumed (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Allowable Increment (<math>\mu\text{g}/\text{m}^3</math>)</b>
24-hour	29	30
Annual	3	17

**Nitrogen Dioxide**

<b>Maximum Averaging Time</b>	<b>Maximum Increment Consumed (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Allowable Increment (<math>\mu\text{g}/\text{m}^3</math>)</b>
Annual	0.4	25

PM<sub>2.5</sub>

Maximum Averaging Time	Maximum Increment Consumed (µg/m <sup>3</sup> )	Allowable Increment (µg/m <sup>3</sup> )
24-hour	8.7	9
Annual	2.7	4

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Dallas/Fort Worth regional office, and at the Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Dallas/Fort Worth Regional Office, 2309 Gravel Drive, Fort Worth, Texas.

**INFORMATION AVAILABLE ONLINE.** These documents are accessible through the Commission's Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, the air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.689632,33.538174&level=13>.

**PUBLIC COMMENT / PUBLIC MEETING.** You may submit public comments to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments in developing a final decision on the application. A public meeting will be held and will consist of two parts, an Informal Discussion Period and a Formal Comment Period. A public meeting is not a contested case hearing under the Administrative Procedure Act. During the Informal Discussion Period, the public will be encouraged to ask questions of the applicant and TCEQ staff concerning the permit application. The comments and questions submitted orally during the Informal Discussion Period will not be considered before a decision is reached on the permit application, and no formal response will be made. Responses will be provided orally during the Informal Discussion Period. During the Formal Comment Period on the permit application, members of the public may state their formal comments orally into the official record. At the conclusion of the comment period, all formal comments will be considered before a decision is reached on the permit application. A written response to all formal comments will be prepared by the executive director and will be sent to each person who submits a formal comment or who requested to be on the mailing list for this permit application and provides a mailing address. Only relevant and material issues raised during the Formal Comment Period can be considered if a contested case hearing is granted on this permit application.

**The Public Meeting is to be held:**

**Monday, March 25, 2024 at 7:00 PM  
Hilton Garden Inn Denison/Sherman/At Texoma Event Center  
5015 South US 75  
Denison, Texas 75020**

Persons with disabilities who need special accommodations at the meeting should call the Office of the Chief Clerk at 512-239-3300 or 1-800-RELAY-TX (TDD) at least five business days prior to the meeting.

**You may submit additional written public comments within 30 days of the date of newspaper publication of this notice or by the date of the public meeting, whichever is later in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

After the deadline for public comment, the executive director will consider the comments and prepare a response to all public comment. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application.**

**OPPORTUNITY FOR A CONTESTED CASE HEARING.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court. **A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; (6) a description of how you use the property which may be impacted by the facility; and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.**

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decisions on the application. The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. Issues that are not submitted in public comments may not be considered during a hearing.

**EXECUTIVE DIRECTOR ACTION.** If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the CID. If any timely hearing requests are received and not withdrawn, the executive director will not issue final approval of the permit and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

**MAILING LIST.** You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

**AGENCY CONTACTS AND INFORMATION.** Public comments and requests must be submitted either electronically at [www14.tceq.texas.gov/epic/eComment/](http://www14.tceq.texas.gov/epic/eComment/), or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from BM Dorchester LLC at the address stated above or by calling Mr. Michael Meister, Trinity Consultants at (361) 883-1668.

*Amended Notice Issuance Date: February 12, 2024*

## Example B

### Publication Elsewhere in the Newspaper:

**TO ALL INTERESTED PERSONS AND PARTIES:**

BM Dorchester LLC, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit Number 167047 and Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, which would authorize construction of a Portland Cement at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. Additional information concerning this application is contained in the public notice section of this newspaper.

3"  
minimum

← Minimum 2 column widths or 4 inches →

**Public Notice Checklist**  
**Notice of Application and Preliminary Decision for an Air Quality Permit**  
**(2nd Notice)**

The following tasks must be completed for public notice. If publication in an alternative language is required, please complete the tasks for both the English and alternative language publications. Detailed instructions are included in the "Instructions for Public Notice" section of this package.

<b>Within 33 calendar days after date of this letter</b>
<p>Publish <i>Notice of Application and Preliminary Decision for an Air Quality Permit</i> in the same newspaper(s) in which you published <i>Notice of Receipt of Intent to Obtain Permit</i> for this application.</p> <ul style="list-style-type: none"><li>- Example A must be published in "public notice" section of newspaper. Review for accuracy prior to publishing.</li><li>- Example B (if applicable) must be published in prominent location (other than "public notice") in same issue of newspaper</li><li>- As part of the expedited permitting process, it is recommended that you publish immediately.</li></ul> <p>Provide copy of the complete application, the executive director's preliminary decision (including the draft permit), and the executive director's preliminary determination summary and executive director's air quality analysis, including any revisions, at a public place for review and copying. Keep them there for duration of the designated comment period. The public place should provide public access to the internet.</p>
<b>First day of newspaper publication</b>
<p>Review published newspaper notice for accuracy. If errors, contact Air Permits Division.</p> <p>Ensure copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) are at the public place.</p> <p>It is recommended that the signs from the first notice be in place and the lettering must remain legible and visible until 30 days after publication of the <i>Notice of Application and Preliminary Decision</i> (either English or alternative language notice, whichever is later).</p>
<b>Within 10 business days after date of publication</b>
<p>Proof of publication showing publication date and newspaper name should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="padding-left: 40px;">Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of newspaper clippings showing publication date and newspaper name to persons listed on <i>Notification List</i>.</p>
<b>Within 30 calendar days after date of publication</b>
<p>Affidavit of publication for air permitting and alternative language affidavit of publication for air permitting (if applicable) should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="padding-left: 40px;">Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of affidavits to persons listed on <i>Notification List</i>.</p>
<b>Within 10 business days after end of the designated comment period</b>
<p>Public Notice Verification Form should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="padding-left: 40px;">Texas Commission on Environmental Quality Office of the Chief Clerk, MC-105 Attn: Notice Team / AIR Expedited Permitting P.O. Box 13087 Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of Public Notice Verification Form to persons listed on <i>Notification List</i>.</p>



# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## Instructions for Public Notice For New Source Review & Prevention of Significant Deterioration Air Permit

### Notice of Application and Preliminary Decision

We have completed the technical review of your application and issued a preliminary decision. You must comply with the following instructions:

#### Review Notice

Included in the notice is all of the information which the commission believes is necessary to effectuate compliance with applicable public notice requirements. Please read it carefully and notify the Texas Commission on Environmental Quality (TCEQ) immediately if it contains any errors or omissions. You are responsible for ensuring the accuracy of all information published. You may not change the text of the notice without prior approval from the TCEQ.

#### Newspaper Notice

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* within **33 calendar days** after the date this information was mailed to you (see date of letter). As part of the expedited permitting process, it is recommended that you publish immediately.
- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* at your expense, in the same newspaper(s) in which you published the *Notice of Receipt and Intent to Obtain Permit* for this application. The newspaper must be a newspaper that is of general circulation in the municipality where the facility is or will be located. If the facility is not located within a municipality, the newspaper must be of general circulation in the municipality nearest the location.
- You must publish this notice in one issue of any applicable newspaper.
- You will find two example notices enclosed in this package. *Example A* must be published in the "public notice" section of the newspaper. The phrase "Example A" is not required to be published. *Example B* must be published in the **same issue** of the newspaper as *Example A*; however, it must be published in a prominent location (other than the public notice section). *Example B* refers the public to the "public notice" section of the newspaper where *Example A* provides more information regarding the permit application.
- *Example B* must be a total of at least **6 column inches (standard advertising units)** with a height of at least **3 inches** and a horizontal dimension of **2 column widths**. If the newspaper chosen does not use standard advertising units for measurement, the notice must be at least **12 square inches** with the shortest side of at least **3 inches**.
- The bold text of the enclosed notice **must be** printed in the newspaper in a font style or size that distinguishes it from the rest of the notice (i.e., **bold**, *italics*). **Failure to do so may require re-notice.**

## Alternative Language Notice

In certain circumstances, applicants for air permits must complete notice in alternative languages.

- Public notice rules require the applicant to determine whether a bilingual program is required at either the elementary or middle school nearest to the facility or proposed facility location. Bilingual education programs are determined on a district-wide basis. When students who are required to attend either school are eligible to be enrolled in a bilingual education program, some alternative language notice is required (newspaper notice).
- Since the school district, and not the schools, must provide the bilingual education program, these programs do not have to be located at the elementary or middle school nearest to the facility or proposed facility to trigger the alternative language notice requirement. If there are students who would normally attend the nearest schools eligible to be taught in a bilingual education program at a different location, alternative language notice is required.
- If triggered, publications of alternative language notices must be made in a newspaper or publication printed primarily in each language taught in the bilingual education program. The same newspaper(s) used for *Notice of Receipt and Intent to Obtain Permit* must be used for publication of the *Notice of Application and Preliminary Decision for an Air Quality Permit*. This notice is required if such a newspaper or publication exists in the municipality or the county where the facility is or will be located.
- The applicant must demonstrate a good faith effort to identify a newspaper or publication in the required language. If a newspaper or publication of general circulation published at least once a month in such language cannot be found, publishing in that language is not required, but signs must remain posted in the same location(s) utilized during the *Notice of Receipt of Intent to Obtain Permit* (1<sup>st</sup> public notice).
- Publication in an alternative language section or insertion within an English language newspaper does not satisfy these requirements.
- The applicant has the burden to demonstrate compliance with these requirements. You must fill out the **Public Notice Verification Form (Form TCEQ-20244)** indicating your compliance with the requirements regarding publication in an alternative language. **This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).**
- It is suggested the applicant work with the local school district to do the following:
  - (a) determine if a bilingual program is required in the district;
  - (b) determine which language is required by the bilingual program;
  - (c) locate the nearest elementary and middle schools; and
  - (d) determine if any students attending either school are entitled to be enrolled in a bilingual educational program.
- **If you determine that you must meet the alternative language notice requirements after receipt of the full public notice package, you are responsible for ensuring that the publication in the alternative language is complete and accurate in that language. Spanish notice templates are available through the Air Permits Division Web site at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html). All italic notes should be replaced with the corresponding Spanish translations for the specific application and published in the alternative language publication. Email a copy to Air Permits Division staff.**
- If you are required to publish notice in a language other than Spanish, you must translate the entire public notice at your own expense.

### Public Comment Period

- The public comment period will last at least **30 calendar days after publication of the last notice**.
- The comment period will be longer if the last day of the public comment period ends on a weekend or a holiday. In this case, the comment period will end on the next business day.
- The comment period for the permit may lengthen depending on whether a public meeting is held. If a public meeting is held, the comment period will be extended to the later of either the date of the public meeting or the end of the second notice period.

### Proof of Publication

- Check each publication to ensure that the articles were accurately published. If a notice was not published correctly you may be required to republish.
- For each newspaper in which you published, you must submit proof of publication that shows the notice, the date of publication, and the name of the newspaper to the Office of the Chief Clerk within **10 business days** after the date of publication. Acceptable proofs of publication are 1) copies of the published notice or 2) the newspaper clippings of the published notice. If you choose to submit copies of the published notice to the Office of the Chief Clerk, copies must be on standard-size 8½" x 11" paper and must show the actual size of the published notice (do not reduce the image when making copies). Published notices longer than 11" must be copied onto multiple 8½" x 11" pages. Please note, submitting a copy of your published notice could result in faster processing of your application. It is recommended that you maintain newspaper clippings or tear sheets of the notice for your records.
- You must submit an **affidavit of publication for air permitting and alternate language affidavit of publication for air permitting (if applicable)** to the Office of the Chief Clerk within **30 calendar days** after the date of publication. **You must use the enclosed affidavits of publication.** The affidavits must clearly identify the applicant's name and permit number. You are encouraged to submit the affidavit with the proof of publication described above.
- You must submit the **Public Notice Verification Form (Form TCEQ-20244)** to the Office of the Chief Clerk within **10 business days** of the end of this public comment period. You must use this form to certify that you have met alternative language notice requirements. **This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).**
- The **affidavits of publication, Public Notice Verification Form, and acceptable proof of publication of the published notices** should be emailed to [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov) or mailed to:

Texas Commission on Environmental Quality  
Office of the Chief Clerk, MC-105  
Attn: Notice Team / AIR Expedited Permitting  
P.O. Box 13087  
Austin, Texas 78711-3087

- Please ensure that the affidavit(s) you send to the Chief Clerk have all blanks filled in correctly.
- Photocopies of newspaper clippings, affidavits, and verifications must also be sent to those listed on the enclosed *Notification List* within the deadlines specified above.

### Failure to Publish and Submit Proof of Publication

You must meet all publication requirements. **If you fail to publish the notice or submit proof of publication on time**, the TCEQ may suspend further processing on your application or take other actions.

### **Sign Posting**

It is recommended that the signs that were put in place prior to publication of the first notice remain in place and be legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).

### **Application in a Public Place**

- You must provide a copy of the complete application, the executive director's preliminary decision (including the draft permit), the executive director's preliminary determination summary and the executive director's air quality analysis, (including any subsequent revisions), at a public place for review and copying by the public. This place must be in the county in which the facility is located or proposed to be located.
- A public place is one that is publicly owned or operated (ex: libraries, county courthouses, or city halls). Location selected must provide public access to the internet.
- This copy must be accessible to the public for review and copying. The copy must be available beginning on the first day of newspaper publication and remain in place until the commission has taken action on the application or the commission refers issues to the State Office of Administrative Hearings.
- If the application is submitted to the TCEQ with information marked as "CONFIDENTIAL," you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: "Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the Texas Commission on Environmental Quality, Public Information Coordinator, MC-197, P.O. Box 13087, Austin, Texas 78711-3087."
- You must submit verification of file availability using the ***Public Notice Verification Form (Form TCEQ-20244)*** within **10 business days** after end of the publications' designated comment period. Do not submit the form verifying that the application was in a public place until after the comment period is complete. If a public meeting is held or second notice is required causing the public comment period to be extended, at a later date you will be required to verify that the application was in a public place during the entire public comment period. **This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).**

### **General Information**

When contacting the Commission regarding this application, please refer to the permit number at the top of the *Notice of Application and Preliminary Decision*.

If you have questions or need assistance regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300 or the project reviewer listed in the cover letter.

TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

### AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §

COUNTY OF \_\_\_\_\_ §

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_, who being by me duly sworn, deposes and says that (s)he is (Name  
of Person Representing Newspaper)

the \_\_\_\_\_ of the \_\_\_\_\_  
(Title of Person Representing Newspaper) (Name of the Newspaper)

that said newspaper is generally circulated in \_\_\_\_\_, Texas;  
(The municipality or nearest municipality to the location of the facility or the proposed facility)

that the enclosed notice was published in said newspaper on the following date(s):  
\_\_\_\_\_

\_\_\_\_\_  
(Newspaper Representative's Signature)

Subscribed and sworn to before me this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
to certify which witness my hand and seal of office.

[Affix Seal]

\_\_\_\_\_  
Notary Public in and for the State of Texas

\_\_\_\_\_  
Print or Type Name of Notary Public

\_\_\_\_\_  
My Commission Expires

TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

**ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING**

**STATE OF TEXAS §**

**COUNTY OF \_\_\_\_\_ §**

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_, who being by me duly sworn, deposes and says that (s)he is (*Name of Person Representing Newspaper*)

the \_\_\_\_\_ of the \_\_\_\_\_;  
(*Title of Person Representing Newspaper*) (*Name of the Newspaper*)

that said newspaper is generally circulated in \_\_\_\_\_, Texas;  
(*The municipality or county in which the facility or proposed facility is located*)

that the enclosed notice was published in said newspaper on the following date(s):

\_\_\_\_\_  
(*Newspaper Representative's Signature*)

Subscribe and sworn to before me this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
to certify which witness my hand and seal of office.

[Affix Seal]

\_\_\_\_\_  
Notary Public in and for the State of Texas

\_\_\_\_\_  
Print or Type Name of Notary Public

\_\_\_\_\_  
My Commission Expires



## Notification List

It is the responsibility of the applicant to furnish the following offices with copies of the notices published, the *Affidavit of Publication for Air Permitting*, the *Alternative Language Affidavit of Publication for Air Permitting* (if applicable), and a completed copy of the *Public Notice Verification Form* (Form TCEQ-20244). Acceptable proof of publication and any affidavits and Form TCEQ-20244 should be emailed to [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov) or mailed to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, AIR Expedited Permitting, P.O. Box 13087, Austin, Texas 78711-3087.

**Electronic copies** should be submitted via email to the U.S. Environmental Protection Agency (EPA), **Region 6** at [R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov). Please contact Ms. Aimee Wilson ([wilson.aimee@epa.gov](mailto:wilson.aimee@epa.gov)) at (214) 665-7596 if you have any questions pertaining to electronic submittals to the EPA.

**Email copies to Mr. Joel Stanford at** [Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov)

**Hard copies** should be sent to the following:

Texas Commission on Environmental Quality  
Dallas/Fort Worth Regional Office  
2309 Gravel Dr  
Fort Worth, Texas 76118-6951

Texas General Land Office  
Upland Leasing Team Leader  
Professional Services  
P.O. Box 12873  
Austin, Texas 78711-2873

The Honorable Bruce Dawsey  
County Judge  
County Courthouse  
100 West Houston  
Sherman, TX 75090

The Honorable David Smith  
Mayor of Dorchester  
373 Main Street  
Dorchester, TX 75459

**AR-34**  
**Draft Permit**

### **Special Conditions**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

#### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

#### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

#### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	--	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	--	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The following additional requirements apply:
- A. The engine shall be equipped with a non-resettable hour meter.
  - B. Compliance with the emission limits referenced by paragraph B of this Special Condition shall be demonstrated by retaining a copy of the manufacturer's certificate of conformity, or through other methods receiving prior written approval of the TCEQ Executive Director.

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.002
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.005
10-BF-140	Material Transfer (LS to Storage)	0.005
12-BF-140	Additive Unloading (Rail)	0.005
11-BF-270	Material Transfer (LS to Hopper)	0.005

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
11-BF-285	Material Transfer (LS to Hopper)	0.005
12-BF-315	Truck Unloading	0.005
12-BF-325	Material Transfer (Rail Add. to Storage)	0.005
12-BF-360	Material Transfer (Truck Add. to Storage)	0.005
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.005
13-BF-500	Raw Mill Feed Bin Building	0.005
20-BF-010	Raw Mill Building	0.005
20-BF-182	Raw Mill Building	0.005
20-BF-360	Raw Mill Building	0.005
21-BF-330	Top of CKD Bin	0.005
22-BF-060	Bottom of Raw Meal Silo	0.005
22-BF-080	Preheater Tower	0.005
22-BF-160	Top of Raw Meal Silo	0.005
22-BF-385	Top of Surge Bin (RM Silo)	0.005
30-BF-260	Bottom of Preheater Tower	0.005
30-BF-320	Top of Preheater Tower	0.005
42-BF-270	Cooler Discharge	0.005
41-BF-130	Top of Bin (Bypass Dust)	0.005
44-BF-030	Top of Clinker Silo Baghouse	0.005
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.005
50-BF-050	Top of Clinker Feed Bin	0.005
50-BF-020	Top of Gypsum Feed Bin	0.005
50-BF-350	Cement Feed Bin Extraction	0.005
51-BF-050	Cement Mill Building	0.005
51-BF-140	Cement Mill Building	0.005
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.005
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.005
52-BF-110	Top of Cement Silo 1	0.005
53-BF-110	Top of Cement Silo 2	0.005
52-BF-190	Top of Surge Bin (CM Silo-1)	0.005



EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.005
52-BF-270	Loadout System (CM Silo-1)	0.005
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.005

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements:

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Limestone Stockpiles 1 and 2, the Gypsum Stockpile, the High Grade Limestone Stockpile, the Sand Stockpile, and in general all incoming raw materials shall be stored in fully enclosed storage buildings.
16. The following material handling operations shall utilize the specified controls:

**Table 3: Material Handling Operation Controls**

EPN	Source Name	Controls
TRK_MH	Additive - Material Handling Truck Unloading	Three-sided walls and fogging nozzles.
RR_MH	Additive - Material Handling Rail Unloading	Two-sided walls and fogging nozzles.
LSCRSHBD_MH	Limestone – Material Handling LS Crusher Building	Three-sided walls and fogging nozzles.

Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.

17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.
19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.
20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

#### **Cement Kiln Selective Catalytic Reduction**

22. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

#### **Planned Maintenance, Startup, and Shutdown**

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:

- A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.
25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
- A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
- A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### **Ammonia Handling**

##### **Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO**

27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
- A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per shift.
  - B. Immediately, but no later than 1 hour upon detection of a leak, plant personnel shall take at least one of the following actions:

- (1) Isolate the leak.
- (2) Commence repair or replacement of the leaking component.
- (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### **Initial Demonstration of Compliance**

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 43. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### **Sampling Requirements**

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate

sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.

31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:
  - A. Date for pretest meeting;
  - B. Date sampling will occur;
  - C. Points or sources to be sampled;
  - D. Name of firm conducting sampling;
  - E. Type of sampling equipment to be used; and
  - F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

One copy to each appropriate local air pollution control program with jurisdiction.

38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.
39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

**Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
  - A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:



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- (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.
- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
  - D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
  - F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 42, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.

- B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).
- Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.
- Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.
- C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.
44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.
45. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
- B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
- (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
- (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> stack concentration or greater.
- C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
- D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings

- (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
- E. The permit holder may establish a correlation between the maximum  $\text{NH}_3$  stack concentration limit and maximum  $\text{NH}_3$  injection rate or other surrogate parameter that may be monitored to determine compliance with  $\text{NH}_3$  stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - F. Other alternative methods used for measuring  $\text{NH}_3$  stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the

emission point. If visible emissions are observed from the emission point, the owner or operator shall:

- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or
  - B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).

#### **Recordkeeping Requirements**

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;

- C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);
  - E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;
  - H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 23-26 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### **Reporting Requirements**

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.

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- D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.
54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

**Greenhouse Gases Special Conditions**

55. Emissions from the Kiln exhaust shall not exceed the following limits:



Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 28 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 28, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of ±15 percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### **Greenhouse Gases Recordkeeping Requirements**

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require

authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.

59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
  - C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
    - (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
    - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
    - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

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**Inherently Low Emitting (ILE) Maintenance Activities**

<b>Planned Maintenance Activity</b>	<b>Pollutant</b>					
	<b>VOC</b>	<b>NOx</b>	<b>CO</b>	<b>PM</b>	<b>SO2</b>	<b>CO2</b>
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:

# Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 167047 and PSDTX1602

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	NO <sub>x</sub>	75.34	289.00
		SO <sub>2</sub>	83.33	213.31
		H <sub>2</sub> SO <sub>4</sub>	152.76	58.66
		HCl	2.38	10.41
		CO	1249.88	1599.84
		PM	41.66	159.98
		PM <sub>10</sub>	41.66	159.98
		PM <sub>2.5</sub>	41.66	159.98
		Pb	0.01	0.04
		Hg	<0.01	0.01
		VOC	25.24	100.49
		NH <sub>3</sub>	12.95	56.72
51-SK-250	Finish Mill Baghouse Stack	NO <sub>x</sub>	0.16	0.70
		SO <sub>2</sub>	<0.01	0.04
		CO	1.31	5.74
		PM	3.23	14.13
		PM <sub>10</sub>	3.23	14.13
		PM <sub>2.5</sub>	3.23	14.13
		VOC	0.09	0.38
10-BF-035	Crusher Building Baghouse Stack	PM	1.36	5.97
		PM <sub>10</sub>	1.36	5.97
		PM <sub>2.5</sub>	1.36	5.97
10-BF-140	Material Transfer (LS to Storage) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.25	1.11
12-BF-140	Additive Unloading (Rail) Baghouse Stack	PM	0.25	1.11
		PM <sub>10</sub>	0.25	1.11
		PM <sub>2.5</sub>	0.25	1.11
11-BF-270	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
11-BF-285	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-315	Truck Unloading Baghouse Stack	PM	0.76	3.31
		PM <sub>10</sub>	0.76	3.31
		PM <sub>2.5</sub>	0.76	3.31
12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-030	Raw Mill Feed (Top of Bin Baghouse) Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
13-BF-500	Raw Mill Feed Bin Building Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
20-BF-010	Raw Mill Building Baghouse Stack	PM	0.30	1.33
		PM <sub>10</sub>	0.30	1.33

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.30	1.33
20-BF-182	Raw Mill Building Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
20-BF-360	Raw Mill Building Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
21-BF-330	Top of CKD Bin Baghouse Stack	PM	0.08	0.33
		PM <sub>10</sub>	0.08	0.33
		PM <sub>2.5</sub>	0.08	0.33
22-BF-060	Bottom of Raw Meal Silo Baghouse Stack	PM	0.23	0.99
		PM <sub>10</sub>	0.23	0.99
		PM <sub>2.5</sub>	0.23	0.99
22-BF-080	Preheater Tower Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
22-BF-160	Top of Raw Meal Silo Baghouse Stack	PM	0.38	1.66
		PM <sub>10</sub>	0.38	1.66
		PM <sub>2.5</sub>	0.38	1.66
22-BF-385	Top of Surge Bin (RM Silo) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
30-BF-260	Bottom of Preheater Tower Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
30-BF-320	Top of Preheater Tower Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50



Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.11	0.50
42-BF-270	Cooler Discharge Baghouse Stack	PM	0.16	0.72
		PM <sub>10</sub>	0.16	0.72
		PM <sub>2.5</sub>	0.16	0.72
41-BF-130	Top of Bin (Bypass Dust) Baghouse Stack	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22
44-BF-030	Top of Clinker Silo Baghouse Stack	PM	0.63	2.76
		PM <sub>10</sub>	0.63	2.76
		PM <sub>2.5</sub>	0.63	2.76
44-BF-185	Transfer Tower (Clinker Storage and Handling) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
50-BF-050	Top of Clinker Feed Bin Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
50-BF-020	Top of Gypsum Feed Bin Baghouse Stack	PM	0.09	0.39
		PM <sub>10</sub>	0.09	0.39
		PM <sub>2.5</sub>	0.09	0.39
50-BF-350	Cement Feed Bin Extraction Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
51-BF-050	Cement Mill Building Baghouse Stack	PM	0.30	1.32
		PM <sub>10</sub>	0.30	1.32
		PM <sub>2.5</sub>	0.30	1.32
51-BF-140	Cement Mill Building Baghouse Stack	PM	0.23	1.01
		PM <sub>10</sub>	0.23	1.01

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM <sub>2.5</sub>	0.23	1.01
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse Stack	PM	0.14	0.61
		PM <sub>10</sub>	0.14	0.61
		PM <sub>2.5</sub>	0.14	0.61
52-BF-110	Top of Cement Silo 1 Baghouse Stack	PM	0.43	1.88
		PM <sub>10</sub>	0.43	1.88
		PM <sub>2.5</sub>	0.43	1.88
53-BF-110	Top of Cement Silo 2 Baghouse Stack	PM	0.40	1.77
		PM <sub>10</sub>	0.40	1.77
		PM <sub>2.5</sub>	0.40	1.77
52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
52-BF-270	Loadout System (CM Silo-1) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
53-BF-270	Loadout System (CM Silo-2) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
LSCRSHBD_MH	Limestone - Material Handling LS Crusher Building (5)	PM	0.04	0.15
		PM <sub>10</sub>	0.02	0.07
		PM <sub>2.5</sub>	<0.01	0.01
TRK_MH	Additive - Material Handling Truck Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
RR_MH	Additive - Material Handling Rail Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
LS_STKPL	Limestone Stockpile 1 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
LS_STKPL	Limestone Stockpile 2 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
ADD_STKPL	Gypsum Stockpile (5)	PM	0.03	0.11
		PM <sub>10</sub>	0.01	0.06
		PM <sub>2.5</sub>	0.002	0.01
ADD_STKPL	High Grade Limestone Stockpile (5)	PM	0.05	0.20
		PM <sub>10</sub>	0.02	0.10
		PM <sub>2.5</sub>	<0.01	0.02
ADD_STKPL	Sand Stockpile (5)	PM	0.02	0.09
		PM <sub>10</sub>	0.01	0.05
		PM <sub>2.5</sub>	<0.01	0.01
EG-1	Emergency Generator Engine	NO <sub>x</sub>	8.87	0.44
		SO <sub>2</sub>	<0.01	<0.01
		CO	17.74	0.89

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM	0.14	0.01
		PM <sub>10</sub>	0.14	0.01
		PM <sub>2.5</sub>	0.14	0.01
		VOC	4.58	0.23
NH3FUG	NH3 Fugitives (5)	NH <sub>3</sub>	0.06	0.28
MSSFUG	ILE MSS Activities	NO <sub>x</sub>	<0.01	<0.01
		SO <sub>2</sub>	<0.01	<0.01
		CO	<0.01	<0.01
		PM	0.81	0.77
		PM <sub>10</sub>	0.66	0.76
		PM <sub>2.5</sub>	0.28	0.38
		VOC	<0.01	<0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
SO<sub>2</sub> - sulfur dioxide  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
HCl - hydrogen chloride  
H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
Pb - Lead  
Hg - Mercury  
NH<sub>3</sub> - ammonia  
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.  
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: DRAFT

Emission Sources - Maximum Allowable Emission Rates  
Permit Number GHGPSDTX212

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities authorized by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	CO <sub>2e</sub>	-	981,402.53
51-SK-250	Finish Mill Baghouse Stack	CO <sub>2e</sub>	-	8,210.12
EG-1	Emergency Generator Engine	CO <sub>2e</sub>	-	42.25

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO<sub>2e</sub> - carbon dioxide equivalents based on the following Global Warming Potentials (GWP) found in Table A-1 of Subpart A 40 CFR Part 98 (78 FR 71904) for each pollutant: CO<sub>2</sub> (1), N<sub>2</sub>O (298), CH<sub>4</sub>(25)
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.

Date:           DRAFT

**AR-35**

**Preliminary Determination Summary**



## Preliminary Determination Summary

Bm Dorchester LLC

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

### I. Applicant

BM Dorchester LLC  
1008 Southview Cir  
Center, TX 75935-4537

### II. Project Location

Portland Cement Plant

Located at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road

Dorchester, Grayson County, Texas 75459

### III. Project Description

The Applicant has requested initial authorization of a cement kiln. Emissions from planned startup and shutdown activities will be authorized by this permit. Startup and shutdown emissions are virtually indistinguishable from production emissions. Although there may be minor emissions associated with startup and shutdown, emission factors used to quantify production emissions are considered to have enough conservatism to include any incidental increases that may be attributed to startup and shutdown (see the kiln BACT discussion for more on this for that source).

### IV. Emissions

Air Contaminant	Proposed Allowable Emission Rates (tpy)
PM	217.72
PM <sub>10</sub>	217.06
PM <sub>2.5</sub>	216.17
VOC	101.11
NO <sub>x</sub>	290.15
CO	1606.48
SO <sub>2</sub>	213.37
Pb	0.04
NH <sub>3</sub>	57.00
H <sub>2</sub> SO <sub>4</sub>	58.66
HCl	10.41
CO <sub>2</sub> e*	989,654.90

\*CO<sub>2</sub>e - carbon dioxide equivalents based on global warming potentials of  
CH<sub>4</sub> = 25, N<sub>2</sub>O = 298, SF<sub>6</sub>=22,800.

#### V. Federal Applicability

The proposed site is located in Greyson County, which is classified as attainment for all criteria pollutants. Cement kilns are a PSD named source. Therefore, the PSD review threshold is 100 tpy for criteria pollutants. Once this threshold has been exceeded, each criteria pollutant and GHGs are compared against the PSD Significant Emission Rate (SER) to determine if the project triggers PSD review for these pollutants. The emissions of PM, PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, VOC, CO<sub>2e</sub> (GHGs), and H<sub>2</sub>SO<sub>4</sub> are greater than their corresponding SERs.

The following chart illustrates the annual project emissions for each pollutant and whether this pollutant triggers PSD review.

Pollutant	Project Emissions (tpy)	PSD Triggered Y/N
VOC	101.11	Y
NO <sub>x</sub>	290.15	Y
SO <sub>2</sub>	213.37	Y
CO	1606.48	Y
PM	217.72	Y
PM <sub>10</sub>	217.06	Y
PM <sub>2.5</sub>	216.17	Y
H <sub>2</sub> SO <sub>4</sub>	58.66	Y

The site is a major source for a non-GHG pollutant. In addition, the site has a potential to emit of more than 100,000 tpy CO<sub>2e</sub> which makes it a major source of GHG and PSD review is triggered.

Pollutant	Project Emissions (tpy)	Major Source or Major Mod Trigger Level (tpy)	PSD Triggered Y/N
CO <sub>2e</sub>	989,654.90	75,000	Y

The proposed emissions include MSS scenarios, which are not expected to exceed normal operational emissions.

#### VI. Control Technology Review

The proposed control technology is consistent with PSD BACT for PSD pollutants and state minor BACT for non-PSD pollutants. A control technology review was conducted for all pollutants. The controls described in this section were determined to satisfy BACT requirements based on a review of recently issued permits from Texas and other states, and consideration of the RACT/BACT/LAER Clearinghouse (RBLC) data provided by the applicant. MSS emissions are not expected to exceed normal operation given the nature of most of the sources at this facility (baghouse controlled or fugitive emissions). The section on the kiln below contains information relating to startup scenarios provided by the Applicant which describe why startup emissions for the kiln are not expected to exceed normal operational scenarios.

Source Name	EPN	Best Available Control Technology Description
Kiln System	21-SK-230	<p><b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b>            Add on control: Baghouse at 0.002 grains per dry standard cubic foot (gr/dscf). 5% opacity.</p> <p>PM, PM<sub>10</sub>, PM<sub>2.5</sub> (filterable): 0.02 lbs. PM per ton of clinker on a 1-hour average and a rolling 12-month average            PM, PM<sub>10</sub>, PM<sub>2.5</sub> (condensable): 0.28 lbs. PM per ton of clinker on a 1-hour average, 30-day rolling average, and a rolling 12-month average.</p> <p><b>CO:</b>            No add on controls.</p> <p>BACT determination based on other kilns. 9.0 lbs of CO/ton of clinker on a 1-hour average and 30-day rolling average. 3.0 lbs. of CO/ton of clinker on a rolling 12-month average.</p> <p><b>NO<sub>x</sub>:</b>            Add on and other control: Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system, staged combustion, low NO<sub>x</sub> burners, good combustion practices. Notably the proposed NO<sub>x</sub> rate exceeds RBLC PSD and state BACT, which is typically 1.5 lb/ton of clinker compared to the 0.54 lb/ton of clinker proposed.</p> <p>0.54 lbs. of NO<sub>x</sub> per ton of clinker on a 1-hour rolling average, 30-day rolling average, and 12 month rolling average.</p> <p><b>SO<sub>2</sub>:</b>            Add on and other control: Scrubber with a represented control efficiency of 90%, the alkali absorption inherent in the pre-calciner kiln, and</p>

Source Name	EPN	Best Available Control Technology Description
		<p>the use of low sulfur content natural gas as fuel.</p> <p>0.60 lbs. SO<sub>2</sub> per ton of clinker on a 1-hour rolling average, 0.40 lb per ton of clinker on a 30-day and 12 month rolling average.</p> <p><b>VOC:</b>          No add on controls. Good combustion practices. 24 ppmv at 7% O<sub>2</sub> for THC on a 1-hour average, 30-day rolling average, and 12 month rolling average. Note that VOC levels are related to composition and concentration of organic materials in the quarry and BACT determinations are driven by this.</p> <p><b>O-HAP</b>          No add on controls. 12 ppmvd total organic HAP on a 30-day rolling average and 12 month rolling average. Note that this rate is based on preliminary organic information from the quarry.</p> <p><b>Dioxins and Furans</b>          No add on controls. 0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O<sub>2</sub> on a 30-day rolling average and 12 month rolling average.</p> <p><b>H<sub>2</sub>SO<sub>4</sub>:</b>          Add on and other control: scrubber. The control efficiency of the scrubber will be specified in an as-built modification.          1.10 lbs. per ton of clinker on an hourly basis when the in-line raw mill and scrubber are not operating. 0.11 lbs. per ton of clinker on a 12-month rolling average basis.</p> <p><b>HCl:</b>          No add on controls. 3 ppmvd corrected to 7% O<sub>2</sub> on a 30-day rolling average and 12 month rolling average.</p> <p><b>Hg</b>          No add on controls. 0.000021 lb/ton of clinker on a 30-day rolling average and 12 month rolling average.</p> <p><b>Pb</b>          7.50E-05 lb/ton of clinker on a 30-day rolling average and 12 month rolling average.</p>

Source Name	EPN	Best Available Control Technology Description
		<p><b>GHG:</b>            No add on controls. Proper design and operation. 0.92 lbs. per ton of clinker on a 30 day rolling average.</p> <p><b>NH<sub>3</sub> (SCR):</b>            No add on controls. Operation in a manner to minimize ammonia slip. 35 ppmv at 7% O<sub>2</sub> on a 30-day rolling average.</p> <p><b>MSS:</b> The Applicant has represented the following in relation to kiln startup and shutdown:</p> <p>The SCR will be operating at all times when fuel is being fired in the kiln/pre-heater except during kiln heat-ups at the beginning of startup. During these times, no raw materials will be fed into the kiln. During a cold startup after major refractory work, it will take about 36 hours to heat up the kiln. This operation is expected to only occur once per year. During the kiln heat-up process, NO<sub>x</sub> emissions are estimated to range from 3 to 12 lb/hr based the AP-42 Table 1.4-1 NO<sub>x</sub> emission factor for a large (&gt;100 MMBtu/hr) boiler equipped with a low NO<sub>x</sub> burner*.</p> <p>This NO<sub>x</sub> emission rate range is well below the proposed MAERT NO<sub>x</sub> limit for normal kiln operations of 75.34 lb/hr, which is less than the kiln emission rate of 143.7 lb/hr evaluated in the Air Quality Analysis (AQA) submitted along with the initial application materials. During these kiln heat-up periods, supplemental air will be added to ensure that any combustion emissions are being exhausted. Although stack flow and temperature during these kiln heat-up periods have not been quantified, any reduction in dispersion due to stack flow and/or temperature is not expected to offset the ~13X lower NO<sub>x</sub> emissions expected during planned kiln MSS periods shown in the example below.</p> <p>In addition, the total planned kiln MSS operating hours per year are expected to be not more than 72 hr/yr, which would qualify as an intermittent source under TCEQ and US EPA modeling guidance. The expected planned MSS hours are listed below:</p> <p>Case 1 - Kiln heat-up from cold after major refractory work - estimated to occur once per year at main maintenance stoppage (36 hrs per event)</p>

Source Name	EPN	Best Available Control Technology Description
		<p>Case 2 - Kiln heat-up from cold after maintenance work w/o refractory work - estimated to occur once per year at secondary maintenance stoppage (12 hrs per event)</p> <p>Case 3 - Kiln heat-up from short stoppage for secondary maintenance work not requiring a full cool-down - estimated to occur about four times per year (6 hrs per event)</p> <p>Example Calculation - Maximum heat input during any warm-up case is not expected to exceed 81 MMBtu/hr. Therefore, the maximum NO<sub>x</sub> emissions during warm-up periods are estimated as follows:</p> $81 \text{ MMBtu/hr} * 140 \text{ lb NO}_x/10^6 \text{ scf} / 1020 \text{ Btu/scf} = 11.15 \text{ lb/hr NO}_x$ <p>* It should be noted that the factor used for the qualitative comparison above is conservative in that it reflects a low NO<sub>x</sub> burner for a large (&gt;100 MMBtu/hr) combustion unit; however, given that the kiln burner is a low NO<sub>x</sub> burner rated at less than 100 MMBtu/hr (peak heat input during a start-up is expected to be approximately 81 MMBtu/hr), the NO<sub>x</sub> emissions from the kiln burner during start-up could be as much as 36X lower than the emissions modeled in the AQA.</p>
Clinker Cooler	42-SK-370	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> Baghouse with an outlet grain loading of 0.005 gr/dscf. 5% opacity.
Finish Mill and Air Heater	51-SK-250	15.9 MMBtu/hr heater: <b>NO<sub>x</sub>:</b> 0.01 lb/MMBtu based on the higher heating value of the fuel and the use of a low NO <sub>x</sub> burner.
Crusher, Milling, Raw Material Handling, and Product Handling	BF-Series EPNs (Numerous)	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> Add on control: Baghouse at 0.005 gr/dscf. 5% opacity.
Limestone, Gypsum, High Grade Limestone, and Sand Stockpiles	LS STKPL, ADD STKPL	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> 90% reduction. Stockpiles will be required to be stored within a fully enclosed building.
Ammonia handling	NH3FUG	<b>NH<sub>3</sub>:</b> AVO checks once per shift (28AVO). A control efficiency of 93-97% - dependent on the piping component type.
Emergency Generator Engine	EG-1	<b>Products of combustion:</b>



Source Name	EPN	Best Available Control Technology Description
		Limited to pipeline quality natural gas. Subject to 40 CFR Part 60 JJJJ and Part 63 ZZZZ. Operation is limited to 100 hours per year. A non-resettable hour meter is required in the Special Conditions.
Raw Material Loading	RR_MH, TRK_MH	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> 85% reduction. Partial enclosure defined as consisting of two sided (rail loading) or three-sided walls (truck loading) with fogging nozzles. Dustless telescopic spouts are required be used for loading trucks or rail from bins or silos. 85% is conservative given the additional controls and aspiration on this system.
Raw Material Handling (Crusher Building)	LSCRSHBD_MH	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> 85% reduction. The actual crusher is controlled by a baghouse, this EPN is the dump into the crushing system. Partial enclosure is defined as three-sided walls with fogging nozzles. The operation is represented as taking place within the crusher's building, and the crusher loading hopper will be located below-grade to accommodate trucks dumping mined limestone. Therefore, 85% is expected to be a conservative control efficiency.
Silo Loading	N/A	Dustless telescoping spouts are required for these. This removes the units as potential fugitive dust sources, and emissions would be associated with the baghouses/dust collectors which control these units.
ILE MSS Activities	MSS FUG	<p><b>Refractory Removal:</b>  <b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b>            Refractory (a bricklike material) is removed as needed for repairs or replacement. Operations taking place inside the kiln or cooler will be enclosed by nature, resulting in a 90% reduction in emissions. Drop into trucks was accounted for with no controls.</p> <p><b>Vacuum Truck Loading and Unloading:</b>  <b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b>            Partial enclosure will be utilized for an 85% reduction on loadouts. The trucks have a filter with an outlet grain loading of 0.01 gr/dscf for loading operations.</p> <p><b>CEMS Calibration</b>  <b>NO<sub>x</sub>, CO, THC, SO<sub>2</sub></b>            Emissions are due to the release of calibration gas from the feed analyzers and CEMS unit. No add on controls.</p>

## VII. Air Quality Analysis

The air quality analysis (AQA) is acceptable for all review types and pollutants. The results are summarized below.

### A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results indicate that 1-hr SO<sub>2</sub>, 24-hr and annual PM<sub>10</sub>, 24-hr and annual PM<sub>2.5</sub> (NAAQS), 24-hr and annual PM<sub>2.5</sub> (Increment), and 1-hr NO<sub>2</sub> exceed the respective de minimis concentrations and require a full impacts analysis. The De Minimis analysis modeling results for 3-hr, 24-hr, and annual SO<sub>2</sub>, annual NO<sub>2</sub>, and 1-hr and 8-hr CO indicate that the project is below the respective de minimis concentrations and no further analysis is required.

The justification for selecting the EPA's interim 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> De Minimis levels is based on the assumptions underlying EPA's development of the 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> De Minimis levels. As explained in EPA guidance memoranda<sup>1,2</sup>, the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr NO<sub>2</sub> and 1-hr SO<sub>2</sub> NAAQS.

The PM<sub>2.5</sub> and ozone De Minimis levels are the EPA recommended De Minimis levels. The use of the EPA recommended De Minimis levels is sufficient to conclude that a proposed source will not cause or contribute to a violation of an ozone and PM<sub>2.5</sub> NAAQS or PM<sub>2.5</sub> PSD increments based on the analyses documented in EPA guidance and policy memoranda<sup>3</sup>.

While the De Minimis levels for both the NAAQS and increment are identical for PM<sub>2.5</sub> in the table below, the procedures to determine significance (that is, predicted concentrations to compare to the De Minimis levels) are different. This difference occurs because the NAAQS for PM<sub>2.5</sub> are statistically-based, but the corresponding increments are exceedance-based.

**Table 1. Modeling Results for PSD De Minimis Analysis  
in Micrograms Per Cubic Meter (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	12	7.8
SO <sub>2</sub>	3-hr	12	25
SO <sub>2</sub>	24-hr	4.5	5
SO <sub>2</sub>	Annual	0.3	1

<sup>1</sup> [www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf](http://www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf)

<sup>2</sup> [www.tceq.texas.gov/assets/public/permitting/air/memos/guidance\\_1hr\\_no2naaqs.pdf](http://www.tceq.texas.gov/assets/public/permitting/air/memos/guidance_1hr_no2naaqs.pdf)

<sup>3</sup> [www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html](http://www.tceq.texas.gov/permitting/air/modeling/epa-mod-guidance.html)

Pollutant	Averaging Time	GLCmax ( $\mu\text{g}/\text{m}^3$ )	De Minimis ( $\mu\text{g}/\text{m}^3$ )
PM <sub>10</sub>	24-hr	10	5
PM <sub>10</sub>	Annual	3	1
PM <sub>2.5</sub> (NAAQS)	24-hr	7.2	1.2
PM <sub>2.5</sub> (NAAQS)	Annual	2.5	0.2
PM <sub>2.5</sub> (Increment)	24-hr	8.7	1.2
PM <sub>2.5</sub> (Increment)	Annual	2.7	0.2
NO <sub>2</sub>	1-hr	19	7.5
NO <sub>2</sub>	Annual	0.4	1
CO	1-hr	769	2000
CO	8-hr	276	500

The GLCmax for 1-hr SO<sub>2</sub>, 1-hr NO<sub>2</sub>, and 24-hr and annual PM<sub>2.5</sub> (NAAQS) are based on the highest five-year averages of the maximum predicted concentrations determined for each receptor. The GLCmax for all other pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

Intermittent guidance was relied on for the 1-hr SO<sub>2</sub> and 1-hr NO<sub>2</sub> PSD De Minimis analyses.

Note the updated NO<sub>x</sub> emission rates for the kiln (EPN 21-SK-230) are less than the representations made in the original modeling demonstration. The applicant did not update the NO<sub>2</sub> modeling for this demonstration. The NO<sub>2</sub> results reported above in Table 1 are conservative.

To evaluate secondary PM<sub>2.5</sub> impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutants impacts from a source. Using data associated with the 500 tpy Parker County source, the applicant estimated 24-hr and annual secondary PM<sub>2.5</sub> concentrations of 0.18949  $\mu\text{g}/\text{m}^3$  and 0.00231  $\mu\text{g}/\text{m}^3$ , respectively. Since the combined direct and secondary 24-hr and annual PM<sub>2.5</sub> impacts are above the De minimis levels, a full impacts analysis is required.

**Table 2. Modeling Results for Ozone PSD De Minimis Analysis  
 in Parts per Billion (ppb)**

Pollutant	Averaging Time	GLCmax (ppb)	De Minimis (ppb)
O <sub>3</sub>	8-hr	0.997	1

The applicant performed an O<sub>3</sub> analysis as part of the PSD AQA. The applicant evaluated project emissions of O<sub>3</sub> precursor emissions (NO<sub>x</sub> and VOC) based on a Tier 1 demonstration approach consistent with the EPA's GAQM referred to as MERPs. Using data associated with the 500 tpy and 1000 tpy Parker County source, the applicant estimated an 8-hr O<sub>3</sub> concentration of 0.99718 ppb. When the estimates of ozone concentrations from the project emissions are added together, the results are less than the De Minimis level.

#### **B. Air Quality Monitoring**

The De Minimis analysis modeling results indicate that 24-hr PM<sub>10</sub> exceeds the respective monitoring significance level and requires the gathering of ambient monitoring information.

The De Minimis analysis modeling results indicate that 24-hr SO<sub>2</sub>, annual NO<sub>2</sub>, and 8-hr CO are below their respective monitoring significance level.

**Table 3. Modeling Results for PSD Monitoring Significance Levels**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Significance (µg/m <sup>3</sup> )
SO <sub>2</sub>	24-hr	4.5	13
PM <sub>10</sub>	24-hr	10.1	10
NO <sub>2</sub>	Annual	0.4	14
CO	8-hr	276	575

The GLCmax for all pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

Note the updated NO<sub>x</sub> emission rates for the kiln (EPN 21-SK-230) are less than the representations made in the original modeling demonstration. The applicant did not update the NO<sub>2</sub> modeling for this demonstration. The annual NO<sub>2</sub> result reported above in Table 3 is conservative.

The applicant evaluated ambient PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data to satisfy the requirements for the pre-application air quality analysis.

A background concentration for PM<sub>10</sub> was obtained from the EPA AIRS monitor 481130050 located at 717 South Akard St. Dallas, Dallas County. The high, second high monitored concentration from 2020-2022 was used for the 24-hr value (82 µg/m<sup>3</sup>). The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the

monitor site relative to the project site. The background concentration was also used in the NAAQS analysis.

Background concentrations for PM<sub>2.5</sub> were obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The applicant calculated the three-year average (2020-2022) of the 98<sup>th</sup> percentile of the annual distribution of the 24-hr concentrations for the 24-hr value (20 µg/m<sup>3</sup>). The applicant used a three-year average (2020-2022) of the annual concentrations for the annual value (7.5 µg/m<sup>3</sup>). The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site. The background concentrations were also used in the NAAQS analysis.

Since the project has a net emissions increase of 100 tpy or more of VOC or NO<sub>x</sub>, the applicant evaluated ambient O<sub>3</sub> monitoring data to satisfy the requirements for the pre-application air quality analysis.

The applicant identified the Pilot Point ozone monitor (EPA AQS 481211032) as a conservative monitor for the proposed project site location. The applicant further noted how the Pilot Point monitor is located within the Dallas-Fort Worth (DFW) ozone non-attainment area and summarized the 2020-2022 ozone design value for the monitor without further refinement. The ADMT has reviewed the ozone monitoring data for further refinement and this review is discussed below.

Initially, during the modeling protocol development, the applicant had proposed using the Greenville ozone monitor (EPA AQS 482311006) for the proposed project site location. The ADMT had commented that the proposed project site location is likely to be located downwind of the DFW ozone non-attainment area more often than the selected Greenville monitor, based on wind data, and it is likely that the Greenville monitor would not be representative of the proposed project site location for all wind directions and should not be exclusively used in the pre-application analysis.

The ADMT reviewed monitoring data from two additional ozone monitors to identify ozone concentrations during times when the proposed project site location could have been located downwind of the DFW ozone non-attainment area – the above-mentioned Pilot Point monitor and the Frisco monitor (EPA AQS 480850005). Collectively, the information from these two monitors, along with the Greenville monitor, gives a complete analysis for the proposed project site location.

The Pilot Point ozone monitor is located to the southwest of the proposed project site location. A sector was defined with an origin at the Pilot Point monitor and that covered the extent of the modeled receptor grid surrounding the proposed project site location. The sector was then used to identify wind directions favorable for transport towards the proposed project site location (220–265 degrees). Ozone data were reviewed during these wind directions for years 2020-2022 and the highest fourth highest daily maximum hourly value from all three years was 64 ppb. This would be a conservative metric for the ozone design value; the ozone design value is based on a three-year average of the fourth highest daily maximum rolling 8-hr average.

The Frisco ozone monitor is located to the south-southwest of the proposed project site location. Similar to the Pilot Point ozone monitor described above, a sector was defined with an origin at the Frisco monitor and that covered the extent of the modeled receptor grid surrounding the proposed project site location. The sector was then used to identify wind directions favorable for transport towards the proposed project site location (178–215

degrees). Ozone data were reviewed during these wind directions for years 2020-2022 and the highest fourth highest daily maximum rolling 8-hr average value from all three years was 69 ppb. This would be a conservative metric for the ozone design value; the ozone design value is based on a three-year average of the fourth highest daily maximum rolling 8-hr average.

The Greenville ozone monitor has an ozone design value of 63 ppb for the years 2020-2022.

### C. National Ambient Air Quality Standards (NAAQS) Analysis

The De Minimis analysis modeling results indicate 1-hr SO<sub>2</sub>, 24-hr and annual PM<sub>10</sub>, 24-hr and annual PM<sub>2.5</sub>, and 1-hr NO<sub>2</sub> exceed the respective de minimis concentration and require a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentrations will not result in an exceedance of the NAAQS.

**Table 4. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m³)	Background (µg/m³)	Total Conc. = [Background + GLCmax] (µg/m³)	Standard (µg/m³)
SO <sub>2</sub>	1-hr	11	16	27	196
PM <sub>10</sub>	24-hr	10	82	92	150
PM <sub>2.5</sub>	24-hr	6	20	26	35
PM <sub>2.5</sub>	Annual	2.6	7.5	10.1	12
NO <sub>2</sub>	1-hr	87	see discussion below	87	188

The 1-hr SO<sub>2</sub> GLCmax is the highest five-year average of the 99<sup>th</sup> percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor.

The 24-hr PM<sub>10</sub> GLCmax is the maximum predicted concentration over five years of meteorological data.

The 24-hr PM<sub>2.5</sub> GLCmax is the highest five-year average of the 98<sup>th</sup> percentile of the annual distribution of predicted 24-hr concentrations determined for each receptor.

The annual PM<sub>2.5</sub> GLCmax is the maximum five-year average of the annual concentrations determined for each receptor.

The 1-hr NO<sub>2</sub> GLCmax is the highest five-year average of the 98<sup>th</sup> percentile of the annual distribution of predicted daily maximum 1-hr concentrations determined for each receptor.

Note the updated NO<sub>x</sub> emission rates for the kiln (EPN 21-SK-230) are less than the representations made in the original modeling demonstration. The applicant did not update the NO<sub>2</sub> modeling for this demonstration. The 1-hr NO<sub>2</sub> result reported above in Table 4 is conservative.



A background concentration for SO<sub>2</sub> was obtained from the EPA AIRS monitor 481390016 located at 2725 Old Fort Worth Rd., Midlothian, Ellis County. A three-year average (2019-2021) of the 99<sup>th</sup> percentile of the annual distribution of daily maximum 1-hr concentrations was used for the 1-hr value. The applicant reviewed more recent monitoring data from EPA AIRS monitor 482570005 and determined the outcome of the analysis would not change. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

A background concentration for NO<sub>2</sub> was obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The applicant determined the 98<sup>th</sup> percentile of the annual distribution of the maximum 1-hr concentrations for each hour of the day (using data from 2020-2022), consistent with EPA guidance. These background values were then used in the model (as hourly background scalars) with the BACKGRND keyword to be combined with model predictions, giving a total predicted concentration. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

As stated above, to evaluate secondary PM<sub>2.5</sub> impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as MERPs. Using data associated with the 500 tpy Parker County source, the applicant estimated 24-hr and annual secondary PM<sub>2.5</sub> concentrations of 0.18949 µg/m<sup>3</sup> and 0.00231 µg/m<sup>3</sup>, respectively. When these estimates are added to the GLCmax listed in Table 4 above, the results are less than the NAAQS.

#### D. Increment Analysis

The De Minimis analysis modeling results indicate that 24-hr and annual PM<sub>10</sub> and 24-hr and annual PM<sub>2.5</sub> exceed the respective de minimis concentrations and require a PSD increment analysis.

**Table 5. Results for PSD Increment Analysis**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Increment (µg/m <sup>3</sup> )
PM <sub>10</sub>	24-hr	29	30
PM <sub>10</sub>	Annual	3	17
PM <sub>2.5</sub>	24-hr	8.7	9
PM <sub>2.5</sub>	Annual	2.7	4

The GLCmax for 24-hr PM<sub>2.5</sub> and 24-hr PM<sub>10</sub> are the maximum high, second high (H2H) predicted concentrations across five years of meteorological data. The GLCmax for annual PM<sub>10</sub> and PM<sub>2.5</sub> are the maximum predicted concentrations over five years of meteorological data.

The GLCmax for 24-hr and annual PM<sub>2.5</sub> reported in the table above represent the total predicted concentrations associated with modeling the direct PM<sub>2.5</sub> emissions and the

contributions associated with secondary PM<sub>2.5</sub> formation (discussed above in the NAAQS Analysis section).

#### E. Additional Impacts Analysis

The applicant performed an Additional Impacts Analysis as part of the PSD AQA. The applicant conducted a growth analysis and determined that population will not significantly increase as a result of the proposed project. The applicant conducted a soils and vegetation analysis and determined that all evaluated criteria pollutant concentrations are below their respective secondary NAAQS. The applicant meets the Class II visibility analysis requirement by complying with the opacity requirements of 30 TAC Chapter 111. The Additional Impacts Analyses are reasonable and possible adverse impacts from this project are not expected.

The ADMT evaluated predicted concentrations from the proposed project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Wichita Mountains Wilderness, is located approximately 225 kilometers (km) from the proposed site.

The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration of 7 µg/m<sup>3</sup> occurred approximately 243 meters from the property line towards the west. The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration occurring at the edge of the receptor grid, 10.6 km from the proposed sources, in the direction of the Wichita Mountains Wilderness Class I area is 0.526 µg/m<sup>3</sup>. The Wichita Mountains Wilderness Class I area is an additional 214.4 km from the edge of the receptor grid. Therefore, emissions of H<sub>2</sub>SO<sub>4</sub> from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

The predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times, are all less than de minimis levels at a distance of 7.3 km from the proposed sources in the direction of the Wichita Mountains Wilderness Class I area. The Wichita Mountains Wilderness Class I area is an additional 217.7 km from the location where the predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

#### F. Minor Source NSR and Air Toxics Review

Table 6. Site-wide Modeling Results for State Property Line

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	12	1021
H <sub>2</sub> SO <sub>4</sub>	1-hr	22	50
H <sub>2</sub> SO <sub>4</sub>	24-hr	7	15

**Table 7. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m³)	Background (µg/m³)	Total Conc. = [Background + GLCmax] (µg/m³)	Standard (µg/m³)
Pb	3-mo	0.0001	0.02	0.0201	0.15

The 3-mo Pb GLCmax is based on the maximum monthly predicted concentration over a one-year period.

A background concentration for Pb was obtained from the EPA AIRS monitor 480850029 located at 7202 Stonebrook Parkway, Frisco, Collin County. The highest 3-month rolling average from 2020-2022 was used for the 3-month value. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

**Table 8. Minor NSR Site-wide Modeling Results for Health Effects**

Pollutant	CAS#	Averaging Time	GLCmax (µg/m³)	GLCmax Location	ESL (µg/m³)
ammonia	7664-14-7	1-hr	17	Eastern Property Line	180
hydrogen chloride	7647-01-0	1-hr	0.3	--	190
hydrogen chloride	7647-01-0	Annual	0.01	--	7.9
mercury	7439-97-6	1-hr	0.0004	--	0.25
portland cement	65997-15-1	1-hr	53	Southern Property Line	50
portland cement	65997-15-1	Annual	1	15m N	5
silica, crystalline (quartz)	14808-60-7	1-hr	2	Northern Property Line	14
silica, crystalline (quartz)	14808-60-7	Annual	0.07	Southern Property Line	0.27

**Table 9. Minor NSR Hours of Exceedance for Health Effects**

Pollutant	Averaging Time	1 X ESL GLCni
portland cement	1-hr	1

The GLCmax locations are listed in Table 8 above by their approximate distance and direction from the property line of the project site. The GLCmax also represents the GLCni. The GLCmax locations for hydrogen chloride and mercury are not available since the applicant relied on generic modeling (see discussion below).

**G. Greenhouse Gases**

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no National Ambient Air Quality Standard (NAAQS) for GHGs, including no PSD increment. The global climate-change inducing effects of GHG emissions, according to the "Endangerment and Cause or Contribute Finding", are far-reaching and multi-dimensional (75 FR 66497). Climate change modeling and evaluations of risks and impacts are typically conducted for changes in emissions that are orders of magnitude larger than the emissions from individual projects that might be analyzed in PSD permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible [EPA's PSD and Title V Permitting Guidance for GHGs at 48]. Thus, EPA has concluded in other GHG PSD permitting actions it would not be meaningful to evaluate impacts of GHG emissions on a local community in the context of a single permit.

The TCEQ has determined that an air quality analysis would provide no meaningful data and has not required the applicant to perform one. As stated in the preamble to TCEQ's adoption of the GHG PSD program, the impacts review for individual air contaminants will continue to be addressed, as applicable, in the state's traditional minor and major NSR permits program per 30 TAC Chapter 116.

**VIII. Conclusion**

As described above, the applicant has demonstrated that the project meets all applicable rules, regulations and requirements of the State of Texas and the Federal Clean Air Act. The Executive Director's preliminary determination is that the permits should be issued.

**AR-36**

**Amended NAPD Mailing Documentation**

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## EXAMPLE A

### AMENDED COMBINED NOTICE OF PUBLIC MEETING AND NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR AN AIR QUALITY PERMIT

#### PROPOSED AIR QUALITY PERMIT NUMBERS: 167047 AND PSDTX1602

**APPLICATION AND PRELIMINARY DECISION.** BM Dorchester LLC, 1008 Southview Circle, Center, TX 75935-4537, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047 and Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. This application was submitted to the TCEQ on November 8, 2021. The proposed facility will emit the following air contaminants in a significant amount: carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide and sulfuric acid. In addition, the facility will emit the following air contaminants: hazardous air pollutants and lead.

The degree of PSD increment predicted to be consumed by the proposed facility and other increment-consuming sources in the area is as follows:

#### Sulfur Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
3-hour	12	512
24-hour	4.5	91
Annual	0.3	20

#### PM<sub>10</sub>

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
24-hour	29	30
Annual	3	17

#### Nitrogen Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
Annual	0.4	25



PM<sub>2.5</sub>

Maximum Averaging Time	Maximum Increment Consumed (µg/m <sup>3</sup> )	Allowable Increment (µg/m <sup>3</sup> )
24-hour	8.7	9
Annual	2.7	4

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Dallas/Fort Worth regional office, and at the Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Dallas/Fort Worth Regional Office, 2309 Gravel Drive, Fort Worth, Texas.

**INFORMATION AVAILABLE ONLINE.** These documents are accessible through the Commission's Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, the air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application. <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.689632,33.538174&level=13>.

**PUBLIC COMMENT / PUBLIC MEETING.** You may submit public comments to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments in developing a final decision on the application. A public meeting will be held and will consist of two parts, an Informal Discussion Period and a Formal Comment Period. A public meeting is not a contested case hearing under the Administrative Procedure Act. During the Informal Discussion Period, the public will be encouraged to ask questions of the applicant and TCEQ staff concerning the permit application. The comments and questions submitted orally during the Informal Discussion Period will not be considered before a decision is reached on the permit application, and no formal response will be made. Responses will be provided orally during the Informal Discussion Period. During the Formal Comment Period on the permit application, members of the public may state their formal comments orally into the official record. At the conclusion of the comment period, all formal comments will be considered before a decision is reached on the permit application. A written response to all formal comments will be prepared by the executive director and will be sent to each person who submits a formal comment or who requested to be on the mailing list for this permit application and provides a mailing address. Only relevant and material issues raised during the Formal Comment Period can be considered if a contested case hearing is granted on this permit application.

**The Public Meeting is to be held:**

**Monday, March 25, 2024 at 7:00 PM  
Hilton Garden Inn Denison/Sherman/At Texoma Event Center  
5015 South US 75  
Denison, Texas 75020**

Persons with disabilities who need special accommodations at the meeting should call the Office of the Chief Clerk at 512-239-3300 or 1-800-RELAY-TX (TDD) at least five business days prior to the meeting.

**You may submit additional written public comments within 30 days of the date of newspaper publication of this notice or by the date of the public meeting, whichever is later in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

After the deadline for public comment, the executive director will consider the comments and prepare a response to all public comment. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application.**

**OPPORTUNITY FOR A CONTESTED CASE HEARING.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court. **A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; (6) a description of how you use the property which may be impacted by the facility; and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.**

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decisions on the application. The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. Issues that are not submitted in public comments may not be considered during a hearing.

**EXECUTIVE DIRECTOR ACTION.** If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the CID. If any timely hearing requests are received and not withdrawn, the executive director will not issue final approval of the permit and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

**MAILING LIST.** You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

**AGENCY CONTACTS AND INFORMATION.** Public comments and requests must be submitted either electronically at [www14.tceq.texas.gov/epic/eComment/](http://www14.tceq.texas.gov/epic/eComment/), or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from BM Dorchester LLC at the address stated above or by calling Mr. Michael Meister, Trinity Consultants at (361) 883-1668.

*Amended Notice Issuance Date: February 12, 2024*

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167047-PSDTK1602  
APP-1493

STATE

2/12/24

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CITY OF DORCHESTER  
MAYOR  
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CITY

GRAYSON COUNTY HEALTH DEPARTME  
515 N WALNUT ST  
SHERMAN TX 75090-4952

GRAYSON COUNTY JUDGE  
COUNTY COURTHOUSE - JUSTICE  
100 W HOUSTON ST STE 15  
SHERMAN TX 75090-5958

RED RIVER AUTHORITY OF TEXAS  
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WICHITA FALLS TX 76307-0240

PUBLIC HEALTH REGION 2/3  
TEXAS DEPARTMENT OF STATE HEAL  
1301 S BOWEN RD STE 200  
ARLINGTON TX 76013-2262

TEXOMA COUNCIL OF GOVERNMENTS  
1117 GALLAGHER DR STE 100  
SHERMAN TX 75090-3107

US ARMY CORPS OF ENGINEERS  
TULSA DISTRICT - CESWT  
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TULSA OK 74137-4290

FIELD SUPERVISOR  
US FISH & WILDLIFE SERVICE  
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GLENN C CLINGENPEEL  
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CAROLYN FRUTHALER MD DIR  
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MS JESSICA STAGGS SUPERVISO  
DALLAS WATER UTILITIES  
4334 SCOTTSDALE DR  
DALLAS TX 75227-4044

County

THE HONORABLE REGGIE SMITH STATE  
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WILLIES BALLOU  
6007 HWY 289  
HOWE TX 75459-2079

DOUGLAS GLENN BANNER  
146 MIDWAY ACRES DR  
HOWE TX 75459-2482

KELLY DENISE BARNES  
2569 FORD RD  
HOWE TX 75459-2427

ROBERT BAUER  
645 CHOCTAW EST CIR  
SHERMAN TX 75092-7929

HEATHER BEAVER  
245 ROCKPORT RD  
SHERMAN TX 75092-7933

NELSON BEAVER  
245 ROCKPORT RD  
SHERMAN TX 75092-7933

JENNIFER BEECROFT  
861 DERRICK LN  
PROSPER TX 75078-8851

167047-1602  
APP-1494

JP/PROT

2/12/24

DARALD BERGER  
1128 MACGREGOR LN  
GUNTER TX 75058-4253

CLIFF BLACKSTOCK  
1281 VINEYARD RD  
GUNTER TX 75058-3142

MR JAMES C BOLES  
1378 PRESTON MEADOWS RD  
SHERMAN TX 75092-6917

NANCY BOND  
1499 ROCKPORT RD  
SHERMAN TX 75092-7060

NOLAN E BOND  
1499 ROCKPORT RD  
SHERMAN TX 75092-7060

JAN BROOMALL  
ILLUMINED CROSSING LLC  
500 GARVER RD  
MANSFIELD OH 44903-7554

LAFFEL BROWN  
262 MORMAN GROVE RD  
SHERMAN TX 75092-6912

JAMIE BUCKALEW  
1558 WATSON RD  
WHITESBORO TX 76273-5544

CLINT CATCHING  
HOWE ISD  
105 W TUTT ST  
HOWE TX 75459-4702

KRISTIN CHANDLER  
6575 MACKEY RD  
DORCHESTER TX 75459-2467

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GUNTER TX 75058-3242

CHANEL ANN DAVIS  
6123 STATE HIGHWAY 289  
DORCHESTER TX 75459-2081

JEREMY DEVORE  
CITY OF ALLEN  
6386 MACKEY RD  
DORCHESTER TX 75459-2504

MRS BETHANY DEVORE  
6386 MACKEY RD  
DORCHESTER TX 75459-2504

MARY GAIL DEVORE  
11015 FM 902  
DORCHESTER TX 75459-2413

DEIRDRE DIAMOND  
2105 BLEDSOE RD  
GUNTER TX 75058-3015

ROBERT E DRYDEN  
4627 CHEROKEE TRL  
DALLAS TX 75209-1915

JUDY SEARCY DRYDEN  
JJ TRUST  
6 RUE DU LAC ST  
DALLAS TX 75230-2834

BOYD DUNN  
11831 FM 902  
DORCHESTER TX 75459-2421

MICHAEL JOSEPH ELLIOTT  
7V RANCH MICHAEL ELLIOTT  
20975 FM 902  
COLLINSVILLE TX 76233-3739

WILLIAM ENGLE  
2020 PARK RDG  
DENISON TX 75020-7361

LAURA FINCHER  
1549 TIMBERCREEK DR  
HOWE TX 75459-2887

167047-PSD TX 1602  
APP-1495

IP / PRO T

2/12/24

LISA FLAGGERT  
GRACE FARMS MINITURE THERAPY  
130 GREENE RD  
SHERMAN TX 75092

WILLIAM FOSTER  
13044 FM 902  
DORCHESTER TX 75459-2014

LORI GARDNER  
721 LOGANS WAY DR  
PROSPER TX 75078-2529

CHRIS GARDNER  
721 LOGANS WAY DR  
PROSPER TX 75078-2529

LORA GORDON  
607 SPERRY RD  
DORCHESTER TX 75459-2117

MR RICHARD ORAN GROSS  
306 TEE TAW CIR  
SHERMAN TX 75092-7900

MATT GUDGEL  
13006 FM 902  
DORCHESTER TX 75459-2014

GINGER HAM  
1330 FORD RD  
SHERMAN TX 75092-7012

BILLY & CATHEY HAMILTON  
104 GOLDEN RD  
SHERMAN TX 75090-7514

SUNNI HAYES  
497 RIDDELS RD  
SHERMAN TX 75092-7936

MOSES HEJNY  
PO BOX 3298  
SHERMAN TX 75091-3298

MRS LISA HEJNY  
813 SPERRY RD  
DORCHESTER TX 75459-2081

BRYAN HEMMAN  
2100 DEER RUN  
GUNTER TX 75058-4222

JOANN HENSLEY  
224 OLD GUNTER HWY  
SHERMAN TX 75092-7944

DONNA HEPNER  
4304 MACKEY RD  
HOWE TX 75459-2452

AMY HERTEL  
APT 3613  
5001 PAR DR  
DENTON TX 76208-6739

KATERINA HESS  
3405 PORTSMOUTH PL  
SHERMAN TX 75092-6261

JERRY DEAN HESTAND  
BOBCAT UNIVERSE  
PO BOX 883  
HOWE TX 75459-0883

MICHAEL S HIGNIGHT  
600 MORMAN GROVE RD  
SHERMAN TX 75092-7072

CAROL HILL  
1422 HANGING ROCK TRCE  
GUNTER TX 75058-4270

AMY HOLLY  
2400 W SMITH AVE  
BOISE ID 83702-0328

SUZANNE HOOKS  
1501 WOLF RIDGE RUN  
GUNTER TX 75058-4216

JOYCE A HUFF  
1966 OLD SCOGGINS RD  
DORCHESTER TX 75459-1785

ALICE HUGHES  
6733 CALLEJO RD  
GARLAND TX 75044-2803

LINDA K HUNTER  
1273 WALL STREET RD  
GUNTER TX 75058-2041

COLIN DREW HUNTER  
1273 WALL STREET RD  
GUNTER TX 75058-2041

HEATHER JACQUES  
1600 BEARPATH WAY  
GUNTER TX 75058-4209

MIKE JACQUES  
1600 BEARPATH WAY  
GUNTER TX 75058-4209

MR MICHAEL JEFFERSON  
352 WD HILL RD  
SHERMAN TX 75092-7953

SUZANNA DRYDEN JENSEN  
DRYDEN DORCHESTER  
PO BOX 2189  
ADDISON TX 75001-2189

167047 DSDTX 1602  
APP-1496

IP/PROT

2/12/24



BRANDON JOHNSON  
999 CYPRESS POINT DR  
GUNTER TX 75058-3235

CARRIE JONES  
1535 PIONEER VLY  
HOWE TX 75459-2826

ELIZABETH JONES  
HWY 289 MORMON GROVE RD  
DORCHESTER TX 75459

ELIZABETH JONES  
PO BOX 331190  
CORPUS CHRISTI TX 78463-1190

DR. RAY M JOSEPH  
KERATEX LP  
STE 100  
7920 PRESTON RD  
PLANO TX 75024-2343

MRS DEBBIE ELAINE JUDKINS  
PO BOX 1168  
HOWE TX 75459-1168

KIMBERLY G KELLEY  
BLDG 1, STE 300  
3711 S MOPAC EXPY  
AUSTIN TX 78746-8013

DINA KENEMORE  
736 CHOCTAW EST CIR  
SHERMAN TX 75092-7930

JAMES KIMBREL  
282 ROCKPORT RD  
SHERMAN TX 75092-6966

LAURA L KING  
1671 TAYLOR RD  
HOWE TX 75459-2517

CODY M KING  
1671 TAYLOR RD  
HOWE TX 75459-2517

KEN KING  
49 HEFLEY RD  
DORCHESTER TX 75459-2436

MRS GERI V KING  
49 HEFLEY RD  
DORCHESTER TX 75459-2436

DEBBIE KIRKPATRICK  
2217 CHIPPEWA HLS  
GUNTER TX 75058-4221

CINDY KVAAL  
500 WD HILL RD  
SHERMAN TX 75092-7964

JASON R LANKFORD  
52 WHITE MOUND RD  
SHERMAN TX 75090-5662

JASON LANKFORD  
11831 FM 902  
DORCHESTER TX 75459-2421

PATSY LEMASTER  
2101 FOX BEND TRCE  
GUNTER TX 75058-4204

TRUDY LUCAS  
LUCAS RANCH  
7322 HWY 289  
DORCHESTER TX 75459-2118

MR BRIAN MAI  
FURIZON LIMITED  
PO BOX 3328  
SHERMAN TX 75091-3328

MICHAEL GENE MARSH  
109 TEE TAW CIR  
SHERMAN TX 75092-6997

MONICA MARTIN  
3000 PRESTON CLUB DR  
SHERMAN TX 75092-8369

MRS PATSY MAULDIN  
310 TEE TAW CIR  
SHERMAN TX 75092-7900

MRS KATHLEEN MCCLURE  
180 CYPRESS POINT DR  
GUNTER TX 75058-3256

LES MCCONNELL  
5202 WILDER TRL  
SHERMAN TX 75092-6411

DIANA MCMAHAN  
10455 COUNTY ROAD 497  
PRINCETON TX 75407-2363

DUSTY MELTON  
1037 SMITH RD  
HOWE TX 75459-2851

JOYCE L MOORE  
1302 LOUROCK ST  
GARLAND TX 75040-4548

JASON MORIN  
100 BURGHELEY CT  
BARTONVILLE TX 76226-6958

MRS SHANDI MORRIS  
1088 PRESTON MEADOWS RD  
SHERMAN TX 75092-6930

167043 DSD TX 1602  
APP-1497

JP / PWT

2/12/24

KAREN MURPHY  
1321 VINEYARD RD  
GUNTER TX 75058-3111

RICK MYER  
89 HARMON CIR  
HOWE TX 75459-2430

LUCY MYER  
APT 8306  
870 BLASSINGAME AVE  
VAN ALSTYNE TX 75495-2844

MRS SHARON NELSON  
886 LYNCH CROSSING BLVD  
WHITESBORO TX 76273-7106

MS ANDEE LEA ANDERSON NICHOLS  
294 MAIN ST  
DORCHESTER TX 75459-2472

DANNY THOMAS NICHOLS  
294 MAIN ST  
DORCHESTER TX 75459-2472

CHRIS NICOLOFF  
3774 RANGE CREEK RD  
HOWE TX 75459-2050

MARIE NIXON  
361 BLUEBONNET LN  
SHERMAN TX 75092-9519

MARGIE NOEL  
293 NOEL RD  
HOWE TX 75459-2495

BRIAN E NORRIS  
47 TEE TAW CIR  
SHERMAN TX 75092-9511

TERA NORRIS  
47 TEE TAW CIR  
SHERMAN TX 75092-9511

BRANDON NORRIS  
47 TEE TAW CIR  
SHERMAN TX 75092-9511

MR DUNCAN C NORTON  
STE 1900  
816 CONGRESS AVE  
AUSTIN TX 78701-2442

BONITA L OVERBEY  
57 GREEN RD  
SHERMAN TX 75092-7945

TIM OVERBEY  
11831 FM 902  
DORCHESTER TX 75459-2421

BOBBY N OVERBEY SR  
11831 FM 902  
DORCHESTER TX 75459-2421

JEFF OVERSTREET  
995 SPERRY RD  
HOWE TX 75459-2100

NIKOLAUS OWEN  
1901 W SHEPHERD DR  
SHERMAN TX 75092-7047

MRS MARTHA PABEN  
1821 BLEDSOE RD  
GUNTER TX 75058-3216

JAMES PARRISH  
180 TEE TAW CIR  
SHERMAN TX 75092-6998

MRS HOLLAND PAULA  
101 BLUEBONNET LN  
SHERMAN TX 75092-6918

JAVI PINTO  
5315 HIDDEN TRAILS DR  
ARLINGTON TX 76017-2171

ZACH POLING  
FIRST BAPTIST CHURCH DORCHESTER  
11831 FM 902  
DORCHESTER TX 75459-2421

HEATHER PORTSCHE  
FIRST CLASS NORTH TEXAS  
11831 FM 902  
DORCHESTER TX 75459-2421

SHELLY PREWITT  
1525 WATSON RD  
WHITESBORO TX 76273-5542

MR RAY H. PURDOM  
PO BOX 2931  
SHERMAN TX 75091-2931

CYNTHIA REYES  
161 KENNEDY RD  
SHERMAN TX 75092-6949

CINDY & NAIF J RISK  
445 RIDDELS RD  
SHERMAN TX 75092-7936

JUDY CAROL ROBISON  
303 PRIMROSE LN  
SHERMAN TX 75092-6922

DOUGLAS RAY ROBISON  
303 PRIMROSE LN  
SHERMAN TX 75092-6922

167047 - PSD TX 1602  
APP-1498

IP/PROT

2/12/24

KAYLI RUSHING  
313 PRESTON MEADOWS RD  
SHERMAN TX 75092-6955

BETTYE RUSSELL  
219 W WILSON AVE  
SHERMAN TX 75090-9007

MRS LINDA SUE RUSSELL  
9016 MAGUIRES BRIDGE DR  
DALLAS TX 75231-4017

BRIAN RUSSELL  
7308 GREENHAVEN DR  
AUSTIN TX 78757-2151

RUSSELL RUTHERFORD  
708 S CHEROKEE DR  
TIOGA TX 76271-2532

CARRIE SAINDON  
104 MALLARD CT  
GUNTER TX 75058-3270

JOANN SCHNITKER  
179 WEBER DR  
HOWE TX 75459-2093

MS MARY J SCOTT  
448 MORMAN GROVE RD  
SHERMAN TX 75092-6911

ROSA SHELTON  
12944 FM 902  
HOWE TX 75459-2012

LINDA SIMS  
428 PRESTON GLN  
GUNTER TX 75058-9511

SHARON SLAUGHTER  
PO BOX 3204  
SHERMAN TX 75091-3204

THE HONORABLE REGGIE SMITH STATE  
TEXAS HOUSE OF REPRESENTATIVES  
STE 3  
300 N TRAVIS ST  
SHERMAN TX 75090-5925

DAVID SMITH  
QUALITY GRAIN LLC  
PO BOX 151  
HOWE TX 75459-0151

DAVID SMITH  
QUALITY GRAIN LLC  
11652 FM 902  
DORCHESTER TX 75459-2416

DAVID SMITH  
CITY OF DORCHESTER  
373 MAIN ST  
DORCHESTER TX 75459-2475

MR JEFF RANDALL SPENCER  
CLAY PRECISION  
1102 FM 1417 NE  
SHERMAN TX 75090-2704

FRANCES SPRABARY  
94 MIDWAY ACRES DR  
HOWE TX 75459-2481

JAMES STEWART  
269 MAIN ST  
DORCHESTER TX 75459-2473

MRS ALICE STEWART  
269 MAIN ST  
DORCHESTER TX 75459-2473

ROBERT & SHIRLEY STEWART  
1171 ROCKPORT RD  
SHERMAN TX 75092-6907

ROBERT STEWART  
1171 ROCKPORT RD  
SHERMAN TX 75092-6907

STEPHANIE STRAWN  
6334 OB GRONER RD  
SHERMAN TX 75092-7966

DANA STRONG  
PO BOX 829  
GUNTER TX 75058-0829

SATHAPPUN SUBBIAH  
VIVID PARTNERS LLC  
5573 FM 1461  
MCKINNEY TX 75071-3044

JAMES SUTHERLAND  
161 BLUEBONNET LN  
SHERMAN TX 75092-6918

KENNETH & SUE SVEHLAK  
309 CENTRAL HIGH RD  
ENNIS TX 75119-0899

GRIFFIN TAMMY  
451 FARMINGTON RD  
SHERMAN TX 75092-7006

BETTY JEAN TAYLOR  
177 TAYLOR RD  
DORCHESTER TX 75459-2501

MR THOMAS LELAND TAYLOR III  
11451 FM 902  
DORCHESTER TX 75459-2415

CRISTI TENANT  
565 STEWART RD  
SHERMAN TX 75092-6504

167047 PSD TX 1602  
APP-1499

IP/PROT

2/12/24

KRISTI UTLEY  
1716 MACKEY RD  
HOWE TX 75459-2444

DIANA VANBUSKIRK  
1106 N GRANT DR  
SHERMAN TX 75092-5330

DR. RONALD VANBUSKIRK  
1106 N GRANT DR  
SHERMAN TX 75092-5330

DENISE VAWTER  
916 RICKETTS ST  
HOWE TX 75459-4529

MRS MARILYN SUE VEST  
2514 STATE HIGHWAY 289  
SHERMAN TX 75092-6510

LARRY VINCENT  
1471 TAYLOR RD  
HOWE TX 75459-2511

BECKY VINCENT  
1495 TAYLOR RD  
HOWE TX 75459-2511

LARRY VINCENT  
11831 FM 902  
DORCHESTER TX 75459-2421

JIMMY VINCENT  
11831 FM 902  
DORCHESTER TX 75459-2421

JAYMISON BELLA VOTO  
1717 TAYLOR RD  
HOWE TX 75459-2500

MR LEONARD G WALDRUM JR  
1502 PLEASANT HOME RD  
SHERMAN TX 75092-7908

BORMING WANG  
6719 RUTLEDGE RD  
GARLAND TX 75044-2821

BIHFANG WANG  
6719 RUTLEDGE RD  
GARLAND TX 75044-2821

BRIAN WANG  
6719 RUTLEDGE RD  
GARLAND TX 75044-2821

MANUAL WATSON  
200 JARESH LN  
HOWE TX 75459-2120

CYNTHIA WEEMS  
60 TEE TAW CIR  
SHERMAN TX 75092-9510

RUDY WEEMS  
60 TEE TAW CIR  
SHERMAN TX 75092-9510

ROBERT WELCH  
11831 FM 902  
DORCHESTER TX 75459-2421

JOSEPH WHITE  
PO BOX 967  
VAN ALSTYNE TX 75495-0967

JIM WHITTEN  
1303 BIRDS FORT TRL  
ARLINGTON TX 76005-1251

CAROLYN WILDMAN  
6225 STATE HIGHWAY 289  
DORCHESTER TX 75459-2083

TERESA WILDMAN  
5W RANCH  
13852 FM 902  
DORCHESTER TX 75459-2115

KEVIN WILSON  
HOWE INDEPENDENT SCHOOL DISTRICT  
105 W TUTT ST  
HOWE TX 75459-4702

KRISTA LUCAS WYNN  
PO BOX 411  
WHITESBORO TX 76273-0411

ANGELA ZARALLO  
1117 MACGREGOR LN  
GUNTER TX 75058-4246

MRS REBECCA ZEY  
171 GREEN MEADOW CT  
GUNTER TX 75058-3184

167047 DSDTR 1602  
APP-T500

JP/PROT

2/12/24

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 12, 2024

THE HONORABLE BRUCE DAWSEY  
COUNTY JUDGE  
COUNTY COURTHOUSE  
100 WEST HOUSTON  
SHERMAN TX 75090

Re: Amended Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Judge Dawsey:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. BM Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • [tceq.texas.gov](http://tceq.texas.gov)

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APP-1501

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 12, 2024

THE HONORABLE DAVID SMITH  
MAYOR OF DORCHESTER  
373 MAIN STREET  
DORCHESTER TX 75459

Re: Amended Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mayor Smith:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. BM Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • [tceq.texas.gov](http://tceq.texas.gov)

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Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

February 12, 2024

MR ERIC BRIDGES  
TEXOMA COUNCIL OF GOVERNMENTS  
1117 GALLAGHER DRIVE, SUITE 470  
SHERMAN TX 75090

Re: Amended Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047 and PSDTX1602  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bridges:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. BM Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a long horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

**AR-37**

**Texas Register Public Meeting Notice Documentation**

## Georgia Carroll-Warren

---

**From:** TexReg@sos.texas.gov  
**Sent:** Wednesday, February 21, 2024 11:50 AM  
**To:** Meghan Taack  
**Subject:** TEXAS REGISTER ACKNOWLEDGMENT OF RECEIPT

### ACKNOWLEDGMENT OF RECEIPT

Please note that this email acknowledges receipt of your filing only.  
If we find that the document or submission form does not conform to statutory filing requirements or our administrative rules, we may refuse to accept it for filing and publication.  
If we refuse your filing, we will notify you.

**TRD Number:** 202400755  
**For Issue of:** 03/01/2024  
  
**Submission Date:** 2024-02-21 11:28 AM  
**Receipt Date:** 2024-02-21 11:50 AM

### Miscellaneous Document Submission

**Agency Name:** Texas Commission on Environmental Quality  
**Agency Code:** 0152  
**Liaison:** Meghan Taack  
**Title of Document:** AMENDED COMBINED  
NOTICE OF PUBLIC MEETING  
AND NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR AN AIR QUALITY PERMIT  
PROPOSED AIR QUALITY PERMIT NUMBERS: 167047 AND PSDTX1602

**File Name:** 2PM022124.docx

**Graphics Included:** Y

**AR-38**

**NAPD Public Notice Supporting Documentation**

## Juliet Varra

---

**From:** Hunter Lohrenz <hunter.lohrenz@trinityconsultants.com>  
**Sent:** Wednesday, February 28, 2024 12:55 PM  
**To:** PROOFS; Joel Stanford; R6AirPermitsTX  
**Cc:** jake@highrollergroup.com; Stephen Beene; Mike Meister  
**Subject:** Black Mountain Proof of Publication and Affidavits Submittal  
**Attachments:** 2024-0228 Black Mountain Proof of Publication and Affidavit.pdf

To Whom It May Concern,

Trinity Consultants is sending this email on behalf of BM Dorchester LLC and in regards to the proof of publication and affidavits for the initial permit application for Permit No. 167047 and PSDTX1602. As is directed in the public notice package that was received on February 12, 2024, the proof of publication is attached to this email and is being submitted within 10 business days after the date of publication (published on February 22, 2024). Also included is the affidavit, which is being submitting within 30 calendar days after publication as directed. Thank you.

Best,

**Hunter Lohrenz**  
Consultant

P 972.661.8100 M 406.871.6616

12700 Park Central Dr., Ste. 600, Dallas, TX, 75251

Email: [hunter.lohrenz@trinityconsultants.com](mailto:hunter.lohrenz@trinityconsultants.com)

LinkedIn: [www.linkedin.com/in/hunter-lohrenz-8738141a3](https://www.linkedin.com/in/hunter-lohrenz-8738141a3)



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12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203 / [trinityconsultants.com](http://trinityconsultants.com)

February 28, 2024

**Via email:** [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov)

Texas Commission on Environmental Quality

Office of the Chief Clerk

Attn: Notice Team

*RE: Public Notice Requirements – Proof of Publication and Affidavit Form*

*Permit Numbers: 167047 and PSDTX1602*

*TCEQ Project Number: 335160*

*BM Dorchester LLC*

*Customer Reference Number: CN605952373*

*Regulated Entity Reference Number: RN111368437*

To Whom It May Concern:

BM Dorchester LLC (BM Dorchester) is constructing a Portland cement manufacturing facility located in Dorchester, Grayson County, Texas (Dorchester Facility). BM Dorchester has been assigned Customer Number (CN) 605952373. The Dorchester Facility has been assigned Texas Commission on Environmental Quality (TCEQ) Regulated Entity Number (RN) 111368437.

BM Dorchester submitted an initial permit application on November 8, 2021 and has since submitted revised modelling files per the TCEQ's request. As a part of the application process, the Dorchester Facility is required to publish a formal public notice in a newspaper of general circulation in the municipality nearest to the facility location. In accordance with the public notice guidance package received from the TCEQ on February 12, 2024, BM Dorchester has completed the following:

- ▶ Published a formal public notice on February 22, 2024 in "The Herald Democrat" circulated in Grayson County;
- ▶ Placed a copy of the Air Quality Permit Application at the public location, Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, for public viewing and copying, beginning December 16, 2021; and
- ▶ Prepared and posted signs per TCEQ requirements at the Dorchester Facility beginning December 16, 2021.

With this submittal, BM Dorchester is submitting the Affidavit of Publication for Air Permitting to the TCEQ via email within 30 calendar days after the date of publication.

The Dorchester Facility is required to submit copies of the aforementioned items to those listed on the Notification List. An electronic copy will be sent to [R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov) and Mr. Joel Stanford, TCEQ Air Permits Division, [Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov). Hard copies of these submittals are being mailed to the following, per the Instructions for Public Notice:

"

**HEADQUARTERS**

12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203



TCEQ - Page 2  
January 28, 2024

Texas Commission on Environmental Quality  
Air Section Manager  
Dallas/Fort Worth Regional Office  
2309 Gravel Dr  
Fort Worth, Texas 76118-6951

Texas General Land Office  
Upland Leasing Team Leader  
Professional Services  
P.O Box 12873  
Austin, Texas 78711-2873


The Honorable Bruce Dawsey  
County Judge  
County Courthouse  
100 West Houston  
Sherman, Texas 75090

The Honorable David Smith  
Mayor of Dorchester  
373 Main Street  
Dorchester, TX 75459

If you have any questions, please feel free to contact me at (972) 661-8100 or via email at [MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com).

Sincerely,

TRINTY CONSULTANTS



Michael Meister  
Principal Consultant

cc: U.S. EPA, Region 6 ([R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov))  
Mr. Joel Stanford, Air Permits Division ([Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov))  
Air Section Manager, TCEQ Region 4, DFW  
Upland Leasing Team Leader, Texas General Land Office  
The Honorable Bruce Dawsey, County Courthouse  
The Honorable David Smith, Mayor of Dorchester  
Mr. Jake Bender, BM Dorchester LLC (electronic)

TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

CID - 125804

### AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §

COUNTY OF Grayson §

**BEFORE ME**, the undersigned authority, on this day personally appeared

Sharon Groves, who being by me duly sworn, deposes and says that (s)he is (Name  
of Person Representing Newspaper)

the Agent of the Herald Democrat  
(Title of Person Representing Newspaper) (Name of the Newspaper)

that said newspaper is generally circulated in Sherman, Texas;  
(The municipality or nearest municipality to the location of the facility or the proposed facility)

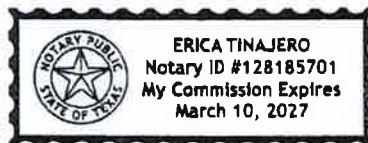
that the enclosed notice was published in said newspaper on the following date(s):

February 22, 2024

Sharon Groves  
(Newspaper Representative's Signature)

Subscribed and sworn to before me this the 27 day of February, 20 24  
to certify which witness my hand and seal of office.

[Affix Seal]



Erica Tinajero  
Notary Public in and for the State of Texas

Erica Tinajero  
Print or Type Name of Notary Public

3-10-27  
My Commission Expires

**785-992-0001 ext. 2189**



**Place your  
classified ad today**

[illegible]

**Place your  
classified ad today**



# ELECTIONS

## District attorney candidates file campaign finance reports

Staff reports

The three people who would like to be Grayson County's next District Attorney have filed campaign finance reports with the county elections administration that show just who has contributed to their campaigns and how much they are spending.

The Herald Democrat obtained those reports and will report on contributions of \$100 or over and the amount that they are spending.

Republican Brett Smith's form covered the period between Jan. 16-Feb. 5, 2024. He listed \$15,500 in contributions during that time and \$68,801 in spending. His form said the campaign had \$14,500 in outstanding loans as of the reporting period.

He listed the following contributions of \$100 or more:

Lynn Edman of McKinney, \$250; Jane Bronstad of Sherman, \$100; Talana & Mike Foley of Van Alstyne, \$500; Ross and Sharon Rolirad of Fairview, \$150; William Leo of Gunter, \$100; James Benton of Van Alstyne, \$250; Kurt Himmelfrich of Van Alstyne, \$500; Byron Whitaker of Van Alstyne, \$500; Von Gallagher of Celina, \$3,500; Joyce Godwin of Van Alstyne, \$200; Phyllis James of Gunter, \$100; Stephen Roddy of Van Alstyne, \$100; Jennifer Becherer of Van Alstyne, \$100; Gabriel Hees of Van Alstyne, \$500; Jim Atkinson of Van Alstyne, \$250; Dorothy Fleming of Sherman, \$100; Roger Stormont of Van Alstyne, \$100; David Bedgood of



Brett Smith



John Kermit Hill



Brandy Douglas

Sherman, \$100; Forrest Marr of Denison, \$500; Jeff Christie of Denison, \$100; Lawrence Davis of Sherman, \$500; Steven Jones of Sherman, \$100; Nell Graham of Denison, \$100; Jeremy and Trish Wood of Austin Texas, \$200; Darrell Ramey of Sherman, \$200; Bob and Barbara Monk of Sherman, \$100; Scott and Kim Marr of Denison, \$250; Bart and Cindy Lawrence of Pottsboro, \$250; Mark Kuneman of Denison, \$250; AJD Adventures of Sherman, \$200; Virginia Smith of Sherman, \$250; Lindsey Wilford of Sherman, \$250; Jason Bethel of Sherman, \$150; Michael Springer of Denison, \$100; Kevin Wilson of Howe, \$100; William Steele of Sherman, \$150; Nora and Drue Bynum of Denison, \$200; Joe Fallon of Sherman, \$200; Elijah Brown of Sherman, \$200; Ron Huff of Sherman, \$200; Ross Rolirad of Fairview, \$100; Paul Bailey of Sherman, \$150; Naif and Cindy Risk of Sherman, \$100; James Garcia of Sherman, \$100; Judith McGraw of Denison, \$250; Lee Olmstead of Sherman, \$250; Barry Boothe of Van Alstyne, \$100; Howard Thornton of Van Alstyne, \$100; David Bayless of Denison, \$250; Luke Motley of Sherman, \$500; Bill Benton of Van

Alstyne \$500 in kind contributions of food and drink; Brett and Debbie Graham of Denison, \$500 in kind contributions of food and drinks.

Smith reported the following expenses: Fast Signs of Sherman, \$1,383 for signs; The Political Firm of Baton Rouge Louisiana, \$790 for script and voice over; Joe Duke of Whitesboro, \$1,400 for sign building and placement; AX Media of Kansas City Missouri, \$36,000 for commercial and Axiom Strategies of Kansas City Missouri, \$28,407 for advertising mail.

Republican John Kermit Hill's most recent campaign finance report shows he had \$8,545 in contributions and \$5,131 in expenditures. He did not list any outstanding loans to his campaign.

He listed contributions of \$100 or more from the following:

Ann Dancer of Denison, \$250; Clinton Long of Sherman, \$1,000; Shelley Luther of Sherman, \$100; Kara Massengale of Sherman, \$100; John Palmer of Denison, \$2,000; Ben Vincent of Denison, \$100; Dana Walker of Anna, \$100; Donna Watterson of Belts, \$100; Jacob West of Denison, \$1,000; Worldwide of Sherman, \$1,000 in

kind contributions for advertising services; Texomaland of Sherman, \$2,000 in kind contributions for website services.

Democrat Brandy Douglas listed \$3,395 in contributions in her most recent campaign finance report and \$1,125 in spending. She did not list any outstanding loans to her campaign.

She listed contributions of \$100 or more from the following:

Jacqueline Love-Worline of McKinney, \$100; Pamela McGraw of Denison, \$100; Jerry Eiregde of Sadler, \$1,000; Ruth Williamson of Sherman, \$100; Madeline Anderson of Cedar Hill, \$100; Krystal Abbott of Durant, Oklahoma, \$100; Phillip Lewis of Washington D.C., \$500; April Vellott of Sherman, \$100; Leshia Champs of Palestine, \$500; Erica Harper Brown of Littleton Colorado, \$100; Alan Smith of Denison, \$200; Douglas did not itemize expenditures.

These and other local candidates campaign finance reports can be found on the Grayson County Elections Administration's website at [cograyson.tx.us](http://cograyson.tx.us) and then select directory and then elections and then candidate information and then candidate campaign finance filings.

## Candidates for Commissioners Precinct 1 file campaign finance reports

Staff reports

Current Grayson County Commissioner for Precinct 1 Jeff Whitmire decided not to seek reelection in 2024 and four men have filed to take his place. They each have recently filed campaign finance reports showing who is contributing to their campaigns. The reports also indicate where and on what the campaigns are spending those funds.

Andre Luper, the only Democrat in the race, reported collecting \$1,630 in contributions in his most recent campaign finance reports. He reported spending \$979 on his campaign for that time period.

Itemized contributions of \$100 or more listed on Luper's filing included the following:

Pamela McGraw, \$1,000 of Sherman and Channing Tutt of Columbia South Carolina, \$500. Luper spent \$201 with BlueHost.com for website hosting and \$750 to the Grayson County Democratic Party for the filing fee.

Republican Josh Marr reported contributions of \$3,750 on his most recent report. He listed spending \$779 in that report. He listed \$300 in outstanding loans to the campaign for the same period.

Marr listed contributions of \$100 or more from the following:

David Ellis of Tom Bean, \$250; Scott Cox of Whitewright, \$200; William Benton of Van Alstyne, \$500; Dan Charles Whitely of Sherman, \$2,000;

Roger Luttrell of Van Alstyne, \$500 and Bryan Wilson of Sherman, \$300. Marr listed spending \$276 at Squarespace in New York City, New York for campaign website and \$503 at Paramax Inc in Sherman for campaign rack cards.

Republican Scott Renfro reported contributions of \$1,850 and spending of \$8,813 on his most recent report. He reported that \$8,788 was spent from his own personal funds.

Renfro listed contributions of



Andre Luper



Scott Renfro



Josh Marr



Terry Thomas

\$100 or more from David Johnson of Van Alstyne, \$250; John or Anthony (no address given), \$1,500 and Kenneth Berridge (no address given), \$100.

Renfro itemized expenditures of \$6,503 at Fast Signs in Sherman for campaign signs and \$750 to the Republican Party for the filing fee.

Republican Terry Thomas reported \$15,500 in contributions and \$14,029 in expenditures in his most recent filing. He listed the following contributions of \$100 or more:

Bill Plauche of Sherman, \$1,000; Ryan Griffin of Frisco, \$5,000; Shane Williams of Trenton, \$7,000 and Teague Griffin of Prosper, \$2,500.

Thomas listed expenditures of \$5,367 at Signs On the Cheap for signs as well as \$70 for a post office box for the campaign. He also listed \$12 at Dollar General for candy for a parade and \$98 at Fast Signs in Sherman for business cards.

Thomas also listed \$75 at The Myth and Ember in Van Alstyne for an announcement and \$70 at Lowes in Sherman for wood for signs.

## Candidate for Commissioners Precinct 3 files campaign finance reports



Lindsay Wright is running for Grayson County Commissioner in Precinct 3. Courtesy photo

Staff reports

Grayson County for

Precinct 3 Phyllis James has decided not to seek reelection in 2024 but one candidate did file to run for that office and that candidate recently filed a campaign finance report.

Republican Lindsay Wright reported \$5,150 in contributions and \$5,945 in expenditures. She listed the following contributions of \$100 or more:

Sarah Ritchey of Collinsville, \$500; Taylor Oldroyd (no address), \$100; Princess Brown (no address), \$500; Dawson (no

address) \$200; Sherry Smith of Denison, \$500; Michaela Ponce of Collinsville, \$150; Rey Glendenning of Frisco, \$1,000; David Crysp of Frisco, \$1,000; Matthew Robinson of Allen, \$250; Brian Reinhardt of Frisco, \$250; Michael Garrison of Allen, \$500 and Carolyn Nix of Tioga, \$1,000.

Wright listed the following expenditures: \$133 to the Whitesboro News Record for ads, \$145 to Build a Sign of Austin for flags; \$34 at Sam's Club for event

food expenses; \$276 at Amazon for parade items; \$3,092 at Axiom of Kansas City Missouri for signs; \$589 at Home Depot in Sherman for sign frames and wood, \$49 at Eggsquisite in Sherman for food; \$145 at Exxon in Pilot Point for gas; \$25 to the city of Sherman for parade expense; \$27 at Dollar General in Pilot Point for event expenses; \$80 at Tx Hand Pies in Tom Bean for food; \$271 at Cellermans in Sherman for food for parade; \$750 at Grayson County Republican Party for filing fee.



### TO ALL INTERESTED PERSONS AND PARTIES

BM Dorchester LLC, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit Number 167047 and Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, which would authorize construction of a Portland Cement at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. Additional information concerning this application is contained in the public notice section of this newspaper.

**AR-39**

**NAPD Public Notice Verification Documentation**

**From:** Hunter Lohrenz <hunter.lohrenz@trinityconsultants.com>  
**Sent:** Friday, April 5, 2024 11:44 AM  
**To:** PROOFS; Joel Stanford; R6AirPermitsTX  
**Cc:** jake@highrollergroup.com; Stephen Beene; Mike Meister  
**Subject:** Black Mountain PN Verification  
**Attachments:** 2024-0405 BM Dorchester PN Verification.pdf

To Whom It May Concern,

Trinity Consultants is sending this email on behalf of BM Dorchester LLC and in regards to the public notice verification for the initial permit application for Permit No. 167047 and PSDTX1602. As is directed in the public notice package that was received on February 12, 2024, the Public Notice Verification Form is attached to this email and is being submitted within 10 business days after the end of the designated comment period. Hard copies have been sent to all recipients listed in the notification list as well. Thank you.

Best,

**Hunter Lohrenz**  
Consultant

P 972.661.8100 M 406.871.6616

12700 Park Central Dr., Ste. 600, Dallas, TX, 75251

Email: [hunter.lohrenz@trinityconsultants.com](mailto:hunter.lohrenz@trinityconsultants.com)

LinkedIn: [www.linkedin.com/in/hunter-lohrenz-8738141a3](https://www.linkedin.com/in/hunter-lohrenz-8738141a3)



Connect with us: [LinkedIn](#) / [Facebook](#) / [Twitter](#) / [YouTube](#) / [trinityconsultants.com](http://trinityconsultants.com)

Stay current on environmental issues. [Subscribe](#) today to receive Trinity's free *EHS Quarterly*.





12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203 / [trinityconsultants.com](http://trinityconsultants.com)

April 5, 2024

**Via email:** [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov)

Texas Commission on Environmental Quality  
Office of the Chief Clerk  
Attn: Notice Team

*RE: Public Notice Requirements – Public Notice Verification Form  
Permit Numbers: 167047 and PSDTX1602  
TCEQ Project Number: 335160  
BM Dorchester LLC  
Customer Reference Number: CN605952373  
Regulated Entity Reference Number: RN111368437*

To Whom It May Concern:

BM Dorchester LLC (BM Dorchester) is constructing a Portland cement manufacturing facility located in Dorchester, Grayson County, Texas (Dorchester Facility). BM Dorchester has been assigned Customer Number (CN) 605952373. The Dorchester Facility has been assigned Texas Commission on Environmental Quality (TCEQ) Regulated Entity Number (RN) 111368437.

BM Dorchester submitted an initial permit application on November 8, 2021. As a part of the application process, the Dorchester Facility is required to publish a formal public notice in a newspaper of general circulation in the municipality nearest to the facility location. In accordance with the public notice guidance package received from the TCEQ on February 12, 2024, BM Dorchester has completed the following:

- ▶ Published a formal public notice on February 24, 2024 in "The Herald Democrat" circulated in Grayson County;
- ▶ Placed a copy of the Air Quality Permit Application at the public location, Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, for public viewing and copying, beginning December 16, 2021; and
- ▶ Prepared and posted signs per TCEQ requirements at the Dorchester Facility beginning December 16, 2021.

With this submittal, BM Dorchester is submitting the Public Notice Verification Form to the TCEQ via email within 10 calendar days after the end of the designated comment period.

The Dorchester Facility is required to submit copies to those listed on the Notification List. An electronic copy will be sent to [R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov) and Mr. Joel Stanford, TCEQ Air Permits Division, [Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov). Hard copies of these submittals are being mailed to the following, per the Instructions for Public Notice:

"

#### HEADQUARTERS

12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203

APP-1515

The Dorchester Facility is required to submit copies of the aforementioned items to those listed on the Notification List. Therefore, copies are also being sent to the following:

Texas Commission on Environmental Quality  
Air Section Manager  
Dallas/Fort Worth Regional Office  
2309 Gravel Dr  
Fort Worth, Texas 76118-6951

Texas General Land Office  
Upland Leasing Team Leader  
Professional Services  
P.O Box 12873  
Austin, Texas 78711-2873

The Honorable Bruce Dawsey  
County Judge  
County Courthouse  
100 West Houston  
Sherman, Texas 75090

The Honorable David Smith  
Mayor of Dorchester  
373 Main Street  
Dorchester, TX 75459

If you have any questions, please feel free to contact me at (972) 661-8100 or via email at [MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com).

Sincerely,

TRINTY CONSULTANTS



Michael Meister  
Principal Consultant

cc: U.S. EPA, Region 6 ([R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov))  
Mr. Joel Stanford, Air Permits Division ([Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov))  
Air Section Manager, TCEQ Region 4, DFW  
Upland Leasing Team Leader, Texas General Land Office  
The Honorable Bruce Dawsey, County Courthouse  
The Honorable David Smith, Mayor of Dorchester  
Mr. Jake Bender, BM Dorchester LLC (electronic)

**ATTACHMENT 1**  
**Public Notice Verification Form**

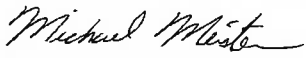
**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: <b>BM Dorchester LLC</b>	
Site or Facility Name: <b>BM Dorchester</b>	
Application Received Date: <b>November 8, 2021</b>	
TCEQ Account Number (if applicable):	Permit Number: <b>167047, PSDTX1602, and GHGPSDTX212</b>
Regulated Entity Number (RN): <b>111368437</b>	Customer Number (CN): <b>605952373</b>
All applicants must <b>complete all applicable</b> portions of this form. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk <b>within 10 business days after the end of the designated comment period</b> . For more information regarding public notice, refer to the instructions in the public notice package.	
<b>Alternative Language Checklist</b>	
I have contacted the appropriate school district. <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>	
School District: <b>Howe ISD and Gunter ISD</b>	Phone Number: <b>903-745-4000 (Howe ISD)</b>
Person Contacted: <b>Giuliana Sheff (Howe ISD)</b> Consulted District Website ( <b>Gunter ISD</b> )	Date: <b>11/01/2021 (Howe ISD); November 2021 (Gunter ISD)</b>
Is a bilingual education program (BEP) required by the Texas Education Code in the district? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>	
<b>If answer is "NO," skip to first question in verification box on next page.</b> <i>(Note: A BEP is different from "English as a Second Language" (ESL) program; and Elementary/Middle schools that only offer ESL will not trigger notice in an alternative language.)</i>	
Notice in an alternative language is required if a BEP is <b>required</b> in the District, and <b>one</b> of the following conditions is met:	
1. students in the elementary or middle school nearest the facility are enrolled in a program at that school;	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. students from the elementary or middle school nearest the facility attend a BEP at another location; or	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. the school district that otherwise would be required to provide a BEP has been granted an exception from the requirements to provide the program, as provided for in 19 Texas Administrative Code 89.1207(a).	<input type="checkbox"/> Yes <input type="checkbox"/> No
If the answer is "NO" to <b>1, 2, and 3 above</b> , then alternative language notice is <b>not required</b> .	
The name of the elementary school nearest to the proposed or existing facility is:	
The name of the middle school nearest to the proposed or existing facility is:	
The following language(s) is/are utilized in the bilingual program:	
<b>If notice in an alternative language is required, then applicants must publish alternative language notice(s) and post alternative language sign(s), as outlined in the <i>Instructions for Public Notice</i> and certify compliance with those requirements on this form.</b>	

**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: <b>BM Dorchester LLC</b>	
Site or Facility Name: <b>BM Dorchester</b>	
Application Received Date: <b>November 8, 2021</b>	
TCEQ Account Number (if applicable):	Permit Number: <b>167047, PSDTX1602, and GHGPSDTX212</b>
Regulated Entity Number (RN): <b>111368437</b>	Customer Number (CN): <b>605952373</b>
For more information regarding public notice, refer to the instructions in the public notice package.	
<b>Alternative Language Verification</b>	
1. A BEP is required by the Texas Education Code in the area addressed by this permit application and is subject to alternative language public notice requirements. <b>If "NO," skip 2 through 6 and complete signature, title, date, and name of applicant.</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. The applicant has conducted a diligent search for a newspaper or publication of general circulation in both the municipality and county in which the facility is located (or proposed to be located).	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. A newspaper or publication <b>could not be found</b> in any of the alternative language(s) in which notice is required.	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. The publishers of the <b>newspaper listed below refused to publish the notice</b> as requested, <b>and</b> another newspaper or publication in the same language and of general circulation <b>could not be found</b> in the municipality or county in which the facility is located (or proposed to be located).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Newspaper:	Language:
5. Proof of publication of the newspaper <b>alternative language</b> notice(s) and the requested affidavits have been sent to the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No
6. Alternative language signs were posted as required by the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period.</b> Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk <b>within 10 business days after the end of the designated comment period.</b> The TCEQ will not accept this form if submitted prior to that date.	
Verified by (signature): <i>Michael Meister</i>	
Applicant: <b>Mr. Michael Meister</b>	
Title: <b>Principal Consultant</b>	Date: <b>04/05/2024</b>

**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: <b>BM Dorchester LLC</b>		
Site or Facility Name: <b>BM Dorchester</b>		
Application Received Date: <b>November 8, 2021</b>		
TCEQ Account Number (if applicable):	Permit Number: <b>167047, PSDTX1602, and GHGPSDTX212</b>	
Regulated Entity Number (RN): <b>111368437</b>	Customer Number (CN): <b>605952373</b>	
For more information regarding public notice, refer to the instructions in the public notice package.		
<b>New Source Review Permit Notice Verification (Complete this section, if applicable)</b>		
Proof of publication of the newspaper notices and the requested affidavits have been furnished in accordance with the regulations and instructions of the TCEQ.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Notice of Receipt of Application and Intent to Obtain Permit (1<sup>st</sup> Notice):</b>		
Required signs (for 1st notice) were posted in accordance with the regulations and instructions of the TCEQ.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
A copy of the administratively complete air quality application, and any revisions, were available for review and copying at the public place indicated below throughout the duration of the public comment period.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
The public place indicated below provides public access to the internet (for PSD, nonattainment, or FCAA 112(g) Permit).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<b>Notice of Application and Preliminary Decision (2<sup>nd</sup> Notice, if applicable):</b>		
A copy of the complete air quality application (including any subsequent revisions to the application), executive director's preliminary decision (which includes the draft permit), the preliminary determination summary and air quality analysis (if applicable), are available for review and copying at the public place indicated below from the first day after newspaper publication, and will remain available until either: (1) the TCEQ acts on the application; or (2) the application is referred to the State Office of Administrative Hearings (SOAH) for hearing	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Name of Public Place: <b>Howe Community Library</b>		
Address of Public Place: <b>315 S Collins Fwy</b>		
City: <b>Howe</b>	State: <b>Texas</b>	ZIP Code: <b>75459</b>
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk within 10 business days after the end of the designated comment period. The TCEQ will not accept this form if submitted prior to that date.</b>		
Verified by (signature): 		
Applicant: <b>Mr. Michael Meister</b>		
Title: <b>Principal Consultant</b>	Date: <b>04/05/2024</b>	



**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: <b>BM Dorchester LLC</b>		
Site or Facility Name: <b>BM Dorchester</b>		
Application Received Date: <b>November 8, 2021</b>		
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Regulated Entity Number (RN): <b>111368437</b>	Customer Number (CN): <b>605952373</b>	
For more information regarding public notice, refer to the instructions in the public notice package.		
<b>Federal Operating Permit (Title V) Notice Verification (Complete this section, if applicable)</b>		
I verify that the required signs were posted in accordance with the regulations and instructions of the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
I verify that proof of publication of the newspaper notices and the requested affidavits have been furnished in accordance with the regulations and instruction of the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
I verify that a copy of the complete air quality application (including any subsequent revisions to the application) and draft permit were available for review and copying at the public place indicated below throughout the duration of the public comment period.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Name of Public Place:		
Address of Public Place:		
City:	State:	ZIP Code:
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk within 10 business days after the end of the designated comment period. The TCEQ will not accept this form if submitted prior to that date.</b>		
Verified by (signature):		
Applicant:		
Title:	Date:	

**AR-40**

**PM 2.5 Application Addendum**

**From:** Mike Meister <MMeister@trinityconsultants.com>  
**Sent:** Thursday, April 25, 2024 11:25 AM  
**To:** Joel Stanford  
**Cc:** Chad Dumas; Daniel Jamieson  
**Subject:** BM Dorchester Application/Modeling Addendum  
**Attachments:** BM Dorchester PM2.5 Modeling 2024-0424.zip; BM Dorchester PSD PM2.5 Addendum 2024-0424.pdf; PI-1 Workbook\_Rev (2024-0424).xlsx

Joel,

I tried to send this yesterday but I think it didn't make it through. If it did, you can disregard this email.

Attached is an application addendum/revised AQA to address the recently revised annual PM2.5 NAAQS that will soon become effective. In support of the AQA revision, we have included a revised PI-1 Workbook that reflects the update made to dust collector exit loading and an update to annual operating hours for vacuum truck loading. Both changes are addressed in the document. Modeling updates and revised results are also presented in the document. Model input and output files are contained in the attached zip file.

I have copied ADMT on this email to facilitate review of the modeling updates.

Any questions, comments, or data needs, please do not hesitate to ask.

Thanks,  
Mike

**Michael Meister**  
Principal Consultant

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# **TCEQ AIR QUALITY NEW SOURCE REVIEW PERMIT APPLICATION (PM<sub>2.5</sub> ADDENDUM)**

**BM Dorchester LLC / Black Mountain Dorchester Plant**

**Prepared By:**

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**TRINITY CONSULTANTS**

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April 2024

Project 214401.0054



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## **1. EXECUTIVE SUMMARY**

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BM Dorchester LLC (BM Dorchester) is proposing to construct a greenfield portland cement manufacturing plant that will be located in Dorchester, Texas, called the Black Mountain Dorchester Plant (Dorchester Plant). With the application for this project, BM Dorchester is requesting authorization to construct and operate the Dorchester Plant. The project triggered Prevention of Significant Deterioration (PSD) review. During the final review period of the draft PSD permit, EPA lowered the annual PM<sub>2.5</sub> NAAQS from 12 µg/m<sup>3</sup> to 9 µg/m<sup>3</sup>. This addendum is submitted to address ambient air impacts related to the revised annual PM<sub>2.5</sub> NAAQS.



## 2. UPDATES TO EMISSIONS

This addendum lowers the exit grain loading of the following material handling baghouses from 0.005 gr/dscf to 0.0025 gr/dscf for PM, PM<sub>10</sub>, and PM<sub>2.5</sub>, which lowers the proposed permit emissions limits for such baghouses. An updated PI-1 Workbook is provided with this addendum.

EPN	CIN	Description
10-BF-035	10BF_035	Crusher Building Baghouse
10-BF-140	10BF_140	Material Transfer (LS to Storage) Baghouse
12-BF-140	12BF_140	Additive Unloading (Rail) Baghouse
11-BF-270	11BF_270	Material Transfer (LS to Hopper) Baghouse
11-BF-285	11BF_285	Material Transfer (LS to Hopper) Baghouse
12-BF-315	12BF_315	Truck Unloading Baghouse
12-BF-325	12BF_325	Material Transfer (Rail Add. to Storage) Baghouse
12-BF-360	12BF_360	Material Transfer (Truck Add. to Storage) Baghouse
13-BF-030	13BF_030	Raw Mill Feed (Top of Bin Baghouse)
13-BF-500	13BF_500	Raw Mill Feed Bin Building Baghouse
20-BF-010	20BF_010	Raw Mill Building Baghouse
20-BF-182	20BF_182	Raw Mill Building Baghouse
20-BF-360	20BF_360	Raw Mill Building Baghouse
21-BF-330	21BF_330	Top of CKD Bin Baghouse
22-BF-060	22BF_060	Bottom of Raw Meal Silo Baghouse
22-BF-080	22BF_080	Preheater Tower Baghouse
22-BF-160	22BF_160	Top of Raw Meal Silo Baghouse
22-BF-385	22BF_385	Top of Surge Bin (RM Silo) Baghouse
30-BF-260	30BF_260	Bottom of Preheater Tower Baghouse
30-BF-320	30BF_320	Top of Preheater Tower Baghouse
42-BF-270	42BF_270	Cooler Discharge Baghouse
41-BF-130	41BF_130	Top of Bin (Bypass Dust) Baghouse
44-BF-030	44BF_030	Top of Clinker Silo Baghouse
44-BF-185	44BF_185	Transfer Tower (Clinker Storage and Handling) Baghouse
50-BF-050	50BF_050	Top of Clinker Feed Bin Baghouse
50-BF-020	50BF_020	Top of Gypsum Feed Bin Baghouse
50-BF-350	50BF_350	Cement Feed Bin Extraction Baghouse
51-BF-050	51BF_050	Cement Mill Building Baghouse
51-BF-140	51BF_140	Cement Mill Building Baghouse
51-BF-350	51BF_350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse
51-BF-380	51BF_380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse
52-BF-110	52BF_110	Top of Cement Silo 1 Baghouse
53-BF-110	53BF_110	Top of Cement Silo 2 Baghouse
52-BF-190	52BF_190	Top of Surge Bin (CM Silo-1) Baghouse
53-BF-190	53BF_190	Top of Surge Bin (CM Silo-2) Baghouse
52-BF-270	52BF_270	Loadout System (CM Silo-1) Baghouse
53-BF-270	53BF_270	Loadout System (CM Silo-2) Baghouse

In addition to the above updates, this addendum reduces the annual operating hours from Vacuum Truck Loading (FIN: VACLOAD; EPN: MSSFUG) operations from 2,920 hrs/yr to 730 hrs/yr. The revised emission calculations are provided in Appendix A.

### 3. MODELING UPDATES

---

For this addendum, the annual PM<sub>2.5</sub> significant impact level (SIL) modeling and full impact NAAQS and PSD Class II Increment modeling have been updated. The preamble to the final *Reconsideration of the National Ambient Air Quality Standards for Particulate Matter* (45 FR 16202) states that:

*...EPA is updating its guidance that provides recommended significant impact levels (SILs) for PM<sub>2.5</sub> and expects that an updated SIL for the revised primary annual PM<sub>2.5</sub> NAAQS will be available EPA will be available on or before the effective date of the final NAAQS.*

EPA had not released any updated guidance or recommended SILs at the time this addendum was prepared. Therefore, as a conservative estimate of the revised SIL, BM Dorchester evaluated significant receptors based on half of the current SIL (i.e., lowering the SIL as evaluated from 0.2 µg/m<sup>3</sup> to 0.1 µg/m<sup>3</sup>). If the SIL was reduced by the same percentage as the NAAQS reduction, the revised SIL would equal 0.15 µg/m<sup>3</sup> (0.2 x 9/12). Therefore, using a SIL of 0.1 µg/m<sup>3</sup> is expected to provide a conservative estimate.

The only modeling updates are the use of the current version of AERMOD (23132) and the lower PM<sub>2.5</sub> emissions presented in Section 2.0. There are no changes to the stack parameters or stack locations. The revised annual PM<sub>2.5</sub> full impact NAAQS analysis and PSD Class II Increment modeling results are provided in Appendix A, and the revised files associated with such analysis and modeling are listed in Appendix B. The revised annual PM<sub>2.5</sub> full impact NAAQS analysis and PSD Class II Increment modeling results are below the annual PM<sub>2.5</sub> NAAQS and PSD Class II Increment.

## **APPENDIX A. REVISED EMISSION CALCULATIONS**

---

General Equipment Baghouses Emissions Summary

General Equipment Baghouse Emission Factors

EPN	CIN	Description	Flow Rate (scfm)	PM Outlet Grain Loading <sup>a</sup> (gr/scf)	PM <sub>10</sub> Outlet Grain Loading <sup>a</sup> (gr/scf)	PM <sub>2.5</sub> Outlet Grain Loading (gr/scf)
10-BF-035	10BF 035	Crusher Building Baghouse	31,783	0.0025	0.0025	0.0025
10-BF-140	10BF 140	Material Transfer (LS to Storage) Baghouse	5,886	0.0025	0.0025	0.0025
12-BF-140	12BF 140	Additive Unloading (Rail) Baghouse	5,886	0.0025	0.0025	0.0025
11-BF-270	11BF 270	Material Transfer (LS to Hopper) Baghouse	4,709	0.0025	0.0025	0.0025
11-BF-285	11BF 285	Material Transfer (LS to Hopper) Baghouse	4,709	0.0025	0.0025	0.0025
12-BF-315	12BF 315	Truck Unloading Baghouse	17,657	0.0025	0.0025	0.0025
12-BF-325	12BF 325	Material Transfer (Rail Add. to Storage) Baghouse	4,709	0.0025	0.0025	0.0025
12-BF-360	12BF 360	Material Transfer (Truck Add. to Storage) Baghouse	2,943	0.0025	0.0025	0.0025
13-BF-030	13BF 030	Raw Mill Feed (Top of Bin Baghouse)	2,943	0.0025	0.0025	0.0025
13-BF-500	13BF 500	Raw Mill Feed Bin Building Baghouse	10,006	0.0025	0.0025	0.0025
20-BF-010	20BF 010	Raw Mill Building Baghouse	7,063	0.0025	0.0025	0.0025
20-BF-182	20BF 182	Raw Mill Building Baghouse	4,709	0.0025	0.0025	0.0025
20-BF-360	20BF 360	Raw Mill Building Baghouse	2,649	0.0025	0.0025	0.0025
21-BF-330	21BF 330	Top of CKD Bin Baghouse	1,766	0.0025	0.0025	0.0025
22-BF-060	22BF 060	Bottom of Raw Meal Silo Baghouse	5,297	0.0025	0.0025	0.0025
22-BF-080	22BF 080	Preheater Tower Baghouse	2,943	0.0025	0.0025	0.0025
22-BF-160	22BF 160	Top of Raw Meal Silo Baghouse	8,829	0.0025	0.0025	0.0025
22-BF-385	22BF 385	Top of Surge Bin (RM Silo) Baghouse	2,943	0.0025	0.0025	0.0025
30-BF-260	30BF 260	Bottom of Preheater Tower Baghouse	4,709	0.0025	0.0025	0.0025
30-BF-320	30BF 320	Top of Preheater Tower Baghouse	2,649	0.0025	0.0025	0.0025
42-BF-270	42BF 270	Cooler Discharge Baghouse	3,826	0.0025	0.0025	0.0025
41-BF-130	41BF 130	Top of Bin (Bypass Dust) Baghouse	1,177	0.0025	0.0025	0.0025
44-BF-030	44BF 030	Top of Clinker Silo Baghouse	14,714	0.0025	0.0025	0.0025
44-BF-185	44BF 185	Transfer Tower (Clinker Storage and Handling) Baghouse	3,531	0.0025	0.0025	0.0025
50-BF-050	50BF 050	Top of Clinker Feed Bin Baghouse	2,354	0.0025	0.0025	0.0025
50-BF-020	50BF 020	Top of Gypsum Feed Bin Baghouse	2,060	0.0025	0.0025	0.0025
50-BF-350	50BF 350	Cement Feed Bin Extraction Baghouse	9,417	0.0025	0.0025	0.0025
51-BF-050	51BF 050	Cement Mill Building Baghouse	7,004	0.0025	0.0025	0.0025
51-BF-140	51BF 140	Cement Mill Building Baghouse	5,356	0.0025	0.0025	0.0025
51-BF-350	51BF 350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse	2,649	0.0025	0.0025	0.0025
51-BF-380	51BF 380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse	3,237	0.0025	0.0025	0.0025
52-BF-110	52BF 110	Top of Cement Silo 1 Baghouse	10,006	0.0025	0.0025	0.0025
53-BF-110	53BF 110	Top of Cement Silo 2 Baghouse	9,417	0.0025	0.0025	0.0025
52-BF-190	52BF 190	Top of Surge Bin (CM Silo-1) Baghouse	3,531	0.0025	0.0025	0.0025
53-BF-190	53BF 190	Top of Surge Bin (CM Silo-2) Baghouse	3,531	0.0025	0.0025	0.0025
52-BF-270	52BF 270	Loadout System (CM Silo-1) Baghouse	2,354	0.0025	0.0025	0.0025
53-BF-270	53BF 270	Loadout System (CM Silo-2) Baghouse	2,354	0.0025	0.0025	0.0025

<sup>a</sup> Greater than TCEQ Tier 1 BACT

General Equipment Baghouse Emission Rates

EPN	CIN	Description	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	PM	PM <sub>10</sub>	PM <sub>2.5</sub>
10-BF-035	10BF 035	Crusher Building Baghouse	0.681	0.681	0.126	2.983	2.983	2.983
10-BF-140	10BF 140	Material Transfer (LS to Storage) Baghouse	0.126	0.126	0.126	0.552	0.552	0.552
12-BF-140	12BF 140	Material Unloading (Rail) Baghouse	0.126	0.126	0.126	0.552	0.552	0.552
11-BF-270	11BF 270	Material Transfer (LS to Hopper) Baghouse	0.101	0.101	0.101	0.442	0.442	0.442
11-BF-285	11BF 285	Material Transfer (LS to Hopper) Baghouse	0.101	0.101	0.101	0.442	0.442	0.442
12-BF-315	12BF 315	Truck Unloading Baghouse	0.378	0.378	0.378	1.657	1.657	1.657
12-BF-325	12BF 325	Material Transfer (Rail Add. to Storage) Baghouse	0.101	0.101	0.101	0.442	0.442	0.442
12-BF-360	12BF 360	Material Transfer (Truck Add. to Storage) Baghouse	0.063	0.063	0.063	0.276	0.276	0.276
13-BF-030	13BF 030	Raw Mill Feed (Top of Bin Baghouse)	0.063	0.063	0.063	0.276	0.276	0.276
13-BF-500	13BF 500	Raw Mill Feed Bin Building Baghouse	0.214	0.214	0.214	0.939	0.939	0.939
20-BF-010	20BF 010	Raw Mill Building Baghouse	0.151	0.151	0.151	0.663	0.663	0.663
20-BF-182	20BF 182	Raw Mill Building Baghouse	0.101	0.101	0.101	0.442	0.442	0.442
20-BF-360	20BF 360	Raw Mill Building Baghouse	0.057	0.057	0.057	0.249	0.249	0.249
21-BF-330	21BF 330	Top of CKD Bin Baghouse	0.038	0.038	0.038	0.166	0.166	0.166
22-BF-060	22BF 060	Bottom of Raw Meal Silo Baghouse	0.114	0.114	0.114	0.497	0.497	0.497
22-BF-080	22BF 080	Preheater Tower Baghouse	0.063	0.063	0.063	0.276	0.276	0.276
22-BF-160	22BF 160	Top of Raw Meal Silo Baghouse	0.189	0.189	0.189	0.829	0.829	0.829
22-BF-385	22BF 385	Top of Surge Bin (RM Silo) Baghouse	0.063	0.063	0.063	0.276	0.276	0.276
30-BF-260	30BF 260	Bottom of Preheater Tower Baghouse	0.101	0.101	0.101	0.442	0.442	0.442
30-BF-320	30BF 320	Top of Preheater Tower Baghouse	0.057	0.057	0.057	0.249	0.249	0.249
42-BF-270	42BF 270	Cooler Discharge Baghouse	0.082	0.082	0.082	0.359	0.359	0.359
41-BF-130	41BF 130	Top of Bin (Bypass Dust) Baghouse	0.025	0.025	0.025	0.110	0.110	0.110
44-BF-030	44BF 030	Top of Clinker Silo Baghouse	0.315	0.315	0.315	1.381	1.381	1.381
44-BF-185	44BF 185	Transfer Tower (Clinker Storage and Handling) Baghouse	0.076	0.076	0.076	0.331	0.331	0.331
50-BF-050	50BF 050	Top of Clinker Feed Bin Baghouse	0.050	0.050	0.050	0.221	0.221	0.221
50-BF-020	50BF 020	Top of Gypsum Feed Bin Baghouse	0.044	0.044	0.044	0.193	0.193	0.193
50-BF-350	50BF 350	Cement Feed Bin Extraction Baghouse	0.202	0.202	0.202	0.884	0.884	0.884
51-BF-050	51BF 050	Cement Mill Building Baghouse	0.150	0.150	0.150	0.657	0.657	0.657
51-BF-140	51BF 140	Cement Mill Building Baghouse	0.115	0.115	0.115	0.503	0.503	0.503
51-BF-350	51BF 350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse	0.057	0.057	0.057	0.249	0.249	0.249
51-BF-380	51BF 380	Bottom of Cement Silo (Bucket Elevator Discharge) Baghouse	0.069	0.069	0.069	0.304	0.304	0.304
52-BF-110	52BF 110	Top of Cement Silo 1 Baghouse	0.214	0.214	0.214	0.939	0.939	0.939
52-BF-110	52BF 110	Top of Cement Silo 2 Baghouse	0.202	0.202	0.202	0.884	0.884	0.884
52-BF-190	52BF 190	Top of Surge Bin (CM Silo-1) Baghouse	0.076	0.076	0.076	0.331	0.331	0.331
52-BF-190	52BF 190	Top of Surge Bin (CM Silo-2) Baghouse	0.076	0.076	0.076	0.331	0.331	0.331
52-BF-270	52BF 270	Loadout System (CM Silo-1) Baghouse	0.050	0.050	0.050	0.221	0.221	0.221
53-BF-270	53BF 270	Loadout System (CM Silo-2) Baghouse	0.050	0.050	0.050	0.221	0.221	0.221

\* Sample Calculations

Baghouse 10-BF-035 Hourly PM Emissions (lb/hr) =	31.783 scf min	0.0025 gr scf	lb 7000 gr	60 min hr	=	0.681 lb hr
Baghouse 10-BF-035 Annual PM Emissions (tpy) =	0.681 lb hr	8760 hr yr	ton 2000 lbs		=	2.983 tons yr



INHERENTLY LOW EMITTING (ILE) ACTIVITIES

MSS Activity	NO <sub>x</sub>		CO		SO <sub>2</sub>		PM		PM <sub>10</sub>		PM <sub>2.5</sub>		VOC	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Vacuum Truck Loading	-	-	-	-	-	-	0.514	0.188	0.514	0.188	0.257	0.094	-	-
Vacuum Truck Unloading	-	-	-	-	-	-	0.068	0.012	0.032	0.006	0.005	0.001	-	-
CEMS Calibration	0.002	0.003	0.002	0.003	0.000	0.000	-	-	-	-	-	-	0.0002	0.0003
Refractory Removal	-	-	-	-	-	-	0.231	0.008	0.109	0.004	0.017	0.0006	-	-
<b>TOTAL ILE EMISSIONS (EPN MSSFUG)</b>	<b>0.002</b>	<b>0.003</b>	<b>0.002</b>	<b>0.003</b>	<b>0.00026</b>	<b>0.00048</b>	<b>0.814</b>	<b>0.208</b>	<b>0.656</b>	<b>0.197</b>	<b>0.279</b>	<b>0.095</b>	<b>0.000182</b>	<b>0.000332</b>

**Vacuum Truck Loading****Basis of Calculation:**

Emissions are calculated based on the estimated blower flow rate, filter grain loading, and annual hours of operation at similar cement plants.

Blower flow rate	6,000 cfm	(conservative estimation)
Grain loading	0.01 gr/scf	
Annual operation	730 hr/yr	(2 hours a day)

**Emission Calculations:**

FIN	EPN	Activity	PM		PM <sub>10</sub> <sup>a</sup>		PM <sub>2.5</sub> <sup>b</sup>	
			(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
VACLOAD	MSSFUG	Vacuum loading	0.51	0.19	0.51	0.19	0.26	0.09

<sup>a</sup> PM<sub>10</sub> emissions are assumed to be

100% of PM.

<sup>b</sup> PM<sub>2.5</sub> emissions are estimated to be

50% of PM<sub>10</sub>.

<sup>c</sup> Sample calculations:

$$\text{Short Term PM Emissions} = Q = 6000 \text{ cfm} \times 0.01 \text{ gr/scf} \times \text{lb/7000 gr} \times 60 \text{ min/hr} = 0.51 \text{ lb/hr}$$

$$\text{Long Term PM Emissions} = Q = 0.51 \text{ lb/hr} \times 730 \text{ hr/yr} / 2000 \text{ lb/ton} = 0.19 \text{ ton/yr}$$

## **APPENDIX B. REVISED PM<sub>2.5</sub> MODELING**

---

Table B-1. PSD Class II SIL Analysis Results

Pollutant	Averaging Period	Modeled Year	Description	Modeled GLCmax ( $\mu\text{g}/\text{m}^3$ )		Secondary $\text{PM}_{2.5}$ Concentration <sup>1</sup> ( $\mu\text{g}/\text{m}^3$ )	Total Concentration <sup>2</sup> ( $\mu\text{g}/\text{m}^3$ )	Significant Impacts Level (SIL) <sup>4</sup> ( $\mu\text{g}/\text{m}^3$ )	Below SIL?	ROI <sup>5</sup> (km)
				RM_ON	RM_OFF					
$\text{PM}_{2.5}$ (NAAQS)	Annual	2017-21	Project Only (Max. averaged over 5 years)	1.274	1.275	0.002	1.277	0.1	No	6.923
				1.214	1.215	0.002	1.217	0.1	No	6.457
				1.267	1.268	0.002	1.270	0.1	No	6.923
				1.281	1.283	0.002	1.285	0.1	No	7.571
				1.248	1.250	0.002	1.252	0.1	No	6.923
$\text{PM}_{2.5}$ (PSD Inc.)	Annual	2021	Project Only (Maximum)	1.379	1.381	0.002	1.384	0.1	No	7.394

<sup>1</sup> Secondary  $\text{PM}_{2.5}$  concentrations are estimated using TCEQ's Air Quality Modeling Guidelines (APDG 6232), Appendix D, which is based on EPA's *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tool for Ozone and  $\text{PM}_{2.5}$  under the PSD Permitting Program*, EPA-454/R-19-003, April 2019.

<sup>2</sup> Total concentration is the sum of the modeled concentration and secondary  $\text{PM}_{2.5}$  concentration, as applicable.

<sup>3</sup> Air Quality Modeling Guidelines, Table B-1, APDG 6232, November 2019.

<sup>4</sup> At the time (4/2024) the modeling was conducted, EPA had not published the revised annual  $\text{PM}_{2.5}$  SIL. As a conservative estimate, it is assumed that the SIL would be cut in half.

<sup>5</sup> Radius of Impact (ROI) is measured from UTM coordinates: 714706.4 m Easting, 3713508.7 m Northing, Zone 14.

**Table B-2. NAAQS Analysis Results**

Pollutant <sup>1</sup>	Averaging Period <sup>1</sup>	Modeled Year	Modeled Source Group	Description	Modeled GLC <sub>max</sub> (µg/m <sup>3</sup> )	Secondary PM <sub>2.5</sub> Concentration <sup>2</sup> (µg/m <sup>3</sup> )	Background Concentration <sup>3</sup> (µg/m <sup>3</sup> )	Combined Maximum Impact <sup>4</sup> (µg/m <sup>3</sup> )	NAAQS (µg/m <sup>3</sup> )	Below NAAQS?
PM <sub>2.5</sub>	Annual	2017-21	ALL	Project plus Inventory Sources (Averaged over 5-years)	1.329	0.002	7.5	8.8	9	Yes

<sup>1</sup> A NAAQS analysis is only required for pollutants and averaging periods with impacts in the Significance Analysis that are greater than or equal to the corresponding SIL.

<sup>2</sup> Secondary PM<sub>2.5</sub> concentrations are estimated using TCEQ's Air Quality Modeling Guidelines (APDQ 6232), Appendix D, which is based on EPA's *Guidance on the Development of Modeled Emission Rates for Precursors (MERPs)* as a Tier 1 Demonstration Tool for Ozone and PM<sub>2.5</sub> under the PSD Permitting Program. EPA-454/R-19-003, April 2019.

<sup>3</sup> The background concentration is based on conservative ambient monitoring data for 2020, 2021, and 2022. PM<sub>2.5</sub> data were obtained from the Denton Airport South (EPA ID 48-121-0034).

<sup>4</sup> The combined maximum impact includes impacts from modeled sources (including secondary PM<sub>2.5</sub>, as appropriate) plus the background concentration.

Table B-3. PSD Class II Increment Analysis Results

Pollutant	Averaging Period	Modeled Year	Modeled Source Group	Description	Modeled $GLC_{max}$ ( $\mu g/m^3$ )	Secondary $PM_{2.5}$ Concentration <sup>1</sup> ( $\mu g/m^3$ )	Total Concentration <sup>2</sup> ( $\mu g/m^3$ )	PSD Class II Increment <sup>3</sup> ( $\mu g/m^3$ )	Below Increment?
$PM_{2.5}$	Annual	2017	ALL	Project plus PSD Increment Inventory Sources	1.270	0.002	1.272	4	Yes
		2018	ALL	Project plus PSD Increment Inventory Sources	1.321	0.002	1.323	4	Yes
		2019	ALL	Project plus PSD Increment Inventory Sources	1.333	0.002	1.335	4	Yes
		2020	ALL	Project plus PSD Increment Inventory Sources	1.313	0.002	1.315	4	Yes
		2021	ALL	Project plus PSD Increment Inventory Sources	1.435	0.002	1.437	4	Yes

<sup>1</sup> Secondary  $PM_{2.5}$  concentrations are estimated using TCEQ's Air Quality Modeling Guidelines (APDG 6232), Appendix D, which is based on EPA's *Guidance on the Development of Modeled Emission Rates for Precursors (MERRs)* as a *Tier 1 Demonstration Tool for Ozone and  $PM_{2.5}$  under the PSD Permitting Program*. EPA-454/R-19-003, April 2019.

<sup>2</sup> Total concentration is the sum of the modeled concentration and secondary  $PM_{2.5}$  concentration, as applicable.

<sup>3</sup> Air Quality Modeling Guidelines, Table B-1, APDG 6232, November 2019.



## APPENDIX C. MODELING RUN LOG

**Table C-1. AERMOD Input and Output Data File Descriptions**

<b>Pollutants and Averaging Periods</b>	<b>File Name</b>	<b>File Description</b>	<b>Receptor Grid</b>	<b>Associated Files</b>
PM <sub>2.5</sub> (annual; NAAQS form)	P2S1721A06	Significance Analysis	Fenceline, Tight, Fine, Medium, and Coarse grids	Input File (*.ami) Output File (*.aml) Plot File (*.plt)
PM <sub>2.5</sub> (annual; Increment form)	P2S17A06 P2S18A06 P2S19A06 P2S20A06 P2S21A06			
PM <sub>2.5</sub> (annual)	P2N1721A08	NAAQS Analysis	Significant Receptors	
PM <sub>2.5</sub> (annual)	P2I17A06 P2I18A06 P2I19A06 P2I20A06 P2I21A06	PSD Class II Increment Analysis	Significant Receptors	

**AR-40A**  
**TCEQ PI-1 Workbook**

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**General**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

General Information	
This sheet provides administrative information needed by the TCEQ.	
<b>Instructions:</b> 1. Complete all applicable sections below. 2. An original signature on this sheet is only required for applications that cannot be submitted through STEERS. For these specific application types, follow the instructions on the "Copies" sheet to submit a hard copy of this worksheet with the original signature.	
<a href="#">Click here to return to Cover Sheet.</a>	
I. Applicant Information	
I acknowledge that I am submitting an authorized TCEQ application workbook and any necessary attachments. Except for inputting the requested data and adjusting row height and column width, I have not changed the TCEQ application workbook in any way, including but not limited to changing formulas, formatting, content, or protections.	I agree
A. Company Information	
Company or Legal Name:	BM Dorchester LLC
Permits are issued to either the facility owner or operator, commonly referred to as the applicant or permit holder. List the legal name of the company, corporation, partnership, or person who is applying for the permit. We will verify the legal name with the Texas Secretary of State at (512) 463-5555 or at the link below:	
<a href="https://www.sos.state.tx.us">https://www.sos.state.tx.us</a>	
Texas Secretary of State Charter/Registration Number (if given):	
B. Company Official Contact Information: must not be a consultant	
Prefix (Mr., Ms., Dr., etc.):	Mr.
First Name:	Jacob
Last Name:	Bender
Title:	Chief Financial Officer
Mailing Address:	1008 Southview Cir
Address Line 2:	
City:	Center
State:	Texas
ZIP Code:	75935
Telephone Number:	936-598-8587
Fax Number:	936-590-7464
Email Address:	jake@highrollergroup.com
C. Technical Contact Information: This person must have the authority to make binding agreements and representations on behalf of the applicant and may be a consultant. Additional technical contact(s) can be provided in a cover letter.	
Prefix (Mr., Ms., Dr., etc.):	Mr.
First Name:	Michael
Last Name:	Meister
Title:	Principal Consultant
Company or Legal Name:	Trinity Consultants
Mailing Address:	555 N Carancahua St
Address Line 2:	Suite 820
City:	Corpus Christi
State:	Texas
ZIP Code:	78401
Telephone Number:	361-883-1668
Fax Number:	
Email Address:	mmeister@trinityconsultants.com

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<b>D. Assigned Numbers</b>		
The CN and RN below are assigned when a Core Data Form is initially submitted to the Central Registry. The RN is also assigned if the agency has conducted an investigation or if the agency has issued an enforcement action. If these numbers have not yet been assigned, leave these questions blank and include a Core Data Form with your application submittal. See Section VI.B. below for additional information.		
Enter the CN. The CN is a unique number given to each business, governmental body, association, individual, or other entity that owns, operates, is responsible for, or is affiliated with a regulated entity.		
Enter the RN. The RN is a unique agency assigned number given to each person, organization, place, or thing that is of environmental interest to us and where regulated activities will occur. The RN replaces existing air account numbers. The RN for portable units is assigned to the unit itself, and that same RN should be used when applying for authorization at a different location.		
<b>II. Delinquent Fees and Penalties</b>		
Does the applicant have unpaid delinquent fees and/or penalties owed to the TCEQ? This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ Web site at the link below: <a href="https://www.tceq.texas.gov/agency/financial/fees/delin">https://www.tceq.texas.gov/agency/financial/fees/delin</a>		No
<b>III. Permit Information</b>		
<b>A. Permit and Action Type (multiple may be selected, leave no blanks)</b>		
Additional information regarding the different NSR authorizations can be found at the link below: <a href="https://www.tceq.texas.gov/permitting/air/guidance/authorize.html">https://www.tceq.texas.gov/permitting/air/guidance/authorize.html</a>		
Select from the drop-down the type of action being requested for each permit type. <b>If that permit type does not apply, you MUST select "Not applicable".</b>		
Provide all assigned permit numbers relevant for the project. Leave blank if the permit number has not yet been assigned.		
<b>Permit Type</b>	<b>Action Type Requested (do not leave blank)</b>	<b>Permit Number (if assigned)</b>
Minor NSR (can be a Title V major source): <i>Not applicable, Initial, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Relocation/Alteration, Change of Location, Alteration, Extension to Start of Construction</i>	Not applicable	
Special Permit: <i>Not applicable, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Alteration, Extension to Start of Construction</i>	Not applicable	
De Minimis: <i>Not applicable, Initial</i>	Not applicable	
Flexible: <i>Not applicable, Initial, Amendment, Renewal, Renewal Certification, Renewal/Amendment, Alteration, Extension to Start of Construction</i>	Not applicable	
PSD: <i>Not applicable, Initial, Major Modification</i>	Initial	
Nonattainment: <i>Not applicable, Initial, Major Modification</i>	Not applicable	

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HAP Major Source [FCAA § 112(g)]: <i>Not applicable, Initial, Major Modification</i>	Not applicable	
PAL: <i>Not applicable, Initial, Amendment, Renewal, Renewal/Amendment, Alteration</i>	Not applicable	
GHG PSD: <i>Not applicable, Initial, Major Modification, Voluntary Update</i>	Initial	
<b>GHG projects:</b> List the non-GHG applications (pending or being submitted) that are associated with the project. Note: All preconstruction authorizations (including authorization for emissions of greenhouse gases, if applicable) must be obtained prior to start of construction.	PSD Permit Application	
<b>B. MSS Activities</b>		
How are/will MSS activities for sources associated with this project be authorized?	This permit	
<b>C. Consolidating NSR Permits</b>		
Will this permit be consolidated into another NSR permit with this action?	No	
Will NSR permits be consolidated into this permit with this action?	No	
<b>D. Incorporation of Standard Permits, Standard Exemptions, and/or Permits By Rule (PBR)</b>		
<p>To ensure protectiveness, previously issued authorizations (standard permits, standard exemptions, or PBRs) including those for MSS, are incorporated into a permit either by consolidation or by reference.</p> <ul style="list-style-type: none"> <li>-Authorizations entirely incorporated by consolidation will be voided when the project is complete, and the sources and allowable emissions will be added to the NSR permit's MAERT.</li> <li>-Authorizations incorporated by reference will be referenced with the final action for this project but will not be voided. Sources will continue to be authorized in the current manner.</li> </ul> <p>At the time of renewal and/or amendment, consolidation (in some cases) may be voluntary and referencing is mandatory. More guidance regarding incorporation can be found in 30 TAC § 116.116(d)(2), 30 TAC § 116.615(3) and in this memo (link below):</p> <p><a href="https://www.tceq.texas.gov/assets/public/permitting/air/memos/pbr_spc06.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/memos/pbr_spc06.pdf</a></p>		
Are there any standard permits, standard exemptions, or PBRs to be incorporated by reference?	No	
Are there any PBR, standard exemptions, or standard permits associated to be incorporated by consolidation? <b>Note:</b> Emission calculations, a BACT analysis, and an impacts analysis must be attached to this application at the time of submittal for any authorization to be incorporated by consolidation.	No	
<b>E. Associated Federal Operating Permits</b>		
Is this facility located at a site required to obtain a <b>site operating permit (SOP)</b> or <b>general operating permit (GOP)</b> ?	Yes	
Is a <b>SOP</b> or <b>GOP</b> review pending for this source, area, or site?	No	
If required to obtain a <b>SOP</b> or <b>GOP</b> , list all associated permit number(s). If no associated permit number has been assigned yet, enter "TBD":	TBD	



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IV. Facility Location and General Information	
<b>A. Location</b>	
County: Enter the county where the facility is physically located.	Grayson
TCEQ Region	Region 4
County attainment status as of Sept. 23, 2019	attainment or unclassified for all pollutants
Street Address:	
City: If the address is not located in a city, then enter the city or town closest to the facility, even if it is not in the same county as the facility.	Dorchester
ZIP Code: Include the ZIP Code of the physical facility site, not the ZIP Code of the applicant's mailing address.	75459
Site Location Description: If there is no street address, provide written driving directions to the site. Identify the location by distance and direction from well-known landmarks such as major highway intersections.	From the intersection of highway 289 and Farm to Market (FM) 902 east of Dorchester, Texas, head east on FM 902 for approximately 0.80 miles. The Dorchester Plant site will be located directly north of FM 902 after the intersection of Taylor Rd.
Use USGS maps, county maps prepared by the Texas Department of Transportation, or an online software application such as Google Earth to find the latitude and longitude.	
Latitude (in degrees, minutes, and nearest second (DDD:MM:SS)) for the street address or the destination point of the driving directions. Latitude is the angular distance of a location north of the equator and will always be between 25 and 37 degrees north (N) in Texas.	33:32:17.43
Longitude (in degrees, minutes, and nearest second (DDD:MM:SS)) for the street address or the destination point of the driving directions. Longitude is the angular distance of a location west of the prime meridian and will always be between 93 and 107 degrees west (W) in Texas.	96:41:22.67
Is this a project for a lead smelter, concrete crushing facility, and/or a hazardous waste management facility?	No
<b>B. General Information</b>	
Site Name:	Dorchester Plant
Area Name: Must indicate the general type of operation, process, equipment or facility. Include numerical designations, if appropriate. Examples are Sulfuric Acid Plant and No. 5 Steam Boiler. Vague names such as Chemical Plant are not acceptable.	Preheater / Precalciner kiln line and associated equipment
Are there any schools located within 3,000 feet of the site boundary?	No
<b>C. Portable Facility</b>	
Permanent or portable facility?	Permanent
<b>D. Industry Type</b>	
Principal Company Product/Business:	Portland Cement Production
A list of SIC codes can be found at the link below: <a href="https://www.naics.com/sic-codes-industry-drilldown/">https://www.naics.com/sic-codes-industry-drilldown/</a>	
Principal SIC code:	3241
NAICS codes and conversions between NAICS and SIC Codes are available at the link below: <a href="https://www.census.gov/eos/www/naics/">https://www.census.gov/eos/www/naics/</a>	
Principal NAICS code:	327310



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**General**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

<b>E. State Senator and Representative for this site</b>	
This information can be found at the link below (note, the website is not compatible to Internet Explorer): <a href="https://wrm.capitol.texas.gov/">https://wrm.capitol.texas.gov/</a>	
State Senator:	Drew Springer
District:	30
State Representative:	Reggie Smith
District:	62
<b>V. Project Information</b>	
<b>A. Description</b>	
Provide a <b>brief</b> description of the project that is requested (describe the what, not the how and why). Limited to 500 characters.	Black Mountain Dorchester LLC is proposing to construct a greenfield portland cement production plant that will be located in Dorchester, Texas.
<b>B. Project Timing</b>	
Authorization must be obtained for many projects before beginning construction. Construction is broadly interpreted as anything other than site clearance or site preparation. Enter the date as "Month Date, Year" (e.g. July 4, 1776).	
Projected Start of Construction:	August 1, 2022
Projected Start of Operation:	August 1, 2023
<b>C. Enforcement Projects</b>	
Is this application in response to, or related to, an agency investigation, notice of violation, or enforcement action?	No
<b>D. Operating Schedule</b>	
Will sources in this project be authorized to operate 8760 hours per year?	Yes
<b>VI. Application Materials</b>	
All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. (30 TAC § 116.116)	
<b>A. Confidential Application Materials</b>	
Is confidential information submitted with this application?	No
<b>B. Is the Core Data Form (Form 10400) attached (link to the form below)?</b>	
<a href="https://www.tceq.texas.gov/assets/public/permitting/centralregistry/10400.docx">https://www.tceq.texas.gov/assets/public/permitting/centralregistry/10400.docx</a>	
<b>C. Is a current area map attached?</b>	
Is the area map a current map with a true north arrow, an accurate graduated scale, the entire plant property, the location of the property relative to prominent geographical features including, but not limited to, highways, roads, streams, and significant landmarks such as buildings, residences, schools, parks, hospitals, day care centers, and churches?	Yes
Does the map show a 3,000-foot radius from the property boundary?	Yes
<b>D. Is a plot plan attached?</b>	
Does your plot plan clearly show a north arrow, an accurate scale, all property lines, all emission points, buildings, tanks, process vessels, other process equipment, and two bench mark locations?	Yes
Does your plot plan identify all emission points on the affected property, including all emission points authorized by other air authorizations, construction permits, PBRs, special permits, and standard permits?	Yes
Did you include a table of emission points indicating the authorization type and authorization identifier, such as a permit number, registration number, or rule citation under which each emission point is currently authorized?	Yes

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<b>E. Is a process flow diagram attached?</b>	Yes
Is the process flow diagram sufficiently descriptive so the permit reviewer can determine the raw materials to be used in the process; all major processing steps and major equipment items; individual emission points associated with each process step; the location and identification of all emission abatement devices; and the location and identification of all waste streams (including wastewater streams that may have associated air emissions)?	Yes
<b>F. Is a process description attached?</b>	Yes
Does the process description emphasize where the emissions are generated, why the emissions must be generated, what air pollution controls are used (including process design features that minimize emissions), and where the emissions enter the atmosphere?	Yes
Does the process description also explain how the facility or facilities will be operating when the maximum possible emissions are produced?	Yes
<b>G. Is a detailed list of requested actions included in the application?</b> This list can be included in the project description.	Yes
<b>H. Are detailed calculations attached?</b> Calculations must be provided for each source with new or changing emission rates. For example, a new source, changing emission factors, decreasing emissions, consolidated sources, etc. Calculations do not need to be submitted for sources without any proposed emission rate changes. <b>Note: the preferred format is an electronic workbook (such as Excel) with all formulas viewable for review.</b>	Yes
Are emission rates and associated calculations for planned MSS facilities and related activities attached?	Yes
<b>I. Is a material balance (Table 2, Form 10155) attached?</b>	Yes
Table 2 (Form 10155), entitled Material Balance: A material balance representation may be required for all applications to confirm technical emissions information. Typically this is required for refining and chemical manufacturing processes involving reactions, separations, and blending. It may also be requested by the permit reviewer for other applications. Table 2 should represent the total material balance; that is, all streams into the system and all streams out. Additional sheets may be attached if necessary. Complex material balances may be presented on spreadsheets or indicated using process flow diagrams. All materials in the process should be addressed whether or not they directly result in the emission of an air contaminant. All production rates must be based on maximum operating conditions.	
<b>J. Is a list of MSS activities attached?</b>	Yes
Are the MSS activities listed and discussed separately, each complete with the authorization mechanism or emission rates, frequency, duration, and supporting information if authorized by this permit?	Yes
<b>K. Is a discussion of state regulatory requirements attached, addressing 30 TAC Chapters 101, 111, 112, 113, 115, and 117?</b>	Yes
For all applicable chapters, does the discussion include how the facility will comply with the requirements of the chapter?	Yes
For all not applicable chapters, does the discussion include why the chapter is not applicable?	Yes
<b>L. Are all other required tables, calculations, and descriptions attached?</b>	Yes

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Date: October 2023  
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**VII. Signature**

The owner or operator of the facility must apply for authority to construct. The appropriate company official (owner, plant manager, president, vice president, or environmental director) must sign all copies of the application. The applicant's consultant cannot sign the application. **Important Note: Unless submitting through STEERS, signatures must be original in ink, not reproduced by photocopy, fax, or other means, and must be received before any permit is issued.**

The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382; the Texas Clean Air Act (TCAA); the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.

Name:	George Pigg
Signature:	
<i>Original signature is required unless submitted through STEERS.</i>	
Date:	November 5, 2021



**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Unit Types - Emission Rates**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

Unit Types and Emission Rates															
<p>This sheet documents all units authorized and proposed to be authorized by this permit and the associated emission rates. Review the "Examples" sheet for additional guidance.</p> <p><b>Instructions:</b></p> <p>1. Select the primary industry for your permit.</p> <p>2. Enter the source information (items in step 2 can be completed in any order).</p> <p>a. Column A: Indicate the action requested for this unit in this project. "Not new/modified" means the unit is not new nor modified. The definition of "modification" can be found at 30 TAC § 116.1005.</p> <p>b. Column B: Indicate if the emissions for this unit should be included in the project emissions summary (in the "Public Notice" sheet). Typically, this will be yes. It may be no if the emissions are part of a cap or if there are multiple operating scenarios.</p> <p>c. Columns C-E: Enter the unit EPN, and Source Name. You may have several EPNs with the same EPN. For example, 10 tanks going to one flare.</p> <p>3. In Column F, list all pollutants currently and proposed to be emitted from the unit, including hazardous air pollutants.</p> <p>Include all pollutants, even if not changing. (For example, if the project is to increase a boiler's NOx flow, still include CO, SO2, PM, VOC, etc.)</p> <p>*The drop down includes common pollutants, you can type any additional pollutants as well.</p> <p>*Do not enter more than 13 pollutants for one EPN.</p> <p>*The calls in columns A-E, will grey out as you enter new pollutants. You do not need to enter data in those calls.</p> <p>4. Enter the emission rate information.</p> <p>a. Columns G-H: List the currently authorized allowable emission rates for sources currently in the permit.</p> <p>*If these are new sources, leave these calls blank.</p> <p>*If another permit action is pending, please use the currently authorized rates. If that pending permit action is issued during the review of this project, you will need to update your P-1 and applicable materials with regard to the newly authorized permit.</p> <p>b. Columns I-J: If the EPN is to be incorporated by consolidation from an existing authorization (PNS, Standard Permit, etc.), enter the currently authorized allowable emission rates.</p> <p>c. Columns K-L: Enter the proposed emission rates (what will be represented on the MAERT when this project is complete).</p> <p>5. Select the unit type from the dropdown list. You only need to do this for the first line of each EPN.</p> <p>*If the control unit type is not listed, select "Other" and fill in the "Unit Type Notes".</p> <p>*The "Unit Types" column will be used to prepopulate BACT and monitoring requirements.</p> <p>*The "Unit Types" sheet provides a full list of the options available.</p> <p>6. Repeat Steps 3 and 4 for each pollutant from the first source. Do not enter data in Columns A-E for the same EPN. They will grey out automatically.</p> <p>7. Repeat steps 2-6 for each unit authorized by this permit (not just those in this project). Do not skip any rows.</p> <p><a href="#">Click here to return to Cover Sheet.</a> <a href="#">Click here to see examples of how to complete this sheet.</a></p>															
<p>Permit primary industry (must be selected for workbook to function): <b>Combustion</b></p>															
Action Requested (only 1 action per EPN)	Include these emissions in annual (tpy) summary?	Facility ID Number (FIN)	Emission Point Number (EPN)	Source Name	Pollutant	Current Short- Term (lb/hr)	Current Long- Term (tpy)	Consolidated Current Short- Term (lb/hr)	Consolidated Current Long- Term (tpy)	Proposed Short-Term (lb/hr)	Proposed Long- Term (tpy)	Short-Term Difference (lb/hr)	Long-Term Difference (tpy)	Unit Type (Used for reviewing BACT and Monitoring Requirements)	Unit Type Notes (only if "Other" and type in Column G)
New/Modified	Yes	04h	21-SK-230	Cement Kiln (Baghouse Stack)	NOx					75.34	289	75.34	289	Non-Cement	
					SO2					83.33	213.31	83.33	213.31		
					CO					152.76	58.66	152.76	58.66		
					PM					2.38	10.41	2.38	10.41		
					PM10					1243.68	1593.84	1243.68	1593.84		
					PM2.5					41.663	155.964	41.663	155.964		
					VOC					41.663	155.964	41.663	155.964		
					PM					0.01	0.04	0.01	0.04		
					PM10					0.003	0.011	0.003	0.011		
					VOC					25.24	100.49	25.24	100.49		
					NOx					12.95	56.32	12.95	56.32		
					CO2 Equivalent					56.1402	231	0	881622.737		
New/Modified	Yes	PM	51-SK-250	Finish Mill Baghouse Stack	NOx					0.159	0.696	0.159	0.696	Control: Bag Filter/Baghouse	
					SO2					0.009	0.041	0.009	0.041		
					CO					1.599	5.735	1.599	5.735		
					PM					3.23	14.13	3.23	14.13		
					PM10					3.23	14.13	3.23	14.13		
					PM2.5					0.096	0.376	0.096	0.376		
					CO2 Equivalent					82.19.328	0	0	5218.724		
New/Modified	Yes	10-BF-035	10-BF-035	Cruiser Building Baghouse	PM					0.681	2.983	0.681	2.983	Control: Bag Filter/Baghouse	
					PM10					0.681	2.983	0.681	2.983		
					PM2.5					0.681	2.983	0.681	2.983		
New/Modified	Yes	10-BF-140	10-BF-140	Material Transfer (L.S. to Storage) Baghouse	PM					0.126	0.552	0.126	0.552	Control: Bag Filter/Baghouse	
					PM10					0.126	0.552	0.126	0.552		
					PM2.5					0.126	0.552	0.126	0.552		
New/Modified	Yes	13-BF-140	13-BF-140	Additive Unloading (Roll) Baghouse	PM					0.126	0.552	0.126	0.552	Control: Bag Filter/Baghouse	
					PM10					0.126	0.552	0.126	0.552		
					PM2.5					0.126	0.552	0.126	0.552		
New/Modified	Yes	11-BF-270	11-BF-270	Material Transfer (L.S. to Hoppers) Baghouse	PM					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
					PM10					0.101	0.442	0.101	0.442		
					PM2.5					0.101	0.442	0.101	0.442		
New/Modified	Yes	11-BF-285	11-BF-285	Material Transfer (L.S. to Hoppers) Baghouse	PM					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
					PM10					0.101	0.442	0.101	0.442		

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Unit Types - Emission Rates**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Action Requested (only 1 action per P#)	Include these emissions in annual (ppg) summary?	Facility ID Number (P#)	Emission Point Number (EP#)	Source Name	Pollutant	Current Short-Term (lb/hr)	Current Long-Term (ppg)	Consolidated Current Short-Term (lb/hr)	Consolidated Current Long-Term (ppg)	Proposed Short-Term (lb/hr)	Proposed Long-Term (ppg)	Short-Term Difference (lb/hr)	Long-Term Difference (ppg)	Unit Type (Used for reviewing BACT and Monitoring Requirements)	Unit Type Notes (only if "other" unit type in Column G)
New/Modified	Yes	12-BF-315	12-BF-315	Truck Unloading Baghouse	PM2.5					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
					PM					0.378	1.657	0.378	1.657		
					PM10					0.378	1.657	0.378	1.657		
					PM2.5					0.378	1.657	0.378	1.657		
New/Modified	Yes	12-BF-325	12-BF-325	Material Transfer (Raw Add to Storage) Baghouse	PM					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
					PM10					0.101	0.442	0.101	0.442		
					PM2.5					0.101	0.442	0.101	0.442		
New/Modified	Yes	12-BF-360	12-BF-360	Material Transfer (Truck Add to Storage) Baghouse	PM					0.063	0.276	0.063	0.276	Control: Bag Filter/Baghouse	
					PM10					0.063	0.276	0.063	0.276		
					PM2.5					0.063	0.276	0.063	0.276		
New/Modified	Yes	13-BF-030	13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	PM					0.063	0.276	0.063	0.276	Control: Bag Filter/Baghouse	
					PM10					0.063	0.276	0.063	0.276		
					PM2.5					0.063	0.276	0.063	0.276		
New/Modified	Yes	13-BF-500	13-BF-500	Raw Mill Feed Bin Building Baghouse	PM					0.214	0.939	0.214	0.939	Control: Bag Filter/Baghouse	
					PM10					0.214	0.939	0.214	0.939		
					PM2.5					0.214	0.939	0.214	0.939		
New/Modified	Yes	20-BF-010	20-BF-010	Raw Mill Building Baghouse	PM					0.151	0.663	0.151	0.663	Control: Bag Filter/Baghouse	
					PM10					0.151	0.663	0.151	0.663		
					PM2.5					0.151	0.663	0.151	0.663		
New/Modified	Yes	20-BF-182	20-BF-182	Raw Mill Building Baghouse	PM					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
					PM10					0.101	0.442	0.101	0.442		
					PM2.5					0.101	0.442	0.101	0.442		
New/Modified	Yes	20-BF-360	20-BF-360	Raw Mill Building Baghouse	PM					0.057	0.249	0.057	0.249	Control: Bag Filter/Baghouse	
					PM10					0.057	0.249	0.057	0.249		
					PM2.5					0.057	0.249	0.057	0.249		
New/Modified	Yes	21-BF-330	21-BF-330	Top of OKD Bin Baghouse	PM					0.038	0.166	0.038	0.166	Control: Bag Filter/Baghouse	
					PM10					0.038	0.166	0.038	0.166		
					PM2.5					0.038	0.166	0.038	0.166		
New/Modified	Yes	22-BF-060	22-BF-060	Bottom of Raw Mill Silo Baghouse	PM					0.114	0.497	0.114	0.497	Control: Bag Filter/Baghouse	
					PM10					0.114	0.497	0.114	0.497		
					PM2.5					0.114	0.497	0.114	0.497		
New/Modified	Yes	22-BF-080	22-BF-080	Preheater Tower Baghouse	PM					0.063	0.276	0.063	0.276	Control: Bag Filter/Baghouse	
					PM10					0.063	0.276	0.063	0.276		
					PM2.5					0.063	0.276	0.063	0.276		
New/Modified	Yes	22-BF-160	22-BF-160	Top of Raw Mill Silo Baghouse	PM					0.189	0.829	0.189	0.829	Control: Bag Filter/Baghouse	
					PM10					0.189	0.829	0.189	0.829		
					PM2.5					0.189	0.829	0.189	0.829		
New/Modified	Yes	22-BF-385	22-BF-385	Top of Surge Bin (Raw Silo) Baghouse	PM					0.063	0.276	0.063	0.276	Control: Bag Filter/Baghouse	
					PM10					0.063	0.276	0.063	0.276		
					PM2.5					0.063	0.276	0.063	0.276		
New/Modified	Yes	30-BF-260	30-BF-260	Bottom of Preheater Tower Baghouse	PM					0.101	0.442	0.101	0.442	Control: Bag Filter/Baghouse	
					PM10					0.101	0.442	0.101	0.442		
					PM2.5					0.101	0.442	0.101	0.442		
New/Modified	Yes	30-BF-320	30-BF-320	Top of Preheater Tower Baghouse	PM					0.057	0.249	0.057	0.249	Control: Bag Filter/Baghouse	
					PM10					0.057	0.249	0.057	0.249		
					PM2.5					0.057	0.249	0.057	0.249		
New/Modified	Yes	42-BF-270	42-BF-270	Cooler Discharge Baghouse	PM					0.082	0.359	0.082	0.359	Control: Bag Filter/Baghouse	
					PM10					0.082	0.359	0.082	0.359		
					PM2.5					0.082	0.359	0.082	0.359		
New/Modified	Yes	41-BF-130	41-BF-130	Top of Bin (Bypass Dust) Baghouse	PM					0.025	0.11	0.025	0.11	Control: Bag Filter/Baghouse	
					PM10					0.025	0.11	0.025	0.11		
					PM2.5					0.025	0.11	0.025	0.11		
New/Modified	Yes	44-BF-030	44-BF-030	Top of Cooler Silo Baghouse	PM					0.315	1.381	0.315	1.381	Control: Bag Filter/Baghouse	
					PM10					0.315	1.381	0.315	1.381		
					PM2.5					0.315	1.381	0.315	1.381		
New/Modified	Yes	44-BF-185	44-BF-185	Transfer Tower (Clinker Silo And Handling) Baghouse	PM					0.076	0.331	0.076	0.331	Control: Bag Filter/Baghouse	
					PM10					0.076	0.331	0.076	0.331		
					PM2.5					0.076	0.331	0.076	0.331		
New/Modified	Yes	50-BF-050	50-BF-050	Top of Cooler Feed Bin Baghouse	PM					0.05	0.221	0.05	0.221	Control: Bag Filter/Baghouse	
					PM10					0.05	0.221	0.05	0.221		
					PM2.5					0.05	0.221	0.05	0.221		



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Unit Types - Emission Rates**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Action Requested (only 1 action per PM)	Include these emissions in annual (tpy) summary?	Facility ID Number (FID)	Emission Point Number (EPN)	Source Name	Point#	Current Short-Term (lb/hr)	Current Long-Term (tpy)	Consolidated Current Short-Term (lb/hr)	Consolidated Current Long-Term (tpy)	Proposed Short-Term (lb/hr)	Proposed Long-Term (tpy)	Short-Term Difference (lb/hr)	Long-Term Difference (tpy)	Unit Type (Used for reviewing BACT and Monitoring Requirements)	Unit Type Notes (only if "other" unit type in Column 15)
New/Modified	Yes	50-BF-020	50-BF-020	Top of Gypsum Feed Bin Baghouse	PM					0.044	0.193	0.044	0.193	Control: Bag Filter/Baghouse	
					PM10					0.044	0.193	0.044	0.193		
					PM2.5					0.044	0.193	0.044	0.193		
New/Modified	Yes	50-BF-350	50-BF-350	Cement Feed Bin Extraction Baghouse	PM					0.202	0.884	0.202	0.884	Control: Bag Filter/Baghouse	
					PM10					0.202	0.884	0.202	0.884		
					PM2.5					0.202	0.884	0.202	0.884		
New/Modified	Yes	51-BF-050	51-BF-050	Cement Mill Building Baghouse	PM					0.15	0.657	0.15	0.657	Control: Bag Filter/Baghouse	
					PM10					0.15	0.657	0.15	0.657		
					PM2.5					0.15	0.657	0.15	0.657		
New/Modified	Yes	51-BF-140	51-BF-140	Cement Mill Building Baghouse	PM					0.115	0.503	0.115	0.503	Control: Bag Filter/Baghouse	
					PM10					0.115	0.503	0.115	0.503		
					PM2.5					0.115	0.503	0.115	0.503		
New/Modified	Yes	51-BF-350	51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse	PM					0.057	0.249	0.057	0.249	Control: Bag Filter/Baghouse	
					PM10					0.057	0.249	0.057	0.249		
					PM2.5					0.057	0.249	0.057	0.249		
New/Modified	Yes	51-BF-380	51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse	PM					0.069	0.304	0.069	0.304	Control: Bag Filter/Baghouse	
					PM10					0.069	0.304	0.069	0.304		
					PM2.5					0.069	0.304	0.069	0.304		
New/Modified	Yes	52-BF-110	52-BF-110	Top of Cement Silo 1 Baghouse	PM					0.214	0.939	0.214	0.939	Control: Bag Filter/Baghouse	
					PM10					0.214	0.939	0.214	0.939		
					PM2.5					0.214	0.939	0.214	0.939		
New/Modified	Yes	53-BF-110	53-BF-110	Top of Cement Silo 2 Baghouse	PM					0.202	0.884	0.202	0.884	Control: Bag Filter/Baghouse	
					PM10					0.202	0.884	0.202	0.884		
					PM2.5					0.202	0.884	0.202	0.884		
New/Modified	Yes	52-BF-190	52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse	PM					0.016	0.331	0.016	0.331	Control: Bag Filter/Baghouse	
					PM10					0.016	0.331	0.016	0.331		
					PM2.5					0.016	0.331	0.016	0.331		
New/Modified	Yes	53-BF-190	53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse	PM					0.076	0.331	0.076	0.331	Control: Bag Filter/Baghouse	
					PM10					0.076	0.331	0.076	0.331		
					PM2.5					0.076	0.331	0.076	0.331		
New/Modified	Yes	52-BF-270	52-BF-270	Loadout System (CM Silo-1) Baghouse	PM					0.05	0.221	0.05	0.221	Control: Bag Filter/Baghouse	
					PM10					0.05	0.221	0.05	0.221		
					PM2.5					0.05	0.221	0.05	0.221		
New/Modified	Yes	53-BF-270	53-BF-270	Loadout System (CM Silo-2) Baghouse	PM					0.05	0.221	0.05	0.221	Control: Bag Filter/Baghouse	
					PM10					0.05	0.221	0.05	0.221		
					PM2.5					0.05	0.221	0.05	0.221		
New/Modified	Yes	LSCRSBDD_MH	LSCRSBDD_MH	Limestone - Material Handling LS Crusher Building	PM					0.035	0.152	0.035	0.152	Material Handling: Conveyor	
					PM10					0.017	0.072	0.017	0.072		
					PM2.5					0.002	0.011	0.002	0.011		
New/Modified	Yes	TRK_MH	TRK_MH	Aggregate - Material Handling Truck Unloading	PM					0.009	0.04	0.009	0.04	Material Handling: Conveyor	
					PM10					0.003	0.013	0.003	0.013		
					PM2.5					0.000058	0.004	0.000058	0.004		
New/Modified	Yes	RR_MH	RR_MH	Aggregate - Material Handling Rail Unloading	PM					0.009	0.04	0.009	0.04	Material Handling: Conveyor	
					PM10					0.003	0.013	0.003	0.013		
					PM2.5					0.000058	0.004	0.000058	0.004		
New/Modified	Yes	LS_STKPL_1	LS_STKPL	Limestone Stockpile 1	PM					0.08	0.33	0.08	0.33	Storage: Stockpile	
					PM10					0.04	0.17	0.04	0.17		
					PM2.5					0.01	0.03	0.01	0.03		
New/Modified	Yes	LS_STKPL_2	LS_STKPL	Limestone Stockpile 2	PM					0.08	0.33	0.08	0.33	Storage: Stockpile	
					PM10					0.04	0.17	0.04	0.17		
					PM2.5					0.01	0.03	0.01	0.03		
New/Modified	Yes	GYP_STKPL	ADD_STKPL	Gypsum Stockpile	PM					0.03	0.11	0.03	0.11	Storage: Stockpile	
					PM10					0.01	0.05	0.01	0.05		
					PM2.5					0.002	0.01	0.002	0.01		
New/Modified	Yes	HG_LS_STKPL	ADD_STKPL	High Grade Limestone Stockpile	PM					0.05	0.2	0.05	0.2	Storage: Stockpile	
					PM10					0.02	0.1	0.02	0.1		
					PM2.5					0.004	0.02	0.004	0.02		
New/Modified	Yes	SAND_STKPL	ADD_STKPL	Sand Stockpile	PM					0.02	0.09	0.02	0.09	Storage: Stockpile	
					PM10					0.1	0.05	0.1	0.05		
					PM2.5					0.002	0.01	0.002	0.01		



**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Unit Types - Emission Rates**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

Action Requested (only 1 action per FID)	Include these emissions in annual (typ) summary?	Facility ID Number (FID)	Emission Point Number (EPN)	Source Name	Pollutant	Current Short- Term (lb/hr)	Current Long- Term (tpy)	Consolidated Current Short- Term (lb/hr)	Consolidated Current Long- Term (tpy)	Proposed Short-Term (lb/hr)	Proposed Long Term (tpy)	Short-Term Difference (lb/hr)	Long-Term Difference (tpy)	Unit Type (Used for reviewing SACT and Monitoring Requirements)	Unit Type Notes (only if "other" unit type in column G)
New/Modified	Yes	EG-1	EG-1	Emergency Generator Engine	NOx					0.869	0.443	0.869	0.443	Engine	
					SO2					0.00429	0.000215	0.0043	0.0002		
					CO					17.738	0.887	17.738	0.887		
					PM					0.143	0.007	0.143	0.007		
					PM10					0.185	0.007	0.185	0.007		
					PM2.5					0.143	0.007	0.143	0.007		
					VOC					4.584	0.227	4.584	0.227		
					CO2 Equivalent					42.749	0	42.749	0		
New/Modified	Yes	NH3FUG	NH3FUG	NH3 Fugitive	NH3					0.06	0.28	0.06	0.28	Fugitives, Piping and Equipment Leaks	
New/Modified	Yes	MSSFUG	MSSFUG	MSS Activites	NOx					0.002	0.003	0.002	0.003	MSS Activities	
					SO2					0.00036	0.000492	0.0003	0.0005		
					CO					0.003	0.003	0.003	0.003		
					PM					0.014	0.206	0.014	0.206		
					PM10					0.096	0.137	0.096	0.137		
					PM2.5					0.275	0.095	0.275	0.095		
					VOC					0.000187	0.000332	0.0002	0.0004		

**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Stack Parameters**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

Stack Parameters												
This sheet documents the stack parameters for each EPN. You do not need to complete this sheet for sources included in an EMEW for this project.												
<b>Instructions:</b> 1. The EPN list is automatically populated from the "Unit Types - Emission Rates" sheet. 2. Indicate if the source is included in an EMEW. If it is, you do not need to complete the additional information. 3. Enter the stack parameters that apply for each EPN. 4. Cap EPNs do not need stack parameters (leave those rows blank). <a href="#">Click here to return to Cover Sheet.</a>												
Emission Point Discharge Parameters												
EPN	Included in EMEW?	UTM Coordinates Zone	East (Meters)	North (Meters)	Building Height (ft)	Height Above Ground (ft)	Stack Exit Diameter (ft)	Velocity (FPS)	Temperature (°F)	Fugitives - Length (ft)	Fugitives - Width (ft)	Fugitives - Axis Degrees
21-SK-230	Yes											
51-SK-250	Yes											
10-BF-035	Yes											
10-BF-140	Yes											
12-BF-140	Yes											
11-BF-270	Yes											
11-BF-285	Yes											
12-BF-315	Yes											
12-BF-325	Yes											
12-BF-360	Yes											
13-BF-030	Yes											
13-BF-500	Yes											
20-BF-010	Yes											
20-BF-182	Yes											
20-BF-360	Yes											
21-BF-330	Yes											
22-BF-050	Yes											
22-BF-080	Yes											
22-BF-160	Yes											
22-BF-385	Yes											
30-BF-260	Yes											
30-BF-320	Yes											
42-BF-270	Yes											
41-BF-130	Yes											
44-BF-030	Yes											
44-BF-185	Yes											
50-BF-050	Yes											
50-BF-020	Yes											
50-BF-350	Yes											
51-BF-050	Yes											
51-BF-140	Yes											
51-BF-350	Yes											
51-BF-380	Yes											
52-BF-110	Yes											
53-BF-110	Yes											
52-BF-190	Yes											
53-BF-190	Yes											
52-BF-270	Yes											
53-BF-270	Yes											
LSCRSBHD MH	Yes											
TRK MH	Yes											
RR MH	Yes											
LS STKPL	Yes											
ADD STKPL	Yes											
EG-1	Yes											
NH3FUG	Yes											
MSSFUG	Yes											

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Public Notice Applicability, Required Information, and Small Business Classification						
<p>This sheet is intended to assist in this determination of public notice requirements and is not a replacement for 30 TAC Chapter 39 (Public Notice). If you can see the page header, there are questions applicable to your project on this sheet.</p> <p>The THSC §382.056 and corresponding rules in 30 TAC Chapter 39 (Public Notice) require that you publish a notice of intent to obtain a permit and in certain circumstances, notice of preliminary decision. Notices must be published in a newspaper of general circulation in the municipality where the proposed facility is or will be located (not applicable to alternative language notices). The notices must include a description of the facility and the fact that a person who may be affected by emissions from the facility may request a public hearing and any other information the TCEQ requires by rule. Signs must also be posted at the site in compliance with 30 TAC § 39.604(c). Additional information regarding public notice such as an overview of requirements, an applicability table, and a list of some common errors that may cause renotice and delays in processing your application can be found at the link below:</p> <p><a href="https://www.tceq.texas.gov/permitting/air/bilingual/how1_2_pn.html">https://www.tceq.texas.gov/permitting/air/bilingual/how1_2_pn.html</a></p>						
<p><b>Instructions:</b></p> <ol style="list-style-type: none"> <li>1. Complete all blank questions below in the Public Notice Applicability section. A summary statement at the end will indicate if notice is required.</li> <li>2. If public notice applies, additional information is required to meet the requirements of the THSC § 382.056. If you are unsure whether public notice applies, we encourage you to complete this section to facilitate a quicker review of the application.</li> <li>3. Complete all questions in the Small Business Classification section to determine eligibility.</li> </ol>						
<p><a href="#">Click here to return to Cover Sheet.</a></p>						
<b>I. Public Notice Applicability</b>						
<b>A. Application Type</b>						
Is this an application for an initial permit?						Yes
Is this an application for a new or major modification of a PSD (including GHG), Nonattainment, or HAP permit?						Yes
<b>B. Project Increases and Public Notice Thresholds (for Initial and Amendment Projects)</b>						
Pollutant			Proposed Long-Term (tpy)			
VOC			101.10			
PM			196.39			
PM <sub>10</sub>			195.74			
PM <sub>2.5</sub>			195.10			
NO <sub>x</sub>			290.14			
CO			1606.47			
SO <sub>2</sub>			213.35			
Pb			0.04			
H <sub>2</sub> SO <sub>4</sub>			58.66			
HCl			10.41			
Hg			0.011			
NH <sub>3</sub>			57			
CO <sub>2</sub> Equivalent			989654.904			
<p>* Notice is required for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> if one of these pollutants is above the threshold.</p> <p>** Notice of a GHG action is determined by action type. Initial and major modification always require notice. Voluntary updates require a consolidated notice if there is a change to BACT. Project emission increases of CO<sub>2</sub>e (CO<sub>2</sub> equivalent) are not relevant for determining public notice of GHG permit actions.</p>						
<p><b>D. Is public notice required for this project as represented in this PI-1?</b></p> <p>If no, proceed to Section III Small Business Classification.</p> <p>Note: public notice applicability for this project may change throughout the technical review.</p>						<div style="background-color: #f0f0f0; border: 1px solid black; height: 40px; width: 100%;"></div>

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

<b>E. Are any HAPs to be authorized/re-authorized with this project?</b> The category "HAPs" must be specifically listed in the public notice if the project authorizes (reauthorizes for renewals) any HAP pollutants.	Yes
<b>II. Public Notice Information</b>	
Complete this section if public notice is required (determined in the above section) or if you are not sure if public notice is required.	
<b>A. Contact Information</b>	
Enter the contact information for the <b>person responsible for publishing</b> . This is a designated representative who is responsible for ensuring public notice is properly published in the appropriate newspaper and signs are posted at the facility site. This person will be contacted directly when the TCEQ is ready to authorize public notice for the application.	
Prefix (Mr., Ms., Dr., etc.):	Mr
First Name:	Jacob
Last Name:	Bender
Title:	Chief Financial Officer
Company Name:	BM Dorchester LLC
Mailing Address:	1008 Southview Cir
Address Line 2:	
City:	Center
State:	Texas
ZIP Code:	75935
Telephone Number:	936-598-8587
Fax Number:	936-590-7464
Email Address:	jake@highrollergroup.com
Enter the contact information for the <b>Technical Contact</b> . This is the designated representative who will be listed in the public notice as a contact for additional information.	
Prefix (Mr., Ms., Dr., etc.):	Mr.
First Name:	Michael
Last Name:	Meister
Title:	Principal Consultant
Company Name:	Trinity Consultants
Mailing Address:	555 N Carancahua St
Address Line 2:	Suite 820
City:	Corpus Christi
State:	Texas
ZIP Code:	78401
Telephone Number:	361-883-1668
Fax Number:	
Email Address:	mmeister@trinityconsultants.com
<b>B. Public place</b>	
Place a copy of the full application (including the entire completed PI-1 and all attachments) at a public place in the county where the facilities are or will be located. You must state where in the county the application will be available for public review and comment. The location must be a public place and described in the notice. A public place is a location which is owned and operated by public funds (such as libraries, county courthouses, city halls) and cannot be a commercial enterprise. You are required to pre-arrange this availability with the public place indicated below. The application must remain available from the first day of publication through the designated comment period.	
If this is an application for a PSD, nonattainment, or FCAA §112(g) permit, the public place must have internet access available for the public as required in 30 TAC § 39.411(f)(3).	
If the application is submitted to the agency with information marked as Confidential, you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: <b>Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the TCEQ Public Information Coordinator, MC 197, P.O. Box 13087, Austin, Texas 78711-3087.</b>	
Name of Public Place:	Howe Community Library
Physical Address:	315 S Collins Frwy
Address Line 2:	
City:	Howe



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Public Notice**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

ZIP Code:	75459	
County:	Grayson	
Has the public place granted authorization to place the application for public viewing and copying?	Yes	
Does the public place have Internet access available for the public?	Yes	
<b>C. Alternate Language Publication</b>		
<p>In some cases, public notice in an alternate language is required. If an elementary or middle school nearest to the facility is in a school district required by the Texas Education Code to have a bilingual program, a bilingual notice will be required. If there is no bilingual program required in the school nearest the facility, but children who would normally attend those schools are eligible to attend bilingual programs elsewhere in the school district, the bilingual notice will also be required. If it is determined that alternate language notice is required, you are responsible for ensuring that the publication in the alternate language is complete and accurate in that language.</p>		
Is a bilingual program required by the Texas Education Code in the School District?	No	
Are the children who attend either the elementary school or the middle school closest to your facility eligible to be enrolled in a bilingual program provided by the district?	No	
<b>D. PSD and Nonattainment Permits Only</b>		
If this is an application for emissions of GHGs, select either "Separate Public Notice" or "Consolidated Public Notice". Note: Separate public notices requires a separate application.		Consolidated Public Notice
We must notify the applicable county judge and presiding officer when a PSD or Nonattainment permit or modification application is received. This information can be obtained at the link below: <a href="https://www.txdirectory.com">https://www.txdirectory.com</a>		
Provide the information for the <b>County Judge</b> for the location where the facility is or will be located.		
The Honorable:	Bill Magers	
Mailing Address:	100 W. Houston	
Address Line 2:	Suite 15	
City:	Sherman	
State:	Texas	
ZIP Code:	75090	
Provide the information for the <b>Presiding Officer(s)</b> of the municipality for this facility site. This is frequently the Mayor.		
First Name:	David	
Last Name:	Smith	
Title:	Mayor	
Mailing Address:	373 Main Street	
Address Line 2:		
City:	Dorchester	
State:	Texas	
ZIP Code:	75459	
Are the proposed facilities located within 100 km or less of an affected state or Class I Area?	No	
<b>III. Small Business Classification</b>		
Complete this section to determine small business classification. If a small business requests a permit, agency rules (30 TAC § 39.603(f)(1)(A)) allow for alternative public notification requirements if all of the following criteria are met. If these requirements are met, public notice does not have to include publication of the prominent (12 square inch) newspaper notice.		
Does the company (including parent companies and subsidiary companies) have fewer than 100 employees or less than \$6 million in annual gross receipts?	Yes	
Is the site a major source under 30 TAC Chapter 122, Federal Operating Permit Program?	Yes	
Small business classification:	No	

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Federal Applicability**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

**Federal Applicability Determination Summary**

This sheet provides a summary of nonattainment, PSD and GHG PSD permitting applicability. If nonattainment is required, offset information is included. A full analysis for nonattainment, PSD, and PSD GHG permitting applicability must be included in the permit application. If you can see the page header, there are questions applicable to your project on this sheet.

**Instructions:**

1. Complete separate federal permitting application materials to determine applicability of nonattainment, PSD, and GHG PSD applicability, including netting if applicable. Include this analysis in your permit application.
2. Section I: determine the attainment classification of the county where the proposed project will be located.
  - a. Indicate if the project requires retrospective review. If so, complete the associated questions.
  - b. The county is entered based on the response on the General Sheet.
  - c. If the site is located in a county that is partially nonattainment for a pollutant, indicate whether the site is in that portion of the county.
  - d. If desired, use the optional dropdown to indicate the ozone nonattainment classification this project should be reviewed under. This allows you to account for anticipated reclassifications.
3. Section II: PSD and GHG PSD and Section III: Nonattainment applicability summaries
  - a. Enter the project increase for each pollutant. Depending on the step of applicability required, this may be the increases only for the proposed project or may include all increases/decreases during the contemporaneous period if the project requires netting. If doing netting, the values entered here should be after netting has been conducted.
  - b. Enter the applicable thresholds for each pollutant. This will vary depending on the type of project. For example, an unnamed source at a greenfield site with minor emissions may use the 250 tpy thresholds and an existing major source may use the significant emission rates.
  - c. If the project is not located in a nonattainment county, Section III will grey out.
4. Sections IV and V: Offsets
  - a. If nonattainment permitting is required, the applicable offset ratio and quantity will be listed.
  - b. Provide details of where the offsets will be coming from, listing one or more of these options: emission credits (ERCs or DERs), inter-pollutant use of credits, inter-area use of credits, MECT allowances, HECT allowances, internal offsets, and/or to be determined.
  - c. If inter-pollutant use of credits will be utilized to offset the project, please ensure all required information is submitted to the Emissions Banking and Trading Team. The technical analysis for any site-specific inter-pollutant use of credits must be approved prior to the date that the permit application is deemed technically complete.

Guidance for Determining Project Increases

[https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/fnsr\\_app\\_determ.pdf](https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/fnsr_app_determ.pdf)

Guidance for Determining Federal Applicability Thresholds

<https://www.tceq.texas.gov/assets/public/permitting/air/factsheets/factsheets-psd-na-sigemiss-6240.pdf>

**I. County Classification**

Does the project require retrospective review?

No

County (completed for you from your response on the General sheet)

Grayson

This project will be located in an area that is in attainment for ozone as of Sept. 23, 2019. Select from the drop-down list to the right if you would like the project to be reviewed under a different classification.

Determination:

This project will be located in an area that is in attainment or unclassified for all pollutants. Nonattainment review is not required.

**II. PSD and GHG PSD Applicability Summary**

Is netting required for the PSD analysis for this project?

No



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Federal Applicability**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Pollutant	Project Increase	Threshold	PSD Review Required?
CO	1606.47	100	Yes
NO <sub>x</sub>	290.14	40	Yes
PM	196.39	25	Yes
PM <sub>10</sub>	195.74	15	Yes
PM <sub>2.5</sub>	195.10	10	Yes
SO <sub>2</sub>	213.35	40	Yes
Ozone (as VOC)	101.10	40	Yes
Ozone (as NO <sub>x</sub> )	290.14	40	Yes
Pb	0.04	0.6	No
H <sub>2</sub> S	0	10	No
TRS	0	10	No
Reduced sulfur compounds (including H <sub>2</sub> S)	0	10	No
H <sub>2</sub> SO <sub>4</sub>	58.66	7	Yes
Fluoride (excluding HF)	0	3	No
CO <sub>2</sub> e	989654.904	75000	Yes

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Fees**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

### Estimated Capital Cost and Fee Verification

This sheet is for determining application fee requirements for projects which require a fee and for requesting expedited permitting. **If you can see the page header, there are questions applicable to your project on this sheet.**

Fees are due and payable at the time an application is filed. Required fees must be received before the agency will consider an application to be complete.

For amendment/initial actions: Applications will not be considered for review nor will any time constraints required of TCEQ for application processing begin until a fee is received. (30 TAC § 116.143)

For renewal actions: No fee will be accepted before the permit holder has been notified by the commission that the permit is scheduled for review.

All permit review fees shall be remitted by check, certified check, electronic funds transfer, or money order payable to the Texas Commission on Environmental Quality (TCEQ) and mailed to the TCEQ, P.O. Box 13088, MC 214, Austin, Texas 78711-3088. The State Treasury will not accept checks drawn on foreign banks. Instructions for online payment through the ePay system can be found at the following link:

<https://www3.tceq.texas.gov/epay/>

#### Instructions:

1. Enter information related to the expedited permitting option.
2. Answer each of the questions.
3. Enter the amount of each cost in the associated box. Include estimated cost of equipment and services that would normally be capitalized according to standard and generally accepted corporate financing and accounting procedures (non-renewal actions only). If the amount is \$0.00, enter a zero (do not leave blank).
4. Enter the total annual allowable emissions from the permitted facility to be renewed (renewal actions only).
5. Enter payment information.
6. If applicable, submit the application under the seal of a Texas Licensed P.E.

[Click here to return to Cover Sheet.](#)

#### I. Expedited Permitting Request

Are you requesting to expedite this project?	Yes
Does the purpose of the application associated with this request to expedite benefit the economy of this state or an area of this state? If no, this project does not qualify for expedited permitting.	Yes
Surcharge amount due	\$ 20,000.00
Surcharge amount paid	\$ 20,000.00
Enter the check, money order, ePay Voucher, or other transaction number.	1001

You must also submit the Form APD-APS Air Permitting Surcharge Payment to the TCEQ Cashier's office, link to the form below:

<https://www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/20707.pdf>

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Fees**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

II. General Information - Non-Renewal					
Is this project for new facilities controlled and operated directly by the federal government? (30 TAC § 116.141(b)(1) and 30 TAC § 116.163(a))	No				
A fee of \$75,000 shall be required if no estimate of capital project cost is included with the permit application. (30 TAC § 116.141(d)) Select "yes" here to use this option.	Yes				
<b>Select Application Type</b>	Major Application				
In signing the "General" sheet with this fee worksheet attached, I certify that the total estimated capital cost of the project as defined in 30 TAC §116.141 is equal to or less than the above figure. I further state that I have read and understand Texas Water Code § 7.179, which defines Criminal Offenses for certain violations, including intentionally or knowingly making, or causing to be made, false material statements or representations.					
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Your estimated capital cost:</td> <td style="width: 50%; border: none; text-align: right;">Maximum fee applies.</td> </tr> <tr> <td style="border: none;">Permit Application Fee:</td> <td style="border: none; text-align: right;">\$75,000.00</td> </tr> </table>		Your estimated capital cost:	Maximum fee applies.	Permit Application Fee:	\$75,000.00
Your estimated capital cost:	Maximum fee applies.				
Permit Application Fee:	\$75,000.00				
VII. Total Permit Fees					
<b>Note: fees can be paid together with one payment or as two separate payments.</b>					
Non-Renewal Fee	\$75,000.00				
Total	\$75,000.00				
VIII. Payment Information					
<b>A. Payment One (required)</b>					
Was the fee paid online?	Yes				
Enter the fee amount:	\$ 95,000.00				
Enter the check, money order, ePay Voucher, or other transaction number (enter "STEERS" if submitting and paying through STEERS):	1001				
Enter the Company name as it appears on the check:	BM CEMENT LLC				
<b>C. Total Paid</b>	<b>\$95,000.00</b>				
IX. Professional Engineer Seal Requirement					
Is the estimated capital cost of the project above \$2 million?	Yes				
Is this project subject to an exemption contained in the Texas Engineering Practice Act (TEPA)? (30 TAC § 116.110(f))	No				
Is the application required to be submitted under the seal of a Texas licensed P.E.? Note: an electronic PE seal is acceptable.	Yes				

**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Impacts**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

**Impacts Summary**

This sheet provides a summary of how the impacts review was conducted for each pollutant. If you can see the page header, there are questions applicable to your project on this sheet.

**Instructions:**

1. Ozone, VOC, and all pollutants listed on the Unit Types-Emission Rates sheet are automatically listed below.
2. Select "yes" or "no" to indicate if the project requires PSD review for each pollutant.
3. Select the method used to demonstrate acceptable impacts for PSD or minor NSR review, whichever is applicable for the pollutant.
4. Read all information in the "Notes" column for additional instructions.
5. Add additional notes if desired, such as a short qualitative analysis or other note to your permit reviewer.

**Notes:**

1. An impacts analysis may include a qualitative analysis, MERA analysis, and/or modeling. Modeling is not always required to complete an impacts analysis.
2. An air quality impacts demonstration may be required for Change of Location requests to demonstrate protection of public health and welfare. (30 TAC § 116.178(f))

**Links to help with Impacts Analyses**

MERA guidance	<a href="https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/mera.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/Guidance/NewSourceReview/mera.pdf</a>
Modeling website	<a href="https://www.tceq.texas.gov/permitting/air/nav/modeling_index.html">https://www.tceq.texas.gov/permitting/air/nav/modeling_index.html</a>
Air Quality Modeling Guidelines	<a href="https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/airquality-mod-guidelines6232.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/airquality-mod-guidelines6232.pdf</a>
PSD protocol guidance	<a href="https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/protocol-checklist.pdf">https://www.tceq.texas.gov/assets/public/permitting/air/Modeling/guidance/protocol-checklist.pdf</a>
GHG permitting guidance	<a href="https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/ghg/ghg-permitting.html">https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/ghg/ghg-permitting.html</a>

[Click here to return to Cover Sheet.](#)

Pollutant	Does this pollutant require PSD review?	How will you demonstrate that this project meets all applicable requirements?	Notes	Additional Notes (optional)
Ozone	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
VOC	No	MERA steps 0-2 AND Modeling (screen or refined)	Attach both an "Electronic Modeling Evaluation Workbook" (EMEW) AND a detailed description of which MERA step was met. Include speciated emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
NOx	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Impacts**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Pollutant	Does this pollutant require PSD review?	How will you demonstrate that this project meets all applicable requirements?	Notes	Additional Notes (optional)
SO2	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
H2SO4	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
HCl	No	MERA analysis, steps 0-2 only or using screening tables	Attach a detailed description of which MERA step was met for each species in the project. Include speciated emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
CO	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
PM	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
PM10	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	
PM2.5	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	



**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Impacts**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Pollutant	Does this pollutant require PSD review?	How will you demonstrate that this project meets all applicable requirements?	Notes	Additional Notes (optional)
Pb	No	Modeling: screen or refined	Attach a completed "Electronic Modeling Evaluation Workbook" (EMEW).	
Hg	No	MERA analysis, steps 0-2 only or using screening tables	Attach a detailed description of which MERA step was met for each species in the project. Include speciated emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
NH3	No	MERA analysis, steps 0-2 only or using screening tables	Attach a detailed description of which MERA step was met for each species in the project. Include speciated emission rates with the total VOC and/or PM species corresponding to the short-term and long-term differences represented on the Unit Types-Emission Rates sheet.	
CO2 Equivalent	Yes	Protocol (required for all PSD projects, excluding GHG PSD)	Attach a protocol meeting all requirements listed on the TCEQ website.	



**Texas Commission on Environmental Quality  
Form PI-1 General Application  
BACT**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

Best Available Control Technology (BACT)						Applicant Internal Comments																																																																									
<p>This sheet provides BACT for each source in the project as listed on the "Unit Type - Emission Rates" sheet.</p> <p><b>Instructions for New, Modified, and/or Consolidated Sources</b></p> <ol style="list-style-type: none"> <li>Current Tier I BACT is required for all new, modified, and/or consolidated sources, as well as for Change of Location, (unless conducting a Tier II, Tier III, or LAER analysis).</li> <li>The unit types listed in Unit Type (column C) include all new, modified, and/or consolidated sources as indicated on the "Unit Types - Emission Rates" sheet.</li> <li>The pollutants listed in Pollutant (column D) include those indicated on the "Unit Types - Emission Rates" sheet.</li> <li>Tier I BACT is automatically populated for each unit type and pollutant. If BACT is not yet defined for that unit type or that pollutant, "See additional notes" will appear and you must propose BACT requirements for TCEQ review.</li> <li>Fully expand the Tier I BACT (column E) by increasing the row heights so all text is visible. (Place the cursor on the bottom of the number line to the far left of the screen, click and drag downward until all text is visible.)</li> <li>Confirm that you will meet all representations listed on the sheet and any additional attachments by entering or selecting "Yes" in Confirm (column F). If the BACT column lists "See additional notes", the confirmation column can be left blank.</li> <li>Add additional notes as necessary in Additional Notes (column G), limited to 500 characters or fewer. Examples of when you may have notes include the following: <ul style="list-style-type: none"> <li>Current Tier I BACT column states "See additional notes" or requests details;</li> <li>Indicating there is an attached Tier II, Tier III, or LAER analysis;</li> <li>Details about alternative controls you are proposing; and</li> <li>Any additional information relevant to the minimization of emissions.</li> </ul> </li> <li>Cap EPIs do not need BACT (leave those rows blank).</li> </ol> <p><b>Instructions for Renewed Only Sources (not modified with this project):</b></p> <ol style="list-style-type: none"> <li>Current Tier I BACT is not required for sources that are only being renewed (not modified). However, units being renewed are required to meet requirements that are economically reasonable and technically practicable given the age of the facility and the impacts of its emissions on the surrounding area.</li> <li>The unit types listed in Unit Type (column C) include all renewed sources too, as indicated on the "Unit Types - Emission Rates" sheet. Each of these sources should list what techniques are utilized to minimize emissions.</li> <li>Follow steps 2 through 6 above.</li> <li>If the source utilizes current Tier I BACT, select confirm.</li> <li>If alternate techniques are used, list the techniques currently used to minimize emissions in the additional notes section.</li> </ol> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>If a FIN was not provided on the Unit Types - Emission Rates sheet, a FIN will be created from the EPN.</li> <li>Tier II, Tier III, PSD BACT review, and/or LAER analyses require additional justification which must be included in the application as an attachment.</li> <li>For federal review projects, review the RBLG and provide relevant data in the application. Additional requirements may be identified during the technical review. For additional details on control technology reviews, visit the link below.</li> </ol> <p><a href="https://www.tceq.texas.gov/permits/air/bact/index.html">https://www.tceq.texas.gov/permits/air/bact/index.html</a>  <a href="#">Click here to return to Cover Sheet.</a></p>						<p>All comments must be deleted prior to application submittal.</p>																																																																									
<table border="1"> <thead> <tr> <th>Plant Type</th> <th>Current Tier I BACT</th> <th>Confirm</th> <th>Additional Notes</th> </tr> </thead> <tbody> <tr> <td>Action Requested</td> <td>FINs</td> <td>Unit Type</td> <td>Pollutant</td> <td>Current Tier I BACT</td> <td>Confirm</td> <td>Additional Notes</td> </tr> <tr> <td>New/Modified</td> <td>Kiln</td> <td>Kiln Cement</td> <td>NOx</td> <td>Dry low NOx combustors, NSCR, or waterstream injection. Specify technique. These controls will limit NOx to 1.5 lb/ton clinker on a 30-day rolling average.  Must meet the limits of 40 CFR 60 Subpart F.</td> <td>Yes</td> <td>A limit of 1.5 lb NOx/ton clinker on a 30-day rolling average per 40 CFR Part 60 Subpart F will be met as the BACT for NOx. Due to the close proximity of the DFW ozone nonattainment area, Black Mountain also proposes to voluntarily install a control technology that will consist of a Selective Catalytic Reduction (SCR) system or a combination of SCR and non-selective catalytic reduction (NSCR) system for NOx control (0.54 lb NOx/ton clinker) as a supplemental level of control.</td> </tr> <tr> <td></td> <td></td> <td></td> <td>SO2</td> <td>Firing low sulfur fuel and/or scrubber. Specify technique. SO2 shall be limited to 0.4 lb/ton clinker on a 30-day rolling average.  Must meet the limits of 40 CFR 60 Subpart F.</td> <td>Yes</td> <td>A limit of 0.4 lb SO2/ton clinker on a 30-day rolling average per 40 CFR Part 60 Subpart F is proposed as the BACT for SO2. The SO2 will be controlled by the alkali absorption inherent in the precalciner kiln, the use of low sulfur content natural gas as fuel, and a scrubber.</td> </tr> <tr> <td></td> <td></td> <td></td> <td>H2SO4</td> <td>Firing low sulfur fuel and/or scrubber. Specify technique.</td> <td>Yes</td> <td>A limit of 0.11 lb/ton clinker on an annual basis and 1.1 lb/ton clinker on an hourly basis for H2SO4 when the in-line raw mill and scrubber are not operating. The SO2 will be controlled by the use of low sulfur content natural gas as fuel and a scrubber.</td> </tr> <tr> <td></td> <td></td> <td></td> <td>HCl</td> <td>Limited to 3 ppmvd at 7% O2.  Must meet the limits of 40 CFR 63 Subpart LLL.</td> <td>Yes</td> <td>A limit of 3 ppmvd @ 7% O2 for HCl emissions on a 30-day rolling average per 40 CFR Part 63 Subpart LLL is proposed.</td> </tr> <tr> <td></td> <td></td> <td></td> <td>CO</td> <td>Good combustion practices or oxidation catalyst. Specify technique.</td> <td>Yes</td> <td>Good combustion practices will be employed (3.0 lb/ton clinker on a 12-month rolling average).</td> </tr> <tr> <td></td> <td></td> <td></td> <td>PM</td> <td>The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Fabric filter, ESP, wet scrubber, or cyclone. Specify technique.  For Portland Cement, PM shall be limited to 0.02 lb/ton clinker.  For Lime 0.10 lb/ton stone feed (net)  Must meet the limits of 40 CFR 63 Subpart LLL.</td> <td>Yes</td> <td>A limit of 0.30 lb PM10/ton clinker with a filterable PM rate of 0.02 lb/ton clinker to meet 40 CFR Part 63 Subpart LLL and condensable PM rate of 0.28 lb/ton clinker using a fabric filter system and a scrubber.</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Pb</td> <td>See additional notes.</td> <td>Yes</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Hg</td> <td>Activated carbon injection and/or sorbent injection. Specify technique. Hg shall be limited to 21 lb/MM tons clinker.  Must meet the limits of 40 CFR 63 Subpart LLL.</td> <td>Yes</td> <td>A limit of 21 lb/MM ton clinker on a 30-day rolling basis per 40 CFR Subpart LLL is proposed as the BACT using the scrubber.</td> </tr> <tr> <td></td> <td></td> <td></td> <td>VOC</td> <td>Good combustion practices or oxidizers.  Total Hydrocarbons limited to 24 ppmvd at 7% O2.</td> <td>Yes</td> <td>Good combustion practices. A limit of 24 ppmvd @ 7% O2 for THC on a 30-day rolling average per 40 CFR Part 63 Subpart LLL or the alternative limit of 12 ppmvd total organic HAP on a 30-day rolling average is proposed as BACT.</td> </tr> </tbody> </table>							Plant Type	Current Tier I BACT	Confirm	Additional Notes	Action Requested	FINs	Unit Type	Pollutant	Current Tier I BACT	Confirm	Additional Notes	New/Modified	Kiln	Kiln Cement	NOx	Dry low NOx combustors, NSCR, or waterstream injection. Specify technique. These controls will limit NOx to 1.5 lb/ton clinker on a 30-day rolling average.  Must meet the limits of 40 CFR 60 Subpart F.	Yes	A limit of 1.5 lb NOx/ton clinker on a 30-day rolling average per 40 CFR Part 60 Subpart F will be met as the BACT for NOx. Due to the close proximity of the DFW ozone nonattainment area, Black Mountain also proposes to voluntarily install a control technology that will consist of a Selective Catalytic Reduction (SCR) system or a combination of SCR and non-selective catalytic reduction (NSCR) system for NOx control (0.54 lb NOx/ton clinker) as a supplemental level of control.				SO2	Firing low sulfur fuel and/or scrubber. Specify technique. SO2 shall be limited to 0.4 lb/ton clinker on a 30-day rolling average.  Must meet the limits of 40 CFR 60 Subpart F.	Yes	A limit of 0.4 lb SO2/ton clinker on a 30-day rolling average per 40 CFR Part 60 Subpart F is proposed as the BACT for SO2. The SO2 will be controlled by the alkali absorption inherent in the precalciner kiln, the use of low sulfur content natural gas as fuel, and a scrubber.				H2SO4	Firing low sulfur fuel and/or scrubber. Specify technique.	Yes	A limit of 0.11 lb/ton clinker on an annual basis and 1.1 lb/ton clinker on an hourly basis for H2SO4 when the in-line raw mill and scrubber are not operating. The SO2 will be controlled by the use of low sulfur content natural gas as fuel and a scrubber.				HCl	Limited to 3 ppmvd at 7% O2.  Must meet the limits of 40 CFR 63 Subpart LLL.	Yes	A limit of 3 ppmvd @ 7% O2 for HCl emissions on a 30-day rolling average per 40 CFR Part 63 Subpart LLL is proposed.				CO	Good combustion practices or oxidation catalyst. Specify technique.	Yes	Good combustion practices will be employed (3.0 lb/ton clinker on a 12-month rolling average).				PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Fabric filter, ESP, wet scrubber, or cyclone. Specify technique.  For Portland Cement, PM shall be limited to 0.02 lb/ton clinker.  For Lime 0.10 lb/ton stone feed (net)  Must meet the limits of 40 CFR 63 Subpart LLL.	Yes	A limit of 0.30 lb PM10/ton clinker with a filterable PM rate of 0.02 lb/ton clinker to meet 40 CFR Part 63 Subpart LLL and condensable PM rate of 0.28 lb/ton clinker using a fabric filter system and a scrubber.				Pb	See additional notes.	Yes					Hg	Activated carbon injection and/or sorbent injection. Specify technique. Hg shall be limited to 21 lb/MM tons clinker.  Must meet the limits of 40 CFR 63 Subpart LLL.	Yes	A limit of 21 lb/MM ton clinker on a 30-day rolling basis per 40 CFR Subpart LLL is proposed as the BACT using the scrubber.				VOC	Good combustion practices or oxidizers.  Total Hydrocarbons limited to 24 ppmvd at 7% O2.	Yes
Plant Type	Current Tier I BACT	Confirm	Additional Notes																																																																												
Action Requested	FINs	Unit Type	Pollutant	Current Tier I BACT	Confirm	Additional Notes																																																																									
New/Modified	Kiln	Kiln Cement	NOx	Dry low NOx combustors, NSCR, or waterstream injection. Specify technique. These controls will limit NOx to 1.5 lb/ton clinker on a 30-day rolling average.  Must meet the limits of 40 CFR 60 Subpart F.	Yes	A limit of 1.5 lb NOx/ton clinker on a 30-day rolling average per 40 CFR Part 60 Subpart F will be met as the BACT for NOx. Due to the close proximity of the DFW ozone nonattainment area, Black Mountain also proposes to voluntarily install a control technology that will consist of a Selective Catalytic Reduction (SCR) system or a combination of SCR and non-selective catalytic reduction (NSCR) system for NOx control (0.54 lb NOx/ton clinker) as a supplemental level of control.																																																																									
			SO2	Firing low sulfur fuel and/or scrubber. Specify technique. SO2 shall be limited to 0.4 lb/ton clinker on a 30-day rolling average.  Must meet the limits of 40 CFR 60 Subpart F.	Yes	A limit of 0.4 lb SO2/ton clinker on a 30-day rolling average per 40 CFR Part 60 Subpart F is proposed as the BACT for SO2. The SO2 will be controlled by the alkali absorption inherent in the precalciner kiln, the use of low sulfur content natural gas as fuel, and a scrubber.																																																																									
			H2SO4	Firing low sulfur fuel and/or scrubber. Specify technique.	Yes	A limit of 0.11 lb/ton clinker on an annual basis and 1.1 lb/ton clinker on an hourly basis for H2SO4 when the in-line raw mill and scrubber are not operating. The SO2 will be controlled by the use of low sulfur content natural gas as fuel and a scrubber.																																																																									
			HCl	Limited to 3 ppmvd at 7% O2.  Must meet the limits of 40 CFR 63 Subpart LLL.	Yes	A limit of 3 ppmvd @ 7% O2 for HCl emissions on a 30-day rolling average per 40 CFR Part 63 Subpart LLL is proposed.																																																																									
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			PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Fabric filter, ESP, wet scrubber, or cyclone. Specify technique.  For Portland Cement, PM shall be limited to 0.02 lb/ton clinker.  For Lime 0.10 lb/ton stone feed (net)  Must meet the limits of 40 CFR 63 Subpart LLL.	Yes	A limit of 0.30 lb PM10/ton clinker with a filterable PM rate of 0.02 lb/ton clinker to meet 40 CFR Part 63 Subpart LLL and condensable PM rate of 0.28 lb/ton clinker using a fabric filter system and a scrubber.																																																																									
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			Hg	Activated carbon injection and/or sorbent injection. Specify technique. Hg shall be limited to 21 lb/MM tons clinker.  Must meet the limits of 40 CFR 63 Subpart LLL.	Yes	A limit of 21 lb/MM ton clinker on a 30-day rolling basis per 40 CFR Subpart LLL is proposed as the BACT using the scrubber.																																																																									
			VOC	Good combustion practices or oxidizers.  Total Hydrocarbons limited to 24 ppmvd at 7% O2.	Yes	Good combustion practices. A limit of 24 ppmvd @ 7% O2 for THC on a 30-day rolling average per 40 CFR Part 63 Subpart LLL or the alternative limit of 12 ppmvd total organic HAP on a 30-day rolling average is proposed as BACT.																																																																									

**Texas Commission on Environmental Quality  
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Date: October 2023  
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Company: BM Dorchester LLC

Action Requested	PIs	Unit Type	Pollutant	Current Tier I BACT	Confirm	Additional Notes
			NH <sub>3</sub>	Control of ammonia injection system to minimize ammonia slip.	Yes	Black Mountain will control the ammonia injection system to minimize ammonia slip. (35 ppmv @ 7% O <sub>2</sub> on a 30-day rolling average)
			CO <sub>2</sub> Equivalent	See additional notes:	Yes	A limit of 0.92 lbton clinker on a 30-day rolling average along with proper design and operation are proposed as BACT.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  ESP shall be brought up to manufacturer's suggested temperature and maintained at that temperature for a duration of time specified by manufacturer before being placed into service.  Cyclones shall be maintained according to manufacturer's specifications.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.
New/Modified	FM	Control Bag Filter/Baghouse	H <sub>2</sub> s	See Additional Notes:	Yes	A limit of 0.01 byMMBtu is proposed to meet TCEQ Tier I BACT.
			SO <sub>2</sub>	See Additional Notes:	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions.
			CO	See Additional Notes:	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions.
			PM	The emission reduction techniques for PM <sub>10</sub> and PM <sub>2.5</sub> will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.005 gr/dscf.
			VOC	See Additional Notes:	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions.
			CO <sub>2</sub> Equivalent	See additional notes:	Yes	Black Mountain will combust pipeline quality natural gas and employ good combustion practices to minimize emissions.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	10-BF-035	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM <sub>10</sub> and PM <sub>2.5</sub> will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	10-BF-140	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM <sub>10</sub> and PM <sub>2.5</sub> will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	12-BF-140	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM <sub>10</sub> and PM <sub>2.5</sub> will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	11-BF-270	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM <sub>10</sub> and PM <sub>2.5</sub> will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.

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New/Modified	11-BF-285	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	12-BF-315	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	12-BF-325	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	12-BF-380	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	13-BF-020	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	15-BF-500	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	20-BF-010	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.



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New/Modified	20-BF-192	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.  Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.  Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	20-BF-300	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.  Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.  Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	21-BF-330	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.  Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.  Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	22-BF-090	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.  Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.  Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	22-BF-090	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.  Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.  Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	22-BF-100	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.  Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.  Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	22-BF-345	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.  Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.  Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.

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Action Requested	PI#s	Unit Type	Pollutant	Current Tier / BACT	Confirm	Additional Notes
New/Modified	30-BF-260	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	30-BF-320	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	42-BF-270	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	41-BF-120	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	44-BF-030	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	44-BF-185	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	50-BF-050	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.

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New/Modified	50-BF-020	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSS	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	50-BF-350	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSS	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	51-BF-090	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSS	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	51-BF-140	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSS	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	51-BF-350	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSS	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	51-BF-380	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSS	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	52-BF-110	Control Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 gr/dscf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 gr/dscf.
			MSS	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.



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New/Modified	S3-BF-110	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 grinstcf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 grinstcf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	S2-BF-100	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 grinstcf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 grinstcf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	S3-BF-100	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 grinstcf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 grinstcf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	S2-BF-270	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 grinstcf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 grinstcf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	S3-BF-270	Control: Bag Filter/Baghouse	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Opacity shall not exceed 5% and/or no visible emissions from each stack or vent. 99% reduction or outlet grain loading of 0.01 grinstcf, typically achieved with fabric filters. Specify technique.	Yes	Fabric filter with outlet grain loading of 0.0025 grinstcf.
			MSB	Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	Black Mountain will maintain the fabric filters in good repair and maintain acceptable pressure drop prior to the start of operation.  Removal of spent filters will be conducted in a manner to minimize PM emissions.
New/Modified	USCRSHQ MH	Material Handling: Conveyor	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Coal handling: 90% reduction, typically enclosed (50-90% reduction); chemical sprays (80-90% reduction); or full enclosure (90-95%). Specify technique.  Best management practices (conducting system maintenance in a manner which minimizes emissions) employed during handling system maintenance. No bypassing of controls. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.	Yes	Black Mountain proposes partial building enclosures as BACT for material handling.
			MSB	Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	

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New/Modified	TRK MM	Material Handling: Conveyor	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Coal handling: 90% reduction, typically enclosed (50-90% reduction); chemical sprays (80-90% reduction); or full enclosure (90+%). Specify technique.	Yes	Black Mountain proposes partial building enclosures as BACT for material handling.
			MSB	Best management practices (conducting system maintenance in a manner which minimizes emissions) employed during handling system maintenance. No bypassing of controls. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	
New/Modified	RR MM	Material Handling: Conveyor	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. Coal handling: 90% reduction, typically enclosed (50-90% reduction); chemical sprays (80-90% reduction); or full enclosure (90+%). Specify technique.	Yes	Black Mountain proposes partial building enclosures as BACT for material handling.
			MSB	Best management practices (conducting system maintenance in a manner which minimizes emissions) employed during handling system maintenance. No bypassing of controls. Fabric filters should be in good repair with an acceptable pressure drop prior to the start of operation.  Removal of spent filters in such a manner to minimize PM emissions and placing the spent filters in sealable bags or other sealable containers prior to removal from the site. Bags or containers shall be kept closed at all times except when adding spent filters.	Yes	
New/Modified	LS STKPL 1	Storage: Stockpile	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
			MSB	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
New/Modified	LS STKPL 2	Storage: Stockpile	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
			MSB	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
New/Modified	QYP STKPL	Storage: Stockpile	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
			MSB	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
New/Modified	HQ LS STKPL	Storage: Stockpile	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
			MSB	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
New/Modified	SAND STKPL	Storage: Stockpile	PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. All: 70% reduction, typically achieved with water spray systems. Specify if different.	Yes	Black Mountain proposes building enclosures as BACT for storage piles. This will provide a 90% control efficiency, which meets the requirements of TCEQ Tier 1 BACT for storage piles of a minimum of 70% reduction of emissions.
			MSB	No downtime since water sprays at transfer points and on stockpiles should be functioning prior to the start of operation.	Yes	
New/Modified	EG-1	Engine	NOx	See additional notes:	Yes	Black Mountain proposes NSPS Subpart JJJJ Table 1 emission standards as BACT for the natural gas fired emergency generator engine.
			SO2	See additional notes:	Yes	Black Mountain proposes good combustion practices using natural gas and limited annual operating hours as BACT.
			CO	See additional notes:	Yes	Black Mountain proposes NSPS Subpart JJJJ Table 1 emission standards as BACT for the natural gas fired emergency generator engine using good combustion practices.
			PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. See additional notes:	Yes	Black Mountain proposes good combustion practices using natural gas and limited annual operating hours as BACT.

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				See additional notes:		Black Mountain proposes NSPS Subpart JJJJ Table 1 emission standards as BACT for the natural gas fired emergency generator engine using good combustion practices and limited annual operating hours.
			VOC		Yes	
				See additional notes:	Yes	Black Mountain proposes good combustion practices using natural gas and limited annual operating hours as BACT.
			CO2 Equivalent		Yes	
				See additional notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT.
			MSS		Yes	
				AVO Inspection	Yes	Black Mountain will perform AVO inspections and utilize best management practices to minimize HCl emissions.
New/Modified	NH3FUG	Fugitives: Piping and Equipment Leak	NH3		Yes	Black Mountain will perform AVO inspections and utilize best management practices to minimize NH3 emissions.
				Same as normal operation BACT requirements. Best management practices (BMPs) will be used to minimize emissions, including using proper design of fuel delivery and handling, good air pollution control practices, and safe operating practices. Estimate fugitive emissions of sources such as natural gas, diesel, and ammonia. Leak detection and repair program as required for minimizing VOC leaks.	Yes	
			MSS		Yes	
New/Modified	MSSFUG	MSS Activities	HCl	See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			SO2	See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			CO	See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			PM	The emission reduction techniques for PM10 and PM2.5 will follow the technique for PM. See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			VOC	See Additional Notes:	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
				Use of good air pollution control practices and safe operating practices.	Yes	Black Mountain proposes to minimize the duration and frequency of MSS activities as BACT due to low annual emission rates.
			MSS	Limiting the frequency and duration of activities.	Yes	



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Monitoring**

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Monitoring							
<p>This sheet provides the minimum acceptable requirements to demonstrate compliance through monitoring for each pollutant proposed to be emitted from each FSN. This sheet also includes measuring techniques for sources of significant emissions in the project.</p> <p><b>Instructions:</b></p> <ol style="list-style-type: none"> <li>The unit types listed under Unit Type (column B) include all new, modified, consolidated, and/or renewed sources as indicated on the "Unit Types - Emission Rates" sheet. Each new, modified, consolidated, and/or renewed source must address how compliance will be demonstrated. Note: If a FSN was not provided on the Unit Types - Emission Rates sheet, a FSN will be created from the EPN.</li> <li>The pollutants listed in Pollutant (column C) include the pollutants indicated on the "Unit Types - Emission Rates" sheet.</li> </ol> <p><b>Monitoring (30 TAC § 116.111(a)(2)(G))</b></p> <ol style="list-style-type: none"> <li>The minimum acceptable monitoring is automatically populated for each unit type and pollutant.</li> <li>Additional monitoring may be required and will be included in the NSR and/or Title V permits, when applicable.</li> <li>Fully expand the Minimum Monitoring Requirements (column D) by increasing the row height so all text is visible. (Place the cursor on the bottom of the number line to the far left of the screen, click and drag downward until all text is visible.)</li> <li>Review the monitoring and confirm that you will meet all representations listed on the sheet and any additional attachments by entering or selecting "Yes" in Confirm (column E).</li> <li>Add additional notes as necessary in Additional Notes for Monitoring (column F), limited to 500 characters or fewer. Examples include the following: <ul style="list-style-type: none"> <li>Proposed monitoring for pollutants or units that list "See additional notes".</li> <li>Details requested in the populated data.</li> <li>Alternative monitoring you are proposing, and</li> <li>Any additional information relevant to the minimization of emissions.</li> </ul> </li> <li>Cap EPNs do not need monitoring (leave these rows blank).</li> </ol> <p><b>Measurement of Emissions (30 TAC § 116.111(a)(2)(H))</b></p> <p>Note: This section will be greyed out if the project does not require PSD or nonattainment review, as represented on the General sheet.</p> <ol style="list-style-type: none"> <li>For each pollutant with a project increase greater than the PSD significant emission rate, select the proposed measurement technique using the dropdown (column G).</li> <li>For each pollutant with a project increase less than the PSD significant emission rate, leave blank.</li> <li>If selecting "other", provide details in Additional Notes for Monitoring (column F), limited to 500 characters or fewer.</li> <li>You may also use the Additional Notes for Monitoring (column F) to provide more details on a selection.</li> </ol> <p><b>Click here to return to Cover Sheet.</b></p> <p><b>Important Note:</b> The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours. All required records must be maintained in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application. The site must make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner. The applicant must comply with any additional recordkeeping requirements specified in special conditions in the permit. All records must be retained in the file for at least two years following the date that the information or data is obtained. Some permits are required to maintain records for five years. (30 TAC § 116.115(a)(2)(I))</p>							
FSN	Unit Type	Pollutant	Minimum Monitoring Requirements	Confirm	Additional Notes for Monitoring	Proposed Measurement Technique (only complete for pollutants with a project increase above the PSD threshold)	Additional Notes for Monitoring
10-BF-035	Control Bag Filter/Daghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes			Record keeping
10-BF-140	Control Bag Filter/Daghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes			Record keeping
12-BF-140	Control Bag Filter/Daghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes			Record keeping
11-BF-270	Control Bag Filter/Daghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes			Record keeping
11-BF-285	Control Bag Filter/Daghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes			Record keeping
12-BF-315	Control Bag Filter/Daghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes			Record keeping

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Company: BM Dorchester LLC

[illegible]



Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

[illegible]



**Texas Commission on Environmental Quality  
Form PI-1 General Application  
Monitoring**

Date: October 2023  
Permit #: 167047  
Company: BM Dorchester LLC

51-BF-350	Control Bag Filterbaghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
52-BF-110	Control Bag Filterbaghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
53-BF-110	Control Bag Filterbaghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
52-BF-130	Control Bag Filterbaghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
53-BF-190	Control Bag Filterbaghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
52-BF-270	Control Bag Filterbaghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
53-BF-270	Control Bag Filterbaghouse	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Continuous pressure drop monitoring across the filter media with records of the pressure drop on a frequency that is commensurate with the process operating schedule, while the facility is in operation. Unless the process requires more frequent monitoring, visible emissions observations shall be performed and recorded quarterly per 40 CFR Part 60, Appendix A, Test Method 22. If visible emissions are observed, opacity shall be determined using Test Method 9 and compared to the applicable permit or rule limits. Immediately after the facility is returned to service, visible emissions observations shall be performed and recorded per EPA Test Method 22.	Yes		Record keeping	
LSCHSHED_MH	Material Handling: Conveyor	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Differential pressure across control device shall be continuously monitored and recorded at least once an hour. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes		Record keeping	
TRK_MH	Material Handling: Conveyor	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Differential pressure across control device shall be continuously monitored and recorded at least once an hour. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes		Record keeping	
RR_MH	Material Handling: Conveyor	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Differential pressure across control device shall be continuously monitored and recorded at least once an hour. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes		Record keeping	
LS_STKPL_1	Storage: Stockpile	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes		Record keeping	
LS_STKPL_2	Storage: Stockpile	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes			
GYP_STKPL	Storage: Stockpile	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes			
HO_1_S_STKPL	Storage: Stockpile	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes			
SAND_STKPL	Storage: Stockpile	PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes			
EG-1	Engine	NOx	See additional notes.	Yes	Utilize a non-resettable hour meter	Record keeping	
		SO2	See additional notes.	Yes	Utilize a non-resettable hour meter	Record keeping	
		CO	See additional notes.	Yes	Utilize a non-resettable hour meter	Record keeping	
		PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes	Utilize a non-resettable hour meter	Record keeping	
		VOC	See additional notes.	Yes	Utilize a non-resettable hour meter	Record keeping	
		CO2 Equivalent (MTC)	See additional notes.	Yes	Utilize a non-resettable hour meter	Record keeping	
WHFUG	Fugitive, Piling and Equipment Leak MMS Activities	NOx	Track emissions check via calculations and/or monitoring.	Yes		Record keeping	
		SO2	Track emissions check via calculations and/or monitoring.	Yes		Record keeping	
		CO	Track emissions check via calculations and/or monitoring.	Yes		Record keeping	
		PM	The emission monitoring techniques for PM10 and PM2.5 will follow the technique for PM. Monthly visible emission observations per EPA Method 22 to demonstrate compliance with opacity requirements.	Yes		Record keeping	
		VOC	Track emissions check via calculations and/or monitoring.	Yes		Record keeping	

**Texas Commission on Environmental Quality**  
**Form PI-1 General Application**  
**Materials**

Date: October 2023  
 Permit #: 167047  
 Company: BM Dorchester LLC

Application Materials			Applicant Internal Comments
<p>This sheet provides a list of application materials and how they were submitted to the Air Permits Division. This also provides the preferred order of application materials in the application.</p> <p><b>Instructions:</b></p> <ol style="list-style-type: none"> <li>1. Indicate the submittal method and date for each applicable part of the application.</li> <li>2. Items are greyed out based on responses in the PI-1 to help guide you. There may be additional items listed below that are not not greyed out and are not needed for this application. You can select "not applicable" for those items.</li> <li>3. If needed, enter additional application materials in Section F.</li> </ol> <p><a href="#">Click here to return to Cover Sheet.</a></p>			<p>All comments must be deleted prior to application submittal.</p>
Item	How submitted	Date submitted	
<b>A. Administrative Information</b>			
Form PI-1 General Application	STEERS	11/05/2021	
Hard copy of the General sheet with original (ink) signature	STEERS	11/05/2021	
Professional Engineer Seal	STEERS	11/05/2021	
<b>B. General Information</b>			
Copy of current permit (both Special Conditions and MAERT)			
Core Data Form	STEERS	11/05/2021	
Area map	STEERS	11/05/2021	
Plot plan	STEERS	11/05/2021	
Process description	STEERS	11/05/2021	
Process flow diagram	STEERS	11/05/2021	
List of MSS activities	STEERS	11/05/2021	
State regulatory requirements discussion	STEERS	11/05/2021	
<b>C. Federal Applicability</b>			
Summary and project emission increase determination - Tables 1F and 2F	STEERS	11/05/2021	
Netting analysis (if required) - Tables 3F and 4F as needed	Not applicable		
<b>D. Technical Information</b>			
BACT discussion, if additional details are attached	STEERS	11/05/2021	
Monitoring information, if additional details are attached	STEERS	11/05/2021	
Material Balance (if applicable)	STEERS	11/05/2021	
Calculations	STEERS	11/05/2021	
<b>E. Impacts Analysis</b>			
Qualitative impacts analysis			
MERA analysis	STEERS	11/05/2021	
EMEW: SCREEN3	Not applicable		
EMEW: NonSCREEN3	STEERS	11/05/2021	
PSD modeling protocol	STEERS	11/05/2021	
<b>F. Additional Attachments</b>			

**AR-41**

**Revised Draft Permit and Supporting Documentation**

**From:** Joel Stanford  
**Sent:** Thursday, May 9, 2024 10:05 AM  
**To:** Michael Meister  
**Subject:** BM Dorchester - Updated Drafts for PM2.5 Revisions  
**Attachments:** CND-BM Dorchester- 167047-335160\_PM25.docx; MAERT-BM Dorchester- 167047-335160\_PM25.docx

Hi Mike,

Attached are updated drafts with the more stringent baghouse efficiency specifications and lower rates on the MAERT. I also cleaned up an orphan sentence in CND 12 (emergency engines).

Let me know if you see any issues.

Regards,

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

Mail Code: MC-163, PO Box 13087

Austin, Texas 78711-3087



How are we doing? Fill out our online customer satisfaction survey  
at: [www.tceq.texas.gov/customersurvey](http://www.tceq.texas.gov/customersurvey)

**From:** Joel Stanford  
**Sent:** Thursday, May 30, 2024 10:47 AM  
**To:** Mike Meister; Daniel Jamieson  
**Cc:** Chad Dumas  
**Subject:** RE: BM Dorchester Application/Modeling Addendum

Chad is out until 6/3, and expects to finish it sometime in the week or two after that. ADMT has been extremely busy, but he'll get to it fairly soon!

---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Thursday, May 30, 2024 10:37 AM  
**To:** Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Subject:** RE: BM Dorchester Application/Modeling Addendum

Hi, Joel and Dan,

I've been asked by BM Dorchester for an update on how things are going, timeline, outstanding items, etc. Let me know if there is any information or news I can relay to them.

Thanks!  
Mike

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**From:** Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>  
**Sent:** Tuesday, May 7, 2024 3:50 PM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>; Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Subject:** RE: BM Dorchester Application/Modeling Addendum

Hi Mike,

We are currently reviewing the modeling files and information provided. If we have any questions, we'll reach out to you.

Thanks,  
Dan

---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Tuesday, May 7, 2024 1:06 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>; Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>  
**Subject:** RE: BM Dorchester Application/Modeling Addendum

Dan,

I had a conversation with the applicant yesterday and they were inquiring how the modeling update looks in terms of completion or additional information needed. I know from the IMS that the audit was started immediately after receipt of the files, so I figured it was a good time to check in on how it's going.

Thanks!  
Mike

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**From:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Sent:** Thursday, April 25, 2024 11:28 AM  
**To:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Cc:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>; Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>  
**Subject:** RE: BM Dorchester Application/Modeling Addendum

Received this time! Thanks!

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**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Thursday, April 25, 2024 11:25 AM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>; Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>  
**Subject:** BM Dorchester Application/Modeling Addendum

Joel,

I tried to send this yesterday but I think it didn't make it through. If it did, you can disregard this email.

Attached is an application addendum/revised AQA to address the recently revised annual PM2.5 NAAQS that will soon become effective. In support of the AQA revision, we have included a revised PI-1 Workbook that reflects the update made to dust collector exit loading and an update to annual operating hours for vacuum truck loading. Both changes are addressed in the document. Modeling updates and revised results are also presented in the document. Model input and output files are contained in the attached zip file.

I have copied ADMT on this email to facilitate review of the modeling updates.

Any questions, comments, or data needs, please do not hesitate to ask.

Thanks,  
Mike

**Michael Meister**  
Principal Consultant



P 361.883.1668, Direct 361.235.3147  
555 N. Carancahua St, Ste 820 Corpus Christi, TX 78401  
Email: [mmeister@trinityconsultants.com](mailto:mmeister@trinityconsultants.com)



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## **Special Conditions**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.

7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	--	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	--	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The engine shall be equipped with a non-resettable hour meter.

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.002
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.0025
10-BF-140	Material Transfer (LS to Storage)	0.0025
12-BF-140	Additive Unloading (Rail)	0.0025
11-BF-270	Material Transfer (LS to Hopper)	0.0025
11-BF-285	Material Transfer (LS to Hopper)	0.0025
12-BF-315	Truck Unloading	0.0025
12-BF-325	Material Transfer (Rail Add. to Storage)	0.0025

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
12-BF-360	Material Transfer (Truck Add. to Storage)	0.0025
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.0025
13-BF-500	Raw Mill Feed Bin Building	0.0025
20-BF-010	Raw Mill Building	0.0025
20-BF-182	Raw Mill Building	0.0025
20-BF-360	Raw Mill Building	0.0025
21-BF-330	Top of CKD Bin	0.0025
22-BF-060	Bottom of Raw Meal Silo	0.0025
22-BF-080	Preheater Tower	0.0025
22-BF-160	Top of Raw Meal Silo	0.0025
22-BF-385	Top of Surge Bin (RM Silo)	0.0025
30-BF-260	Bottom of Preheater Tower	0.0025
30-BF-320	Top of Preheater Tower	0.0025
42-BF-270	Cooler Discharge	0.0025
41-BF-130	Top of Bin (Bypass Dust)	0.0025
44-BF-030	Top of Clinker Silo Baghouse	0.0025
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.0025
50-BF-050	Top of Clinker Feed Bin	0.0025
50-BF-020	Top of Gypsum Feed Bin	0.0025
50-BF-350	Cement Feed Bin Extraction	0.0025
51-BF-050	Cement Mill Building	0.0025
51-BF-140	Cement Mill Building	0.0025
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.0025
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.0025
52-BF-110	Top of Cement Silo 1	0.0025
53-BF-110	Top of Cement Silo 2	0.0025
52-BF-190	Top of Surge Bin (CM Silo-1)	0.0025
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.0025
52-BF-270	Loadout System (CM Silo-1)	0.0025
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.0025

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements:

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Limestone Stockpiles 1 and 2, the Gypsum Stockpile, the High Grade Limestone Stockpile, the Sand Stockpile, and in general all incoming raw materials shall be stored in fully enclosed storage buildings.
16. The following material handling operations shall utilize the specified controls:

**Table 3: Material Handling Operation Controls**

EPN	Source Name	Controls
TRK_MH	Additive - Material Handling Truck Unloading	Three-sided walls and fogging nozzles.
RR_MH	Additive - Material Handling Rail Unloading	Two-sided walls and fogging nozzles.
LSCRSHBD_MH	Limestone – Material Handling LS Crusher Building	Three-sided walls and fogging nozzles.

Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.

17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations.



19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.
20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

#### **Cement Kiln Selective Catalytic Reduction**

22. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

#### **Planned Maintenance, Startup, and Shutdown**

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:
  - A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.

25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
  - A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
  - A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### **Ammonia Handling**

##### **Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO**

27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
  - A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per shift.
  - B. Immediately, but no later than 1 hour upon detection of a leak, plant personnel shall take at least one of the following actions:
    - (1) Isolate the leak.
    - (2) Commence repair or replacement of the leaking component.
    - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### **Initial Demonstration of Compliance**

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 43. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### **Sampling Requirements**

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.
31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

- A. Date for pretest meeting;
- B. Date sampling will occur;
- C. Points or sources to be sampled;
- D. Name of firm conducting sampling;
- E. Type of sampling equipment to be used; and
- F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

- 32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
- 33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
- 34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
- 35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
- 36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
- 37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
  - One copy to the TCEQ Regional Office with jurisdiction.
  - One copy to the TCEQ Office of Air, Air Permits Division in Austin.
  - One copy to each appropriate local air pollution control program with jurisdiction.
- 38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.

39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

#### **Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with in 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
    - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
- D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
- F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 42, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.
- B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).

Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.

Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.



- C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.
44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.
45. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
- A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
  - B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
    - (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
    - (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> stack concentration or greater.
  - C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - E. The permit holder may establish a correlation between the maximum NH<sub>3</sub> stack concentration limit and maximum NH<sub>3</sub> injection rate or other surrogate parameter that may be monitored to determine compliance with NH<sub>3</sub> stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.

- F. Other alternative methods used for measuring  $\text{NH}_3$  stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:
- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or

- B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).

#### **Recordkeeping Requirements**

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;
  - C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);

- E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative  $\text{NH}_3$  continuous demonstration of compliance, if any;
  - F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;
  - H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 23-26 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### Reporting Requirements

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.
  - D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

- G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.
54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

#### Greenhouse Gases Special Conditions

55. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 28 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 28, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### **Greenhouse Gases Recordkeeping Requirements**

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.
59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);



Special Conditions

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

Page 18

- B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
- C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
  - (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
  - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
  - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

**Inherently Low Emitting (ILE) Maintenance Activities**

Planned Maintenance Activity	Pollutant					
	VOC	NOx	CO	PM	SO2	CO2
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:

# Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 167047 and PSDTX1602

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	NO <sub>x</sub>	75.34	289.00
		SO <sub>2</sub>	83.33	213.31
		H <sub>2</sub> SO <sub>4</sub>	152.76	58.66
		HCl	2.38	10.41
		CO	1249.88	1599.84
		PM	41.66	159.98
		PM <sub>10</sub>	41.66	159.98
		PM <sub>2.5</sub>	41.66	159.98
		Pb	0.01	0.04
		Hg	<0.01	0.01
		VOC	25.24	100.49
		NH <sub>3</sub>	12.95	56.72
51-SK-250	Finish Mill Baghouse Stack	NO <sub>x</sub>	0.16	0.70
		SO <sub>2</sub>	<0.01	0.04
		CO	1.31	5.74
		PM	3.23	14.13
		PM <sub>10</sub>	3.23	14.13
		PM <sub>2.5</sub>	3.23	14.13
		VOC	0.09	0.38
10-BF-035	Crusher Building Baghouse Stack	PM	0.68	2.98
		PM <sub>10</sub>	0.68	2.98
		PM <sub>2.5</sub>	0.68	2.98

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
10-BF-140	Material Transfer (LS to Storage) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
12-BF-140	Additive Unloading (Rail) Baghouse Stack	PM	0.13	0.55
		PM <sub>10</sub>	0.13	0.55
		PM <sub>2.5</sub>	0.13	0.55
11-BF-270	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
11-BF-285	Material Transfer (LS to Hopper) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
12-BF-315	Truck Unloading Baghouse Stack	PM	0.38	1.66
		PM <sub>10</sub>	0.38	1.66
		PM <sub>2.5</sub>	0.38	1.66
12-BF-325	Material Transfer (Rail Add. to Storage) Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
12-BF-360	Material Transfer (Truck Add. to Storage) Baghouse Stack	PM	0.06	0.28
		PM <sub>10</sub>	0.06	0.28
		PM <sub>2.5</sub>	0.06	0.28
13-BF-030	Raw Mill Feed (Top of Bin Baghouse) Stack	PM	0.06	0.28
		PM <sub>10</sub>	0.06	0.28
		PM <sub>2.5</sub>	0.06	0.28
13-BF-500	Raw Mill Feed Bin Building Baghouse Stack	PM	0.21	0.94
		PM <sub>10</sub>	0.21	0.94
		PM <sub>2.5</sub>	0.21	0.94

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
20-BF-010	Raw Mill Building Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66
20-BF-182	Raw Mill Building Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44
20-BF-360	Raw Mill Building Baghouse Stack	PM	0.06	0.25
		PM <sub>10</sub>	0.06	0.25
		PM <sub>2.5</sub>	0.06	0.25
21-BF-330	Top of CKD Bin Baghouse Stack	PM	0.04	0.17
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.04	0.17
22-BF-060	Bottom of Raw Meal Silo Baghouse Stack	PM	0.11	0.50
		PM <sub>10</sub>	0.11	0.50
		PM <sub>2.5</sub>	0.11	0.50
22-BF-080	Preheater Tower Baghouse Stack	PM	0.06	0.28
		PM <sub>10</sub>	0.06	0.28
		PM <sub>2.5</sub>	0.06	0.28
22-BF-160	Top of Raw Meal Silo Baghouse Stack	PM	0.19	0.83
		PM <sub>10</sub>	0.19	0.83
		PM <sub>2.5</sub>	0.19	0.83
22-BF-385	Top of Surge Bin (RM Silo) Baghouse Stack	PM	0.06	0.28
		PM <sub>10</sub>	0.06	0.28
		PM <sub>2.5</sub>	0.06	0.28
30-BF-260	Bottom of Preheater Tower Baghouse Stack	PM	0.10	0.44
		PM <sub>10</sub>	0.10	0.44
		PM <sub>2.5</sub>	0.10	0.44



## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
30-BF-320	Top of Preheater Tower Baghouse Stack	PM	0.06	0.25
		PM <sub>10</sub>	0.06	0.25
		PM <sub>2.5</sub>	0.06	0.25
42-BF-270	Cooler Discharge Baghouse Stack	PM	0.08	0.36
		PM <sub>10</sub>	0.08	0.36
		PM <sub>2.5</sub>	0.08	0.36
41-BF-130	Top of Bin (Bypass Dust) Baghouse Stack	PM	0.03	0.11
		PM <sub>10</sub>	0.03	0.11
		PM <sub>2.5</sub>	0.03	0.11
44-BF-030	Top of Clinker Silo Baghouse Stack	PM	0.32	1.38
		PM <sub>10</sub>	0.32	1.38
		PM <sub>2.5</sub>	0.32	1.38
44-BF-185	Transfer Tower (Clinker Storage and Handling) Baghouse Stack	PM	0.08	0.33
		PM <sub>10</sub>	0.08	0.33
		PM <sub>2.5</sub>	0.08	0.33
50-BF-050	Top of Clinker Feed Bin Baghouse Stack	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22
50-BF-020	Top of Gypsum Feed Bin Baghouse Stack	PM	0.04	0.19
		PM <sub>10</sub>	0.04	0.19
		PM <sub>2.5</sub>	0.04	0.19
50-BF-350	Cement Feed Bin Extraction Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
51-BF-050	Cement Mill Building Baghouse Stack	PM	0.15	0.66
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.15	0.66



## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
51-BF-140	Cement Mill Building Baghouse Stack	PM	0.12	0.50
		PM <sub>10</sub>	0.12	0.50
		PM <sub>2.5</sub>	0.12	0.50
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge) Baghouse Stack	PM	0.06	0.25
		PM <sub>10</sub>	0.06	0.25
		PM <sub>2.5</sub>	0.06	0.25
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed) Baghouse Stack	PM	0.07	0.30
		PM <sub>10</sub>	0.07	0.30
		PM <sub>2.5</sub>	0.07	0.30
52-BF-110	Top of Cement Silo 1 Baghouse Stack	PM	0.21	0.94
		PM <sub>10</sub>	0.21	0.94
		PM <sub>2.5</sub>	0.21	0.94
53-BF-110	Top of Cement Silo 2 Baghouse Stack	PM	0.20	0.88
		PM <sub>10</sub>	0.20	0.88
		PM <sub>2.5</sub>	0.20	0.88
52-BF-190	Top of Surge Bin (CM Silo-1) Baghouse Stack	PM	0.08	0.33
		PM <sub>10</sub>	0.08	0.33
		PM <sub>2.5</sub>	0.08	0.33
53-BF-190	Top of Surge Bin (CM Silo-2) Baghouse Stack	PM	0.08	0.33
		PM <sub>10</sub>	0.08	0.33
		PM <sub>2.5</sub>	0.08	0.33
52-BF-270	Loadout System (CM Silo-1) Baghouse Stack	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22
53-BF-270	Loadout System (CM Silo-2) Baghouse Stack	PM	0.05	0.22
		PM <sub>10</sub>	0.05	0.22
		PM <sub>2.5</sub>	0.05	0.22

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
LSCRSHBD_MH	Limestone - Material Handling LS Crusher Building (5)	PM	0.04	0.15
		PM <sub>10</sub>	0.02	0.07
		PM <sub>2.5</sub>	<0.01	0.01
TRK_MH	Additive - Material Handling Truck Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
RR_MH	Additive - Material Handling Rail Unloading (5)	PM	0.01	0.04
		PM <sub>10</sub>	<0.01	0.01
		PM <sub>2.5</sub>	<0.01	<0.01
LS_STKPL	Limestone Stockpile 1 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
LS_STKPL	Limestone Stockpile 2 (5)	PM	0.08	0.33
		PM <sub>10</sub>	0.04	0.17
		PM <sub>2.5</sub>	0.01	0.03
ADD_STKPL	Gypsum Stockpile (5)	PM	0.03	0.11
		PM <sub>10</sub>	0.01	0.06
		PM <sub>2.5</sub>	0.002	0.01
ADD_STKPL	High Grade Limestone Stockpile (5)	PM	0.05	0.20
		PM <sub>10</sub>	0.02	0.10
		PM <sub>2.5</sub>	<0.01	0.02
ADD_STKPL	Sand Stockpile (5)	PM	0.02	0.09
		PM <sub>10</sub>	0.01	0.05
		PM <sub>2.5</sub>	<0.01	0.01
EG-1	Emergency Generator Engine	NO <sub>x</sub>	8.87	0.44
		SO <sub>2</sub>	<0.01	<0.01
		CO	17.74	0.89

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
		PM	0.14	0.01
		PM <sub>10</sub>	0.14	0.01
		PM <sub>2.5</sub>	0.14	0.01
		VOC	4.58	0.23
NH3FUG	NH3 Fugitives (5)	NH <sub>3</sub>	0.06	0.28
MSSFUG	ILE MSS Activities	NO <sub>x</sub>	<0.01	<0.01
		SO <sub>2</sub>	<0.01	<0.01
		CO	<0.01	<0.01
		PM	0.81	0.77
		PM <sub>10</sub>	0.66	0.76
		PM <sub>2.5</sub>	0.28	0.38
		VOC	<0.01	<0.01

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.  
(2) Specific point source name. For fugitive sources, use area name or fugitive source name.  
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1  
NO<sub>x</sub> - total oxides of nitrogen  
CO - carbon monoxide  
SO<sub>2</sub> - sulfur dioxide  
PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>, as represented  
PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>, as represented  
PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
HCl - hydrogen chloride  
H<sub>2</sub>SO<sub>4</sub> - sulfuric acid  
Pb - Lead  
Hg - Mercury  
NH<sub>3</sub> - ammonia  
(4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period.  
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: DRAFT

# Emission Sources - Maximum Allowable Emission Rates

Permit Number GHGPSDTX212

This table lists the maximum allowable emission rates of greenhouse gas (GHG) emissions, as defined in Title 30 Texas Administrative Code § 101.1, for all sources of GHG air contaminants on the applicant's property that are authorized by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities authorized by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
21-SK-230	Cement Kiln Baghouse Stack	CO <sub>2e</sub>	-	981,402.53
51-SK-250	Finish Mill Baghouse Stack	CO <sub>2e</sub>	-	8,210.12
EG-1	Emergency Generator Engine	CO <sub>2e</sub>	-	42.25

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) CO<sub>2e</sub> - carbon dioxide equivalents based on the following Global Warming Potentials (GWP) found in Table A-1 of Subpart A 40 CFR Part 98 (78 FR 71904) for each pollutant: CO<sub>2</sub> (1), N<sub>2</sub>O (298), CH<sub>4</sub>(25)
- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. These rates include emissions from maintenance, startup, and shutdown.

Date: DRAFT

**AR-42**

**Administrative Permit Processing Documentation**

**From:** Jake Bender <jake@highrollergroup.com>  
**Sent:** Thursday, May 30, 2024 5:55 PM  
**To:** Steve Sun  
**Cc:** MMEISTER@TRINITYCONSULTANTS.COM; Joel Stanford  
**Subject:** RE: Expedited Permitting Request

Mr. Sun,

Would you please let us know instructions to remit more funds to continue with the expedited permitting request. We will remit \$5,000 additional in funds shortly after receipt of payment instructions and will confirm when the funds have been sent.

Thanks,  
Jake Bender

?

Jake Bender  
Chief Financial Officer, High Roller Group, LLC  
8144 Walnut Hill Ln, Suite 903, Dallas, TX 75231  
Main:  
Direct: 573-330-4449

Fax:  
Cell: 573-330-4449  
-----Original Message-----

From: Jake Bender  
Sent: Monday, May 6, 2024 9:42 AM  
To: 'Steve Sun' <[steve.sun@tceq.texas.gov](mailto:steve.sun@tceq.texas.gov)>  
Cc: [MMEISTER@TRINITYCONSULTANTS.COM](mailto:MMEISTER@TRINITYCONSULTANTS.COM)  
Subject: RE: Expedited Permitting Request

Mr. Sun,

We would like to continued with the Expedited Permitting Program. As such, please let us know when additional funds are necessary, as well as how much would be required to be deposited, and we will remit in a timely manner.

Thanks,  
Jake

-----Original Message-----  
From: Steve Sun <[steve.sun@tceq.texas.gov](mailto:steve.sun@tceq.texas.gov)>  
Sent: Wednesday, April 24, 2024 2:42 PM  
To: Jake Bender <[JAKE@HIGHROLLERGROUP.COM](mailto:JAKE@HIGHROLLERGROUP.COM)>  
Cc: [MMEISTER@TRINITYCONSULTANTS.COM](mailto:MMEISTER@TRINITYCONSULTANTS.COM)  
Subject: Expedited Permitting Request

Mr. Bender,



Thank you for your interest in the Texas Commission on Environmental Quality (TCEQ) Expedited Permitting Program. In response to your expedited permitting request, please review the attached letter.

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

**Transaction Information**

**Voucher Number:** 707661  
**Trace Number:** 582EA000612394  
**Date:** 05/31/2024 02:08 PM  
**Payment Method:** CC - Authorization 0000206763  
**Voucher Amount:** \$5,000.00  
**Fee Type:** AIR PERMIT - AMENDMENT  
**ePay Actor:** MICHAEL MEISTER  
**Actor Email:** mmeister@trinityconsultants.com  
**IP:** 165.225.36.163

**Payment Contact Information**

**Name:** MICHAEL MEISTER  
**Company:** TRINITY CONSULTANTS  
**Address:** 555 N CARANCAHUA ST, CORPUS CHRISTI, TX 78401  
**Phone:** 361-883-1668

**Site Information**

**RN:** RN111368437  
**Site Name:** DORCHESTER PLANT  
**Site Location:** FROM INTX OF HWYS 289 & 902 E OF DORCHESTER HEAD E ON HWY 902 FOR APPROX 0.8 MI

**Customer Information**

**CN:** CN605952373  
**Customer Name:** BM DORCHESTER LLC

**Other Information**

**Program Area ID:** 167047

[Close](#)

**From:** Jake Bender <jake@highrollergroup.com>  
**Sent:** Friday, May 31, 2024 2:24 PM  
**To:** Steve Sun  
**Cc:** Joel Stanford  
**Subject:** Fwd: TCEQ ePay Receipt for 582EA000612394  
**Attachments:** BM Dorchester Voucher 2024-0531.pdf

Mr. Sun,

Please see ePay receipt for additional funds in our account. Please confirm receipt and let me know if you need anything additional.

Best,  
Jake



**Jake Bender**  
Chief Financial Officer, High Roller Group, LLC  
[8144 Walnut Hill Ln, Suite 903 Dallas, TX 75231](#)  
Office: [936-598-8587](#)  
Direct: [573-330-4449](#)

.....CONFIDENTIALITY NOTICE..... The information in this email may be confidential and/or privileged. This email is intended to be reviewed by only the individual or organization named above. If you are not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any review, dissemination or copying of this email and its attachments, if any, or the information contained herein is prohibited. If you have received this email in error, please immediately notify the sender by return email and delete this email from your system.

Begin forwarded message:

**From:** Matt Trammell  
**Date:** May 31, 2024 at 2:15:24 PM CDT  
**To:** Jake Bender <jake@highrollergroup.com>  
**Subject:** Fwd: TCEQ ePay Receipt for 582EA000612394

Jake

Please see the voucher below showing \$5000 was recharged to your credit card. You can email a copy of this to Mr. Sun. Thank you

Matt

Matt Trammell's iPhone

Begin forwarded message:

**From:** Mike Meister <[mmeister@trinityconsultants.com](mailto:mmeister@trinityconsultants.com)>  
**Date:** May 31, 2024 at 2:13:03 PM CDT  
**To:** Matt Trammell <[matt@trammco.com](mailto:matt@trammco.com)>  
**Subject:** FW: TCEQ ePay Receipt for 582EA000612394

Matt,

Tell Jake that the attached voucher is what Mr. Sun needs. As is shown below, the CC was charged \$5000 plus a CC processing fee, for a total of \$5112.76.

Mike

-----Original Message-----

From: [steers@tceq.texas.gov](mailto:steers@tceq.texas.gov) <[steers@tceq.texas.gov](mailto:steers@tceq.texas.gov)>  
Sent: Friday, May 31, 2024 2:08 PM  
To: Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
Subject: TCEQ ePay Receipt for 582EA000612394

This is an automated message from the TCEQ ePay system.  
Please do not reply.

Trace Number: 582EA000612394

Date: 05/31/2024 02:08 PM

Payment Method: CC - Authorization 0000206763 TCEQ

Amount: \$5,000.00 Texas.gov Price: \$5,112.76\*

\* This service is provided by Texas.gov, the official website of Texas. The price of this service includes funds that support the ongoing operations and enhancements of Texas.gov, which is provided by a third party in partnership with the State.

Actor: MICHAEL MEISTER

Email: [mmeister@trinityconsultants.com](mailto:mmeister@trinityconsultants.com)

Payment Contact: MICHAEL MEISTER

Phone: 361-883-1668

Company: TRINITY CONSULTANTS

Address: 555 N CARANCAHUA ST, CORPUS CHRISTI, TX 78401

Fees Paid:

Fee Description	AR Number	Amount
AIR PERMIT - AMENDMENT		\$5,000.00

TCEQ Amount: \$5,000.00

Voucher: 707661

Trace Number: 582EA000612394

Date: 05/31/2024 02:08 PM

Payment Method: CC - Authorization 0000206763 Voucher

Amount: \$5,000.00 Fee Paid: AIR PERMIT - AMENDMENT RN

Number: RN111368437 Site Name: DORCHESTER PLANT Site

Location: FROM INTX OF HWYS 289 & 902 E OF DORCHESTER

HEAD E ON HWY 902 FOR APPROX 0.8 MI CN Number:

CN605952373 Customer Name: BM DORCHESTER LLC

Program Area ID: 167047

To print out a copy of the receipt and vouchers for this transaction either click on or copy and paste the following url into your browser:

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**AR-43**

**Modifications to Draft Permit Regarding Quarrying**

**From:** Joel Stanford  
**Sent:** Tuesday, June 4, 2024 4:06 PM  
**To:** Mike Meister  
**Cc:** jake@highrollergroup.com; R6AirPermitsTX@epa.gov  
**Subject:** RE: Application update - BM Dorchester, LLC (Permit Nos. 167047, GHGPSDTX212, PSDTX1602)

Received. Thanks! I'll add a line to the Conditions and TRV – likely tomorrow.

---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Tuesday, June 4, 2024 3:03 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** [jake@highrollergroup.com](mailto:jake@highrollergroup.com); [R6AirPermitsTX@epa.gov](mailto:R6AirPermitsTX@epa.gov)  
**Subject:** Application update - BM Dorchester, LLC (Permit Nos. 167047, GHGPSDTX212, PSDTX1602)

Joel,

Please find attached an update to permit representations regarding proposed quarry activities at the BM Dorchester facility. Let me know if you have any questions or if additional information is needed.

Thanks,  
Mike

**Michael Meister**  
Principal Consultant

P 361.883.1668, Direct 361.235.3147  
555 N. Carancahua St, Ste 820 Corpus Christi, TX 78401  
Email: [mmeister@trinityconsultants.com](mailto:mmeister@trinityconsultants.com)



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12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203 / [trinityconsultants.com](http://trinityconsultants.com)

June 4, 2024

Mr. Joel Stanford  
Air Permits Division  
Texas Commission on Environmental Quality  
12100 Park 35 Circle, MC 161  
Building C, Third Floor  
Austin, TX 78753  
[Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov)

*RE: Change to a representation in Prevention of Significant Deterioration (PSD) Permit Application  
Permit Numbers: 167047, GHGPSDTX212 and PSDTX1602  
BM Dorchester LLC - Dorchester Plant  
Dorchester, Grayson County, Texas  
Customer Reference Number: CN605952373  
Regulated Entity Reference Number: RN111368437*

Dear Mr. Stanford:

BM Dorchester LLC (Black Mountain) is submitting the following change to a representation made in the above-referenced permit application (PSD Project No. 335160) submitted to the Texas Commission on Environmental Quality (TCEQ) on November 8, 2021 (Application).

In Section 2.1 of the Application, Black Mountain represented that its on-site limestone mining activities may include blasting. With this letter, Black Mountain represents that no blasting will be conducted as part of its on-site limestone mining activities.

If you have any questions or comments about the information presented in this letter, please do not hesitate to call me at 361-883-1668 or via email at [mmeister@trinityconsultants.com](mailto:mmeister@trinityconsultants.com).

Sincerely,

TRINITY CONSULTANTS

A handwritten signature in black ink that reads "Michael Meister". The signature is written in a cursive, flowing style.

Mr. Michael Meister  
Principal Consultant

cc: TCEQ Region 4, Dallas/Fort Worth  
U.S. Environmental Protection Agency (U.S. EPA) Region 6 ([R6AirPermitsTX@epa.gov](mailto:R6AirPermitsTX@epa.gov))  
Mr. Jake Bender, BM Dorchester LLC (electronic)

**HEADQUARTERS**

12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203  
3582679.v1

APP-1619

**From:** Joel Stanford  
**Sent:** Wednesday, June 5, 2024 11:09 AM  
**To:** Mike Meister  
**Subject:** RE: Application update - BM Dorchester, LLC (Permit Nos. 167047, GHGPSDTX212, PSDTX1602)  
**Attachments:** CND-BM Dorchester- 167047-335160\_PM25.docx

Hi Mike,  
Attached is a draft which addresses this. I added a sentence in the housekeeping CND 18. This draft also matches the earlier baghouse efficiency increase draft. Let me know if this looks OK.

Regards,

**Joel Stanford**

Team Leader - Expedited Team  
Air Permits Division  
Texas Commission on Environmental Quality  
Mail Code: MC-163, PO Box 13087  
Austin, Texas 78711-3087



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---

**From:** Mike Meister <[MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com)>  
**Sent:** Tuesday, June 4, 2024 3:03 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** [jake@highrollergroup.com](mailto:jake@highrollergroup.com); [R6AirPermitsTX@epa.gov](mailto:R6AirPermitsTX@epa.gov)  
**Subject:** Application update - BM Dorchester, LLC (Permit Nos. 167047, GHGPSDTX212, PSDTX1602)

Joel,

Please find attached an update to permit representations regarding proposed quarry activities at the BM Dorchester facility. Let me know if you have any questions or if additional information is needed.

Thanks,  
Mike

**Michael Meister**  
Principal Consultant

P 361.883.1668, Direct 361.235.3147  
555 N. Carancahua St, Ste 820 Corpus Christi, TX 78401  
Email: [mmeister@trinityconsultants.com](mailto:mmeister@trinityconsultants.com)



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## **Special Conditions**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

### **Emission Standards**

1. This permit authorizes only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates" (MAERT), and these sources are restricted to the emission limits and other conditions specified in that attached table. In addition to the emissions from routine operations, this permit authorizes emissions from planned maintenance, startup, and shutdown (MSS) activities, and those emissions shall comply with the limits specified in the MAERT. Attachment A identifies the inherently low emitting (ILE) planned maintenance activities that are authorized by this permit.

### **Fuel Specifications**

2. Fuel for the Cement Kiln (EPN 21-SK-230) and the Finish Mill Air Heater (EPN 51-SK-250) shall be limited to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf).
3. Fuel for the Emergency Generator Engine (EPN EG-1) shall be pipeline quality natural gas. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
4. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

### **Federal Applicability**

5. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources in 40 CFR Part 60, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart F – Portland Cement Plants;
  - C. Subpart OOO – Nonmetallic Mineral Processing Plants; and
  - D. Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
6. These facilities shall comply with all applicable requirements of the EPA Regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63, specifically the following:
  - A. Subpart A – General Provisions;
  - B. Subpart LLL – Portland Cement Manufacturing Industry; and
  - C. Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines.



7. If any condition of this permit is more stringent than the regulations so incorporated, then for the purposes of complying with this permit, the permit shall govern and be the standard by which compliance shall be demonstrated.

#### Opacity/Visible Emission Limitations

8. Opacity of particulate matter emissions from all dust collector (baghouse) stacks shall not exceed 5 percent, averaged over a six-minute period. All other sources listed on the MAERT shall be limited to 10 percent opacity, averaged over a six-minute period.
9. Visible fugitive emissions shall not leave the property for more than 30 cumulative seconds in any six-minute period.

#### Operational Limitations, Work Practices, and Plant Design

10. Emission rates are based on and the kiln shall be limited to maximum clinker production rates of 3,333 short tons per day and 1,066,560 short tons during a rolling 12-month period.
11. Emissions from the facilities shall not exceed the following:

**Table 1: Cement Kiln Baghouse Stack (EPN 21-SK-230) Emission Limits (Excluding Planned Maintenance, Startup, and Shutdown)**

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
PM (condensable)	0.28 lb/ton of clinker	0.28 lb/ton of clinker	0.28 lb/ton of clinker
PM (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>10</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
PM <sub>2.5</sub> (filterable)	0.02 lb/ton of clinker	0.02 lb/ton of clinker	0.02 lb/ton of clinker
CO	9.00 lb/ton of clinker	9.00 lb/ton of clinker	3.00 lb/ton of clinker
NO <sub>x</sub>	0.54 lb/ton of clinker	0.54 lb/ton of clinker	0.54 lb/ton of clinker
SO <sub>2</sub>	0.60 lb/ton of clinker	0.40 lb/ton of clinker	0.40 lb/ton of clinker
VOC (as THC)	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>	24 ppmvd corrected to 7% O <sub>2</sub>
O-HAP	--	12 ppmvd corrected to 7% O <sub>2</sub>	12 ppmvd corrected to 7% O <sub>2</sub>

Pollutant	1-Hr Average Limitation	Short Term Limit – 30 day Rolling Average (except as noted)	Rolling 12 Month/Annual Limit
Dioxins and Furans	--	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>	0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O <sub>2</sub>
H <sub>2</sub> SO <sub>4</sub>	1.10 lb/ton of clinker	--	0.11 lb/ton of clinker
HCl	--	3 ppmvd corrected to 7% O <sub>2</sub>	3 ppmvd corrected to 7% O <sub>2</sub>
NH <sub>3</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmv corrected to 7% O <sub>2</sub>	35 ppmvd corrected to 7% O <sub>2</sub>
Hg	--	0.000021 lb/ton of clinker	0.000021 lb/ton of clinker
Pb	--	7.50E-05 lb/ton of clinker	7.50E-05 lb/ton of clinker

12. The Emergency Generator Engine (EPN EG-1) shall be limited to 100 hours per year for maintenance and readiness testing as defined at 40 CFR §60.4243(d). The engine shall be equipped with a non-resettable hour meter.

#### Bagfilters, Scrubber, and Dry Sorbent Injection System

13. Fabric filter dust collectors shall be designed to meet the maximum outlet grain loading values listed in the table below, in units of grain per dry standard cubic foot (gr/dscf) of exhaust. The dust collectors shall be properly installed and in good working order and shall control particulate matter emissions, when this equipment is in operation, from the following sources:

**Table 2: Fabric Filter Dust Collector Maximum Filterable Outlet Grain Loading Values**

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
21-SK-230	Cement Kiln	0.002
51-SK-250	Finish Mill	0.005
10-BF-035	Crusher Building	0.0025
10-BF-140	Material Transfer (LS to Storage)	0.0025
12-BF-140	Additive Unloading (Rail)	0.0025
11-BF-270	Material Transfer (LS to Hopper)	0.0025
11-BF-285	Material Transfer (LS to Hopper)	0.0025
12-BF-315	Truck Unloading	0.0025
12-BF-325	Material Transfer (Rail Add. to Storage)	0.0025

EPN	Source Name	Maximum Filterable Outlet Grain Loading (gr/dscf)
12-BF-360	Material Transfer (Truck Add. to Storage)	0.0025
13-BF-030	Raw Mill Feed (Top of Bin Baghouse)	0.0025
13-BF-500	Raw Mill Feed Bin Building	0.0025
20-BF-010	Raw Mill Building	0.0025
20-BF-182	Raw Mill Building	0.0025
20-BF-360	Raw Mill Building	0.0025
21-BF-330	Top of CKD Bin	0.0025
22-BF-060	Bottom of Raw Meal Silo	0.0025
22-BF-080	Preheater Tower	0.0025
22-BF-160	Top of Raw Meal Silo	0.0025
22-BF-385	Top of Surge Bin (RM Silo)	0.0025
30-BF-260	Bottom of Preheater Tower	0.0025
30-BF-320	Top of Preheater Tower	0.0025
42-BF-270	Cooler Discharge	0.0025
41-BF-130	Top of Bin (Bypass Dust)	0.0025
44-BF-030	Top of Clinker Silo Baghouse	0.0025
44-BF-185	Transfer Tower (Clinker Strg. And Handling)	0.0025
50-BF-050	Top of Clinker Feed Bin	0.0025
50-BF-020	Top of Gypsum Feed Bin	0.0025
50-BF-350	Cement Feed Bin Extraction	0.0025
51-BF-050	Cement Mill Building	0.0025
51-BF-140	Cement Mill Building	0.0025
51-BF-350	Top of Cement Silo (Bucket Elevator Discharge)	0.0025
51-BF-380	Bottom of Cement Silo (Bucket Elevator Feed)	0.0025
52-BF-110	Top of Cement Silo 1	0.0025
53-BF-110	Top of Cement Silo 2	0.0025
52-BF-190	Top of Surge Bin (CM Silo-1)	0.0025
53-BF-190	Top of Surge Bin (CM Silo-2) B	0.0025
52-BF-270	Loadout System (CM Silo-1)	0.0025
53-BF-270	Loadout System (CM Silo-2) Baghouse	0.0025

14. Acids and Sulfur compounds from the Kiln and associated systems shall be directed to a dry scrubbing system in order to meet the Kiln emission limitations found in this permit. Additionally, a bypass system consisting of a quenching chamber, a baghouse with lime injection, and a fan may be utilized. The dry scrubber and/or bypass system shall meet the following requirements:

- A. The scrubber and/or bypass system shall operate with no less than the specified control efficiency for the following pollutants on a 1-hour average basis or 30-day rolling average basis, as required by Special Condition Number 11:

Pollutant:	Control Efficiency
SO <sub>2</sub>	90

- B. Prior to the start of operations of the facilities covered by this permit, the permit holder shall obtain a permit alteration or permit amendment which updates the application representations relating to monitoring, target pollutants, and control efficiencies for the scrubber and bypass system.

#### Material Handling and Housekeeping

15. Limestone Stockpiles 1 and 2, the Gypsum Stockpile, the High Grade Limestone Stockpile, the Sand Stockpile, and in general all incoming raw materials shall be stored in fully enclosed storage buildings.
16. The following material handling operations shall utilize the specified controls:

**Table 3: Material Handling Operation Controls**

EPN	Source Name	Controls
TRK_MH	Additive - Material Handling Truck Unloading	Three-sided walls and fogging nozzles.
RR_MH	Additive - Material Handling Rail Unloading	Two-sided walls and fogging nozzles.
LSCRSHBD_MH	Limestone – Material Handling LS Crusher Building	Three-sided walls and fogging nozzles.

Dustless telescopic spouts shall be used for loading trucks or rail from bins or silos.

17. Raw material conveyers shall be fully enclosed.
18. Plant roads shall be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads shall be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations. Blasting shall not be utilized on site to acquire raw materials for cement production.

19. A street sweeper and other mobile equipment shall pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the mined-out quarry to dispose of the debris collected.
20. Material collected by air pollution abatement equipment which is not returned to the process shall be disposed of on-site in a manner that minimizes any emissions in transit and prevents any emissions after disposal.
21. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The emission point numbers as listed on the MAERT.

#### **Cement Kiln Selective Catalytic Reduction**

22. The following requirements shall apply to the Cement Kiln (EPN 21-SK-230).
  - A. Emissions of NO<sub>x</sub>, CO, and NH<sub>3</sub> from the Cement Kiln shall not exceed the values specified in Special Condition 11. Compliance with the NO<sub>x</sub> emissions limits shall be achieved through the use of a Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system.
  - B. Aqueous ammonia shall be used in the SCR system or combination of SCR and SNCR system and shall have a concentration of no more than 19% ammonia by weight. The aqueous ammonia shall be stored in pressure vessels.
  - C. Concentration of a pollutant in the exhaust of the cement kiln shall be evaluated on a dry basis, corrected to 7% oxygen.
  - D. Compliance with the NO<sub>x</sub> and CO emission limits of these Special Conditions shall be demonstrated through use of Continuous Emissions Monitoring System (CEMS).

#### **Planned Maintenance, Startup, and Shutdown**

23. The holder of this permit shall minimize emissions during planned MSS activities by operating the facility and associated air pollution control equipment in accordance with good air pollution control practices, safe operating practices, and protection of the facility.
24. The emissions during planned startup and shutdown activities of the Cement Kiln shall be minimized as follows:
  - A. When the precalciner operating temperature is too low for SCR or combination of SCR and SNCR to be engaged, the main kiln burner shall be operated in low-heat input mode and no feed shall be allowed to enter the kiln.
  - B. The feed entering the preheater shall not be introduced into the system until the SCR or combination of SCR and SNCR system is at temperature and fully operational.

25. The emissions from ILE planned maintenance activities identified in Attachment A of this permit shall be complied with as follows:
  - A. The total emissions from all ILE planned maintenance activities shall be no more than the estimated potential to emit for those activities as represented in the MSS permit amendment application and subsequent associated submittals.
  - B. The permit holder shall annually confirm the continued validity of the estimated potential to emit as represented in the MSS permit amendment application and subsequent associated submittals.
26. Emissions from planned MSS activities authorized by this permit shall be determined by the use of an appropriate method, including but not limited to any of following methods:
  - A. Use of a continuous emissions monitoring system (CEMS). The CEMS shall be certified to measure the pollutant's emission over the entire range of a planned maintenance activity.
  - B. Use of emission factors, including but not limited to, facility-specific parameters, manufacturer's emission factors, and/or engineering knowledge of the facility's operations.
  - C. Use of emissions data measured (by a CEMS or during emissions testing) during the same type of planned MSS activity occurring at or on an identical or similar facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - D. Use of emissions testing data collected during a planned maintenance activity occurring at or on the facility, and correlation of that data with the facility's relevant operating parameters, including but not limited to, temperature, fuel input, and fuel sulfur content.
  - E. Additional occurrences of MSS activities authorized by this permit may be authorized under permit by rule only if conducted in compliance with this permit's procedures, emission controls, monitoring, and recordkeeping requirements applicable to the activity.

#### **Ammonia Handling**

##### **Piping, Valves, Pumps, and Compressors in contact with ammonia - 28AVO**

27. Except as may be provided for in the Special Conditions of this permit, the following requirements apply to the above-referenced equipment:
  - A. Audio, olfactory, and visual checks for leaks within the operating area shall be made once per shift.
  - B. Immediately, but no later than 1 hour upon detection of a leak, plant personnel shall take at least one of the following actions:
    - (1) Isolate the leak.
    - (2) Commence repair or replacement of the leaking component.
    - (3) Use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.



Date and time of each inspection shall be noted in the operator's log or equivalent. Records shall be maintained at the plant site of all repairs and replacements made due to leaks. These records shall be made available to representatives of the Texas Commission on Environmental Quality (TCEQ) upon request.

#### **Initial Demonstration of Compliance**

28. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Cement Kiln Baghouse Stack (EPN 21-SK-230). Air contaminants to be tested for include (but are not limited to) PM (filterable and condensable), PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, SO<sub>2</sub>, THC, H<sub>2</sub>SO<sub>4</sub>, HCl, NH<sub>3</sub>, dioxins/furans, methane, Hg, and Pb. Testing shall be performed in accordance with the applicable initial compliance requirements of NSPS Subparts A and F and NESHAP Subpart LLL. Initial determination of compliance for VOC shall be performed in accordance with Special Condition No. 43. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling. The initial demonstration of compliance for NO<sub>x</sub>, CO, and SO<sub>2</sub> hourly emissions for the Cement Kiln shall be based on all quality assured hourly average data collected by the CEMS for all operating hours during the first 30 kiln operating days following the initial CEMS certification. The initial demonstration of compliance for Hg shall be based on data collected from operating the sorbent trap monitoring system for the first 30 kiln operating days. The initial demonstration of compliance for H<sub>2</sub>SO<sub>4</sub> shall be conducted when the in-line raw mill is not operating.
29. To demonstrate compliance with the MAERT and with emission performance levels as specified in the special conditions, the holder of this permit shall perform stack sampling and/or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the Finish Mill Baghouse Stack (EPN 51-SK-250). Air contaminants to be tested for include (but are not limited to) PM, PM<sub>10</sub>, and PM<sub>2.5</sub>. Sampling shall be accomplished within 60 days of achieving maximum production but not later than 180 days after startup. Sampling must be conducted in accordance with the TCEQ Guidelines for Stack Sampling Facilities and in accordance with the applicable EPA 40 CFR procedures. Any deviations from those procedures must be approved by the TCEQ Executive Director prior to sampling.

#### **Sampling Requirements**

30. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at their own expense. Sampling ports and platforms shall be incorporated into the design of the stack(s) according to the specifications set forth in the attachment entitled "Guidelines for Stack Sampling Facilities" prior to stack sampling. Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Office with jurisdiction.
31. A pretest meeting shall be held with personnel from the TCEQ before the required tests are performed. The TCEQ Regional Office with jurisdiction shall be notified not less than 45 days prior to sampling to schedule a pretest meeting. The notice shall include:

- A. Date for pretest meeting;
- B. Date sampling will occur;
- C. Points or sources to be sampled;
- D. Name of firm conducting sampling;
- E. Type of sampling equipment to be used; and
- F. Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

- 32. Alternate sampling methods and representative unit testing may be proposed by the permit holder. A written proposed description of any deviation from sampling procedures or emission sources specified in permit conditions or TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. Such a proposal must be approved by the TCEQ Regional Office with jurisdiction at least two weeks prior to sampling.
- 33. Requests to waive testing for any pollutant specified shall be submitted, in writing, for approval to the TCEQ Office of Air, Air Permits Division in Austin.
- 34. During stack sampling emission testing, the facilities shall operate at maximum represented production rates. Primary operating parameters that enable determination of production rates shall be monitored and recorded during the stack test. These parameters are to be determined at the pretest meeting.
- 35. If the plant is unable to operate at the maximum represented production rates during testing, then additional stack testing shall be required when the production rate exceeds the previous stack test production rate by +2 percent unless otherwise determined, in writing, by the TCEQ Executive Director. Additional testing, if required, shall be conducted within 180 days of achieving a production rate which exceeds the previous stack test production rate by +10 percent.
- 36. Requests for additional time to perform sampling shall be submitted to the TCEQ Regional Office with jurisdiction. Additional time to comply with the applicable federal requirements requires EPA approval, and requests shall be submitted to the TCEQ Regional Office with jurisdiction.
- 37. Copies of the final sampling report shall be forwarded to the TCEQ within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:
  - One copy to the TCEQ Regional Office with jurisdiction.
  - One copy to the TCEQ Office of Air, Air Permits Division in Austin.
  - One copy to each appropriate local air pollution control program with jurisdiction.
- 38. If, as a result of stack sampling, compliance with the permitted emission rates cannot be demonstrated, the holder of this permit shall adjust any operating parameters so as to comply with Special Condition No. 1 and the permitted emission rates.

39. If the holder of this permit is required to adjust any operating parameters for compliance, then beginning no later than 60 days after the date of the test conducted, the holder of this permit shall submit to the TCEQ, on a monthly basis, a record of adjusted operating parameters and daily records of production sufficient to demonstrate compliance with the permitted emission rates. Daily records of production and operating parameters shall be distributed as follows:

One copy to the TCEQ Regional Office with jurisdiction.

One copy to the TCEQ Office of Air, Air Permits Division in Austin.

**Demonstration of Continuous Compliance and Compliance Assurance Monitoring**

40. The holder of this permit shall install, calibrate, operate, and maintain on the Cement Kiln Baghouse Stack (EPN 21-SK-230) a PM continuous parametric monitoring system (CPMS) operated as specified in accordance with in 40 CFR Part 60, Subpart F. The CPMS is required to pass the initial certification requirements in 40 CFR Part 63, Subpart LLL. If the CPMS indicates an exceedance of the site-specific operating limit established per 40 CFR 63, Subpart LLL PM emission compliance, a visible emission observation shall be performed within 24 hours to establish compliance with the applicable opacity limits of Special Conditions No. 8. The visible emission determination must be made in accordance with 40 CFR Part 60, Appendix A, Test Method 22. The observation period when conducting Method 22 shall extend for at least one minute during normal operations. Contributions from uncombined water shall not be included in determining compliance with this condition. If visible emissions are observed, then the permit holder must conduct a six-minute test of opacity in accordance with 40 CFR Part 60 Appendix A, Test Method 9. The Method 9 test must begin within one hour of any observation of visible emissions.
41. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) at the Cement Kiln for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, and Total Hydrocarbon (as a surrogate for VOC as required by 40 CFR Part 63, Subpart LLL).
42. Each CEMS required under this permit shall satisfy the following requirements:
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.
  - B. Subparagraph (1) below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:
    - (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

- (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

- C. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of the permit allowable emission rate in lb/hr at least once every week.
- D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.
- E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.
- F. Quality-assured (or valid) data must be generated when the source generating emissions is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the source generating emissions operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.
43. The holder of this permit shall install, calibrate, operate, and maintain a CEMS to measure and record the in-stack concentrations of THC from the cement kiln in accordance with the requirements of 40 CFR Part 63, Subpart LLL. The holder of this permit shall install, calibrate, operate, and maintain a continuous flow rate sensor to measure and record the exhaust flow rate. The THC CEMS, which may be the same unit as described in Special Condition 42, is subject to the following:
- A. The THC CEMS and the continuous flow rate sensor shall be used as a CERMS for VOC.
- B. The CEMS monitoring data shall be reduced to hourly average concentrations in accordance with 40 CFR §60.13(h)(2)(i)-(ix).

Each CEMS shall complete a minimum of one cycle of sampling, analyzing, and data recording for each successive 15-minute period.

Data recorded during periods of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the computed data averages.

- C. Compliance with VOC emission limits in the MAERT shall be determined by applying the site specific VOC to methane fraction to THC CEMS data to calculate VOC lb/hr emissions from the kiln on a 30-day rolling average.
- 44. The Hg concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be measured continuously using a sorbent trap based CEMS or Mercury CEMS as required by and in accordance with the methods, frequencies, and quality assurance methods detailed in 40 CFR Part 63, Subpart LLL.
- 45. The NH<sub>3</sub> concentration in the Cement Kiln Baghouse Stack (EPN 21-SK-230) shall be tested or calculated according to one of the methods listed below and shall be tested or calculated according to frequency listed below. Testing for the NH<sub>3</sub> stack concentration is only required on days when the SCR or combination of SCR and SNCR unit is in operation.
  - A. The holder of this permit may install, calibrate, maintain, and operate a CEMS to measure and record the concentrations of NH<sub>3</sub>. The NH<sub>3</sub> concentrations shall be corrected and reported in accordance with Special Condition No. 11 above.
  - B. The NH<sub>3</sub> stack concentration may be measured using a sorbent or stain tube device specific for NH<sub>3</sub> measurement in the appropriate range. The frequency of sorbent or stain tube testing shall be monthly.
    - (1) If the sorbent or stain tube testing indicates an ammonia (NH<sub>3</sub>) stack concentration that exceeds 35 parts per million (ppm) at any time, the permit holder shall begin NH<sub>3</sub> testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.
    - (2) If the quarterly testing indicates NH<sub>3</sub> stack concentration is 35 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 35 ppm NH<sub>3</sub> stack concentration or greater.
  - C. The permit holder may install and operate a second NO<sub>x</sub> CEMS probe located between the kiln and the SCR or combination of SCR and SNCR, upstream of the stack NO<sub>x</sub> CEMS, which may be used in association with the SCR or combination of SCR and SNCR efficiency and NH<sub>3</sub> injection rate to estimate NH<sub>3</sub> stack concentration. This condition shall not be construed to set a minimum NO<sub>x</sub> reduction efficiency on the SCR or combination of SCR and SNCR unit. These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - D. The permit holder may install and operate a dual stream system of NO<sub>x</sub> CEMS at the exit of the SCR or combination of SCR and SNCR. One of the exhaust streams would be routed, in an unconverted state, to one NO<sub>x</sub> CEMS, and the other exhaust stream would be routed through an NH<sub>3</sub> converter to convert NH<sub>3</sub> to NO<sub>x</sub> and then to a second NO<sub>x</sub> CEMS. The NH<sub>3</sub> stack concentration shall be calculated from the delta between the two NO<sub>x</sub> CEMS readings (converted and unconverted). These results shall be recorded and used to determine compliance with Special Condition No. 11.
  - E. The permit holder may establish a correlation between the maximum NH<sub>3</sub> stack concentration limit and maximum NH<sub>3</sub> injection rate or other surrogate parameter that may be monitored to determine compliance with NH<sub>3</sub> stack concentrations. These results shall be recorded and used to determine compliance with Special Condition No. 11.

- F. Other alternative methods used for measuring  $\text{NH}_3$  stack concentration shall require prior written approval from the TCEQ Air Permits Division in Austin.
46. The capture and control system for each baghouse shall be operated and maintained in accordance with the manufacturer's recommendations to assure that the minimum control efficiency is met at all times when the controlled source is required to be operated. The following requirements shall apply to each baghouse.
- A. The holder of this permit shall install, calibrate (if applicable), and maintain a differential pressure gauge to monitor pressure drop across the [baghouse, cartridge filter system, or filter pads]. The (each) monitoring device that requires calibration shall be calibrated at least annually in accordance with the manufacturer's specifications and shall be accurate to within a range of  $\pm 0.5$  inch water gauge pressure ( $\pm 125$  pascals) or a span of  $\pm 3$  percent. The monitoring device that only requires to be zeroed shall be zeroed at least once a week.
  - B. The filter media differential pressure shall be maintained between [2 and 6] inches water column, or as defined by the manufacturer.
  - C. Pressure drop readings shall be recorded at least once per day that the system is required to be operated. Bags or filters shall be replaced whenever the pressure drop across the filter media no longer meets the limits in these Special Conditions or the manufacturer's recommendation.
  - D. If the filter system operating performance parameters are outside of the [2 and 6] inches water column or the manufacturer's recommended operating range, the affected facility shall not be operated until the abatement equipment is repaired; and
  - E. Planned maintenance on the dust collection system shall be performed only when the facilities being controlled by the dust collection system are not in operation.
  - F. The capture system's duct work shall be operated under negative pressure and an audio, visual, and olfactory (AVO) inspection of the capture system shall be performed monthly to check for leaking components. The capture system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the capture system; and
  - G. An inspection and maintenance log shall be kept for each baghouse dust collector whereby the log shall note the date of each inspection, the name of the inspector and any repairs and/or maintenance work performed.
47. The holder of this permit shall conduct a monthly visible emissions determination to demonstrate compliance with the opacity limitations specified in this permit for each of the baghouse (dust collector) stacks with the exception of the Finish Mill Baghouse Stack (EPN 51-SK-250), for which visible emissions determinations shall be conducted daily. This visible emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), and 5) at least two stack heights, but not more than five stack heights, from the emission point. If visible emissions are observed from the emission point, the owner or operator shall:
- A. Take immediate action to eliminate visible emissions, record the corrective action within 24 hours, and comply with any applicable requirements in 30 Texas Administrative Code (TAC) § 101.201, Emissions Event Reporting and Recordkeeping Requirements; or



- B. Determine opacity using 40 CFR Part 60, Appendix A, Test Method 9. If the opacity limit is exceeded, take immediate action (as appropriate) to reduce opacity to within the permitted limit, record the corrective action within 24 hours, and comply with applicable requirements in 30 TAC § 101.201, Emissions Event Reporting and Recordkeeping Requirements.
48. The holder of this permit shall conduct a monthly visible fugitive emissions determination to demonstrate compliance with the visible fugitive emissions limitation specified in this permit for the plant property. This visible fugitive emissions determination shall be performed: 1) during normal plant operations, 2) for a minimum of six minutes, 3) approximately perpendicular to plume direction, 4) with the sun behind the observer (to the extent practicable), 5) at least 15 feet, but not more than 0.25 mile, from the plume, and 6) in accordance with EPA 40 CFR Part 60, Appendix A, Test Method 22, except where stated otherwise in this condition. If visible fugitive emissions leaving the property exceed 30 cumulative seconds in any six-minute period, the owner or operator shall take immediate action (as appropriate) to eliminate the excessive visible fugitive emissions. The corrective action shall be documented within 24 business hours of completion.
49. The TCEQ Regional Office shall be notified as soon as possible, but not later than 24 hours, after the discovery of any monitor malfunction that is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 5 percent of the operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
50. The control devices associated with EPNs 10-BF-035, 10-BF-140, 12-BF-140, 12-BF-315, 13-BF-500, 20-BF-010, 21-SK-230, 51-SK-250, 22-BF-160, 44-BF-030, 50-BF-350, 51-BF-050, 51-BF-140, 52-BF-110, and 53-BF-110 shall not have a bypass, with the exception of the alkali bypass for the kiln (EPN 21-SK-230).

#### **Recordkeeping Requirements**

51. Records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction to demonstrate compliance with permit limitations. These records shall be totaled for each calendar month, retained for a rolling 60-month period, and include the following:
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);
  - B. After the CEMS certification (or sorbent trap validation for Hg), CEMS data as specified in Special Condition No. 42 C and a 30-day rolling average NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, THC, and Hg emissions, as applicable, from the kiln shall be calculated on a lb/hr basis. A new 30-day rolling average shall be calculated at the end of each day;
  - C. After the CEMS certification, the holder of this permit shall maintain a raw data file of all CEMS measurements from the EPN 21-SK-230, including CEMS performance testing measurements, all CEMS calibration checks and adjustments and maintenance performed on these systems. This data shall be maintained in either hard copy or electronically so long as it is suitable for inspection;
  - D. Excess emissions and monitoring systems performance report for opacity consistent with the requirements of 40 CFR § 60.7(c) and (d);

- E. Documentation of all CEMS or COMS quality-assurance measures, calibration checks, adjustments, and maintenance performed on these systems and documentation of alternative NH<sub>3</sub> continuous demonstration of compliance, if any;
  - F. Records of AVO checks for Piping, Valves, Pumps, and Compressors in contact with ammonia;
  - G. Records of pressure drop readings for each baghouse;
  - H. Malfunctions of any air pollution abatement systems;
  - I. Documentation of air pollution control equipment inspections, maintenance, and repair;
  - J. Records of visible emission/opacity observations and any corrective actions taken;
  - K. Hours of operation of the Emergency Generator (EPN EG-1);
  - L. Records of planned MSS activities, including the following, to demonstrate compliance with Special Condition Nos. 23-26 and the MAERT:
    - (1) Records of startup and shutdown of the kiln, including the date, time, duration, and emissions associated with those activities.
    - (2) Records of ILE planned maintenance activities and annual validations.
52. The following records shall be maintained at this facility site and made available at the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 60-month period:
- A. All monitoring data and support information as specified in 30 TAC § 122.144; and
  - B. Inspections of capture systems and abatement devices shall be recorded as they occur.

#### **Reporting Requirements**

53. The holder of this permit shall submit a copy of semiannual CPMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess opacity.
  - B. The date and time of the commencement and completion of each specific time period of excess opacity within that event.
  - C. The total time duration of excess opacity.
  - D. The nature and cause of any malfunction resulting in excess opacity and the corrective action taken and/or preventative measures adopted.
  - E. The date and time identifying each period during which a CPMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - F. When no excess opacities have occurred or the CPMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

- G. The reporting of excess opacity required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC §§ 101.201 and 101.211.
  - H. For the purposes of reporting pursuant to these Special Conditions, excess periods of opacity are defined as each six-minute period of operation during which the average opacity, as measured and recorded by the CPMS, exceed the limitations in Special Condition No. 8.
54. The holder of this permit shall submit a copy of semiannual CEMS reports to the TCEQ Regional Office with jurisdiction in a format specified by the TCEQ Regional Office. All reports shall be postmarked by the 30th day following the end of each semiannual period and shall include the following information for each monitor:
- A. The date and duration of time from the commencement to the completion of an event which resulted in excess emissions of any pollutant.
  - B. The date and time of the commencement and completion of each specific time period of excess emissions within that event.
  - C. The total time duration of excess emissions.
  - D. The magnitude of the emissions, including the highest emission rate, and the average emission rate. All excess emissions shall be converted into the units of the permit. All conversion factors and equations shall be included.
  - E. The nature and cause of any malfunction resulting in excess emissions and the corrective action taken and/or preventative measures adopted.
  - F. The date and time identifying each period during which a CEMS was inoperative, except for zero span checks, and the nature of the system repairs and/or adjustments which occurred during the downtime.
  - G. When no excess emissions have occurred or the CEMS have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
  - H. In addition to the other information required in this Special Condition, a summary of the excess emissions shall be reported using the form identified as Figure 1 in 40 CFR § 60.7 or similar form determined to be acceptable by the TCEQ Regional Office.
  - I. The reporting of excess emissions required by this condition does not relieve the holder of this permit from notification requirements of upset conditions as required by 30 TAC § 101.201 or notification of maintenance as required by 30 TAC § 101.211.

#### Greenhouse Gases Special Conditions

55. Emissions from the Kiln exhaust shall not exceed the following limits:

Greenhouse Gases (GHG)	Limit/Emission Factor
CO <sub>2e</sub>	0.92 ton/ton clinker 12 month rolling average

56. Initial determination of compliance as specified in Special Condition No. 28 shall also include sampling for CO<sub>2</sub>.

Provided it is conducted within the time frames and conforms with the notification requirements of this Special Condition and Special Condition No. 28, the CO<sub>2</sub> CEMS may satisfy for the initial performance test, in accordance with 40 CFR §98.34(c)(1), conforming with the Performance Specification 3 in appendix B to Part 60 for CO<sub>2</sub> concentration monitors and Performance Specification 5 in appendix B to Part 60 for the continuous rate monitoring system.

57. The permittee shall install, calibrate, maintain, and operate a CO<sub>2</sub> CEMS or other appropriate monitoring methodology and/or equipment to measure and record the concentration from the Cement Kiln in accordance with the CO<sub>2</sub> CEMS system requirements in 40 CFR 98.83(a).
- A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or an acceptable alternative. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division in Austin for requirements to be met.
  - B. The holder of this permit shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1, or an acceptable alternative. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, § 5.2.3, and any CEMS downtime and all cylinder gas audit exceedances of  $\pm 15$  percent accuracy shall be reported semiannually to the appropriate TCEQ Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director.
  - C. The monitoring data shall be reduced to hourly average values at least once every day, using a minimum of four equally-spaced data points from each one-hour period. At least two valid data points shall be generated during the hourly period in which zero and span is performed.
  - D. All monitoring data and quality-assurance data shall be maintained by the source for a period of five years and shall be made available to the TCEQ Executive Director or a designated representative upon request. The hourly average data from the CEMS shall be used to determine compliance with the conditions of this permit. The Kiln CEMS data shall also be used to produce TPY each month and used to determine compliance with the annual tonnage emission limits of this permit.
  - E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATAs in order to provide them the opportunity to observe the testing.

#### **Greenhouse Gases Recordkeeping Requirements**

58. Permit holders must keep records sufficient to demonstrate compliance with 30 TAC 116.164. Records shall be sufficient to demonstrate the amount of emissions of GHGs from the source as a result of construction; a physical change or a change in method of operation does not require authorization under 30 TAC 116.164(a). Records shall be maintained for a period of five years after collection.
59. The holder of this permit shall maintain the following records at the plant site in a form suitable for inspection for a period of five years after collection, and the records shall be made available upon request to representatives of the TCEQ, EPA, or any air pollution control agency with jurisdiction.
- A. Daily and monthly clinker production rates for the Cement Kiln (in tons);

- B. For each continuous emissions monitor, records of the nature and cause of any malfunction (if known), the corrective action taken, or preventive measures adopted shall be kept; and
- C. Total monthly CO<sub>2</sub> and CO<sub>2e</sub> emissions are to be calculated and recorded monthly as follows:
- (1) Sum total monthly CO<sub>2</sub> emissions from CEMS data.
  - (2) Calculate total nitrous oxide (N<sub>2</sub>O) and methane (CH<sub>4</sub>) monthly emissions using monthly production data, heat input, and worst-case emission factors from Table C-2 of 40 CFR Part 98, Subpart C.
  - (3) Convert CO<sub>2</sub>, N<sub>2</sub>O and CH<sub>4</sub> monthly emissions to CO<sub>2e</sub> emissions using Equation A-1 of 40 CFR Part 98, Subpart A.

The monthly data from this Special Condition shall be used to calculate rolling 12-month total emission rates of CO<sub>2e</sub> to demonstrate compliance with emissions limits in the MAERT.

Date:

**Attachment A**

Permit Numbers 167047, PSDTX1602, and GHGPSDTX212

**Inherently Low Emitting (ILE) Maintenance Activities**

<b>Planned Maintenance Activity</b>	<b>Pollutant</b>					
	<b>VOC</b>	<b>NOx</b>	<b>CO</b>	<b>PM</b>	<b>SO2</b>	<b>CO2</b>
Vacuum truck solids unloading				X		
CEMS calibration	X	X	X		X	X
Refractory maintenance operations				X		
Miscellaneous particulate filter maintenance				X		
Kiln particulate filter maintenance				X		
Equipment heating	X	X	X	X	X	X

Date:



**AR-44**

**TCEQ Air Quality Analysis Audit**

**From:** Joel Stanford  
**Sent:** Wednesday, June 5, 2024 5:06 PM  
**To:** Michael Meister  
**Subject:** FW: Modeling Audit Complete: BM Dorchester LLC (NSR 335160, Permit 167047)  
**Attachments:** Third Modeling Audit - 167047 BM Dorchester LLC (Initial 335160).docx

FYI – Forgot to send this to you yesterday. The audit is complete.

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**From:** Chad Dumas <[Chad.Dumas@Tceq.Texas.Gov](mailto:Chad.Dumas@Tceq.Texas.Gov)>  
**Sent:** Tuesday, June 4, 2024 4:19 PM  
**To:** Joel Stanford <[joel.stanford@tceq.texas.gov](mailto:joel.stanford@tceq.texas.gov)>  
**Cc:** Daniel Jamieson <[daniel.jamieson@tceq.texas.gov](mailto:daniel.jamieson@tceq.texas.gov)>; Daniel Menendez <[daniel.menendez@tceq.texas.gov](mailto:daniel.menendez@tceq.texas.gov)>  
**Subject:** Modeling Audit Complete: BM Dorchester LLC (NSR 335160, Permit 167047)

Joel,

The third modeling audit for BM Dorchester LLC is complete. You can find the document in WCC under Content ID 7104629. It is also attached for your reference. Please let us know if you have any questions or need anything else.

Thank you,  
Chad Dumas  
Texas Commission on Environmental Quality  
Air Permits Division  
Air Dispersion Modeling Team Leader  
(512) 239-2057  
[Chad.Dumas@tceq.texas.gov](mailto:Chad.Dumas@tceq.texas.gov)

How are we doing? Fill out our online customer satisfaction survey at  
[www.tceq.texas.gov/customersurvey](http://www.tceq.texas.gov/customersurvey)

# TCEQ Interoffice Memorandum

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To: Joel Stanford  
Mechanical/Coatings Section

Thru: Chad Dumas, Team Leader  
Air Dispersion Modeling Team (ADMT)

From: Daniel Jamieson  
ADMT

Date: June 4, 2024

Subject: Third Air Quality Analysis Audit – BM Dorchester LLC (RN111368437)

## 1. Project Identification Information

Permit Application Number: 167047  
NSR Project Number: 335160  
ADMT Project Number: 9161  
County: Grayson  
Published Map: <\\tceq4avmgisdata\GISWRK\APD\MODEL PROJECTS\9161\9161.pdf>

Air Quality Analysis: Submitted by Trinity Consultants, April 2024, on behalf of BM Dorchester LLC. Additional information was provided May 2024.

This is the third modeling audit for this NSR project number. The third audit was conducted to review updated annual PM<sub>2.5</sub> modeling associated with revised PM<sub>2.5</sub> emission rates. This memo only addresses updates associated with the updated annual PM<sub>2.5</sub> modeling, and the results presented below supersede the corresponding results from the second modeling audit memo dated January 31, 2024 (WCC content ID 6912313).

## 2. Report Summary

The air quality analysis is acceptable for all review types. The results are summarized below.

### A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results indicate that annual PM<sub>2.5</sub> (NAAQS) and annual PM<sub>2.5</sub> (Increment) exceed the de minimis concentration and require a full impacts analysis.

The annual PM<sub>2.5</sub> De Minimis level is the EPA recommended De Minimis level. The use of the EPA recommended De Minimis level is sufficient to conclude that a proposed source will not cause or contribute to a violation of the PM<sub>2.5</sub> NAAQS or PM<sub>2.5</sub> PSD increments based on the analyses documented in EPA guidance and policy memoranda<sup>1</sup>.

The applicant submitted the updated analysis prior to EPA finalizing the revised recommended PM<sub>2.5</sub> De Minimis levels. In an effort to be conservative, the applicant used a value of 0.1 µg/m<sup>3</sup> for the annual De Minimis level.

While the De Minimis levels for both the NAAQS and increment are identical for PM<sub>2.5</sub> in the table below, the procedures to determine significance (that is, predicted concentrations to compare to the De Minimis levels) are different. This difference occurs because the

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<sup>1</sup> <https://www.epa.gov/nsr/significant-impact-levels-ozone-and-fine-particles>

# TCEQ Interoffice Memorandum

NAAQS for PM<sub>2.5</sub> are statistically-based, but the corresponding increments are exceedance-based.

**Table 1. Modeling Results for PSD De Minimis Analysis  
in Micrograms Per Cubic Meter (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
PM <sub>2.5</sub> (NAAQS)	Annual	1.3	0.13
PM <sub>2.5</sub> (Increment)	Annual	1.4	0.13

The annual PM<sub>2.5</sub> (NAAQS) GLCmax is based on the highest five-year average of the maximum predicted concentrations determined for each receptor. The GLCmax for annual PM<sub>2.5</sub> (Increment) is the maximum predicted concentration over five years of meteorological data.

To evaluate secondary PM<sub>2.5</sub> impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). The basic idea behind the MERPs is to use technically credible air quality modeling to relate precursor emissions and peak secondary pollutants impacts from a source. Using data associated with the 500 tpy Parker County source, the applicant estimated an annual secondary PM<sub>2.5</sub> concentration of 0.00231 µg/m<sup>3</sup>. Since the combined direct and secondary annual PM<sub>2.5</sub> impacts are above the De minimis level, a full impacts analysis is required.

## **B. National Ambient Air Quality Standard (NAAQS) Analysis**

The De Minimis analysis modeling results indicate that annual PM<sub>2.5</sub> exceeds the de minimis concentration and requires a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentration will not result in an exceedance of the NAAQS.

**Table 2. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLCmax] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
PM <sub>2.5</sub>	Annual	1.3	7.5	8.8	9

The annual PM<sub>2.5</sub> GLCmax is the maximum five-year average of the annual concentrations determined for each receptor across five years of meteorological data.

A background concentration for PM<sub>2.5</sub> was obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The applicant used a three-year average (2020-2022) of the annual concentrations for the annual value. The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

As stated above, to evaluate secondary PM<sub>2.5</sub> impacts, the applicant provided an analysis based on a Tier 1 demonstration approach consistent with the EPA's GAQM. Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as

## TCEQ Interoffice Memorandum

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MERPs. Using data associated with the 500 tpy Parker County source, the applicant estimated an annual secondary PM<sub>2.5</sub> concentration of 0.00231 µg/m<sup>3</sup>. When this estimate is added to the GLCmax listed in Table 2 above, the result is less than the NAAQS.

### C. Increment Analysis

The De Minimis analysis modeling results indicate that annual PM<sub>2.5</sub> exceeds the de minimis concentration and requires a PSD increment analysis.

**Table 3. Results for PSD Increment Analysis**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Increment (µg/m <sup>3</sup> )
PM <sub>2.5</sub>	Annual	1.4	4

The GLCmax represents the maximum predicted concentrations over five years of meteorological data.

The GLCmax for annual PM<sub>2.5</sub> reported in the table above represents the total predicted concentration associated with modeling the direct PM<sub>2.5</sub> emissions and the contributions associated with secondary PM<sub>2.5</sub> formation (discussed above in the NAAQS Analysis section).

### 3. Model Used and Modeling Techniques

AERMOD (Version 23132) was used in a refined screening mode.

### 4. Modeling Emissions Inventory

The modeled emission point, area, and volume source parameters and rates were consistent with the modeling report. The source characterizations used to represent the sources were appropriate.

Emissions from model id MSSVACLD were represented to occur for two hours per day.

Annual average emission rates were used for the annual averaging time analyses.

**AR-45**

**NAPD Notice Package**



**From:** Joel Stanford  
**Sent:** Wednesday, June 5, 2024 5:48 PM  
**To:** Michael Meister  
**Subject:** Draft Consolidated NAPD+NORI for BM Project (review & translation)  
**Attachments:** 335160\_Combined Notice - english.pdf; 335160\_Combined Notice.docx

Hi Mike,

Attached is a draft consolidated notice. Please review to ensure everything is accurate. Please also provide a translation into Spanish for both examples A and B. The website with templates has recently been updated to have a series of instructions and glossaries rather than specific templates. This is not terribly helpful, but should at least provide a good start.

[Alternative Language Tools for Air Permits Public Notices - Texas Commission on Environmental Quality - www.tceq.texas.gov](https://www.tceq.texas.gov/alternative-language-tools-for-air-permits-public-notice)

Also, I've attached both Word and PDF versions of the documents, with the latter edited down to just what needs translation.

Thanks,

**Joel Stanford**

Team Leader - Expedited Team

Air Permits Division

Texas Commission on Environmental Quality

Mail Code: MC-163, PO Box 13087

Austin, Texas 78711-3087



How are we doing? Fill out our online customer satisfaction survey  
at: [www.tceq.texas.gov/customersurvey](https://www.tceq.texas.gov/customersurvey)

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

DATE, 2024

MR JACOB BENDER  
CHIEF FINANCIAL OFFICER  
BM DORCHESTER LLC  
1008 SOUTHVIEW CIR  
CENTER TX 75935-4537

Re: Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047, PSDTX1602, and GHGPSDTX212  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bender:

The Texas Commission on Environmental Quality (TCEQ) has completed the technical review of your application and has prepared a preliminary decision and draft permit.

You are now required to publish notice of your proposed activity. To help you meet the regulatory requirements associated with this notice, we have included the following items:

- Notices for Newspaper Publication (Examples A and B)
- Public Notice Checklist
- Instructions for Public Notice
- Affidavit of Publication for Air Permitting (Form TCEQ-20533) and Alternative Language Affidavit of Publication for Air Permitting (Form TCEQ-20534)
- Web link to download Public Notice Verification Form (refer to Public Notice Instructions)
- Notification List
- Draft Permit

Please note that it is **very important** that you follow **all** directions in the enclosed instructions. If you do not, you may be required to republish the notice. A common mistake is the unauthorized changing of notice wording or font. If you have any questions, please contact us before you proceed with publication.

A "Public Notice Checklist" is enclosed which notes the time limitations for each step of the public notice process. **The processing of your application may be delayed if these time limitations are not met (i.e.; submitting proof of publication within 10 business days after publication, affidavits of publication within 30 calendar days after the date of publication, and public notice verification form within 10 business days after the end of the designated comment period).** This checklist should be used as a tool in conjunction with the enclosed, detailed instructions.

If you do not comply with **all** requirements described in the instructions, further processing of your application may be suspended or the agency may take other actions.

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • [tceq.texas.gov](http://tceq.texas.gov)

How is our customer service? [tceq.texas.gov/customersurvey](http://tceq.texas.gov/customersurvey)  
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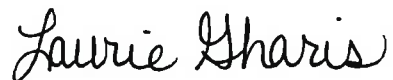
APP-1648

Mr. Jacob Bender  
Page 2  
DATE, 2024

Re: Permit: 167047, PSDTX1602, and GHGPSDTX212

If you have any questions regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300. If you have any other questions, please contact Mr. Joel Stanford at (512) 239-0270.

Sincerely,



Laurie Gharis  
Chief Clerk  
Office of the Chief Clerk  
Texas Commission on Environmental Quality

Enclosure

cc: Air Section Manager, Region 4 - Dallas/Fort Worth  
Air Permits Section Chief, New Source Review Section (6MM-AP), U.S. Environmental Protection  
Agency, Region 6, Dallas

Project Number:335160

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## EXAMPLE A

### CONSOLIDATED NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN PERMIT AND NOTICE OF APPLICATION AND PRELIMINARY DECISION

#### PROPOSED AIR QUALITY PERMIT NUMBERS: 167047, PSDTX1602, and GHGPSDTX212

**APPLICATION AND PRELIMINARY DECISION.** BM Dorchester LLC, 1008 Southview Circle, Center, TX 75935-4537, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047, Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, and Greenhouse Gas PSD Permit GHGPSDTX212 which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. This application was submitted to the TCEQ on November 8, 2021. The proposed facility will emit the following air contaminants in a significant amount: carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide, sulfuric acid, and greenhouse gases. In addition, the facility will emit the following air contaminants: hazardous air pollutants and lead.

The degree of PSD increment predicted to be consumed by the proposed facility and other increment-consuming sources in the area is as follows:

#### Sulfur Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
3-hour	12	512
24-hour	4.5	91
Annual	0.3	20

#### PM<sub>10</sub>

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
24-hour	29	30
Annual	3	17

#### Nitrogen Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
Annual	0.4	25

PM<sub>2.5</sub>

Maximum Averaging Time	Maximum Increment Consumed (µg/m <sup>3</sup> )	Allowable Increment (µg/m <sup>3</sup> )
24-hour	8.7	9
Annual	1.4	4

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Dallas/Fort Worth regional office, and at the Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Dallas/Fort Worth Regional Office, 2309 Gravel Drive, Fort Worth, Texas.

**PUBLIC COMMENT.** You may submit public comments to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments in developing a final decision on the application.

**You may submit additional written public comments within 30 days of the date of newspaper publication of this notice in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

After the deadline for public comment, the executive director will consider the comments and prepare a response to all public comment. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application.**

**OPPORTUNITY FOR A CONTESTED CASE HEARING.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court. **A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; (6) a description of how you use the property which may be impacted by the facility; and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.**

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decisions on the application. The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. Issues that are not submitted in public comments may not be considered during a hearing.

**EXECUTIVE DIRECTOR ACTION.** If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the CID. If any timely hearing requests are received and not withdrawn, the executive director will not issue final approval of the permit and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

**INFORMATION AVAILABLE ONLINE.** These documents are accessible through the Commission's Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid); the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, the air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application.  
<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.689632,33.538174&level=13>.

**MAILING LIST.** You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

**AGENCY CONTACTS AND INFORMATION.** Public comments and requests must be submitted either electronically at [www14.tceq.texas.gov/epic/eComment/](http://www14.tceq.texas.gov/epic/eComment/), or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from BM Dorchester LLC at the address stated above or by calling Mr. Michael Meister, Trinity Consultants at (361) 883-1668.

Combined Notice Issuance Date: **DATE**



## Example B

### Publication Elsewhere in the Newspaper:

**TO ALL INTERESTED PERSONS AND PARTIES:**

BM Dorchester LLC, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047, Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, and Greenhouse Gas PSD Permit GHGPSDTX212, which would authorize construction of a Portland Cement at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. Additional information concerning this application is contained in the public notice section of this newspaper.

↑  
3"  
minimum

← Minimum 2 column widths or 4 inches →

**Public Notice Checklist**  
**Notice of Application and Preliminary Decision for an Air Quality Permit**  
**(2nd Notice)**

The following tasks must be completed for public notice. If publication in an alternative language is required, please complete the tasks for both the English and alternative language publications. Detailed instructions are included in the "Instructions for Public Notice" section of this package.

<b>Within 33 calendar days after date of this letter</b>
<p>Publish <i>Notice of Application and Preliminary Decision for an Air Quality Permit</i> in the same newspaper(s) in which you published <i>Notice of Receipt of Intent to Obtain Permit</i> for this application.</p> <ul style="list-style-type: none"> <li>- Example A must be published in "public notice" section of newspaper. Review for accuracy prior to publishing.</li> <li>- Example B (if applicable) must be published in prominent location (other than "public notice") in same issue of newspaper</li> <li>- As part of the expedited permitting process, it is recommended that you publish immediately.</li> </ul> <p>Provide copy of the complete application, the executive director's preliminary decision (including the draft permit), and the executive director's preliminary determination summary and executive director's air quality analysis, including any revisions, at a public place for review and copying. Keep them there for duration of the designated comment period. The public place should provide public access to the internet.</p>
<b>First day of newspaper publication</b>
<p>Review published newspaper notice for accuracy. If errors, contact Air Permits Division.</p> <p>Ensure copy of the complete application (including any subsequent revisions) and the executive director's preliminary decision (including the draft permit) are at the public place.</p> <p>It is recommended that the signs from the first notice be in place and the lettering must remain legible and visible until 30 days after publication of the <i>Notice of Application and Preliminary Decision</i> (either English or alternative language notice, whichever is later).</p>
<b>Within 10 business days after date of publication</b>
<p>Proof of publication showing publication date and newspaper name should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="margin-left: 40px;">Texas Commission on Environmental Quality  Office of the Chief Clerk, MC-105  Attn: Notice Team / AIR Expedited Permitting  P.O. Box 13087  Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of newspaper clippings showing publication date and newspaper name to persons listed on <i>Notification List</i>.</p>
<b>Within 30 calendar days after date of publication</b>
<p>Affidavit of publication for air permitting and alternative language affidavit of publication for air permitting (if applicable) should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="margin-left: 40px;">Texas Commission on Environmental Quality  Office of the Chief Clerk, MC-105  Attn: Notice Team / AIR Expedited Permitting  P.O. Box 13087  Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of affidavits to persons listed on <i>Notification List</i>.</p>
<b>Within 10 business days after end of the designated comment period</b>
<p>Public Notice Verification Form should be emailed to <a href="mailto:PROOFS@tceq.texas.gov">PROOFS@tceq.texas.gov</a> or mailed to:</p> <p style="margin-left: 40px;">Texas Commission on Environmental Quality  Office of the Chief Clerk, MC-105  Attn: Notice Team / AIR Expedited Permitting  P.O. Box 13087  Austin, Texas 78711-3087</p> <p>Mail or email, as instructed, photocopies of Public Notice Verification Form to persons listed on <i>Notification List</i>.</p>

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## Instructions for Public Notice For New Source Review & Prevention of Significant Deterioration Air Permit

### Notice of Application and Preliminary Decision

We have completed the technical review of your application and issued a preliminary decision. You must comply with the following instructions:

#### Review Notice

Included in the notice is all of the information which the commission believes is necessary to effectuate compliance with applicable public notice requirements. Please read it carefully and notify the Texas Commission on Environmental Quality (TCEQ) immediately if it contains any errors or omissions. You are responsible for ensuring the accuracy of all information published. You may not change the text of the notice without prior approval from the TCEQ.

#### Newspaper Notice

- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* within **33 calendar days** after the date this information was mailed to you (see date of letter). As part of the expedited permitting process, it is recommended that you publish immediately.
- You must publish the enclosed *Notice of Application and Preliminary Decision for an Air Quality Permit* at your expense, in the same newspaper(s) in which you published the *Notice of Receipt and Intent to Obtain Permit* for this application. The newspaper must be a newspaper that is of general circulation in the municipality where the facility is or will be located. If the facility is not located within a municipality, the newspaper must be of general circulation in the municipality nearest the location.
- You must publish this notice in one issue of any applicable newspaper.
- You will find two example notices enclosed in this package. *Example A* must be published in the "public notice" section of the newspaper. The phrase "Example A" is not required to be published. *Example B* must be published in the **same issue** of the newspaper as *Example A*; however, it must be published in a prominent location (other than the public notice section). *Example B* refers the public to the "public notice" section of the newspaper where *Example A* provides more information regarding the permit application.
- *Example B* must be a total of at least **6 column inches (standard advertising units)** with a height of at least **3 inches** and a horizontal dimension of **2 column widths**. If the newspaper chosen does not use standard advertising units for measurement, the notice must be at least **12 square inches** with the shortest side of at least **3 inches**.
- The bold text of the enclosed notice **must** be printed in the newspaper in a font style or size that distinguishes it from the rest of the notice (i.e., **bold**, *italics*). **Failure to do so may require re-notice.**

## Alternative Language Notice

In certain circumstances, applicants for air permits must complete notice in alternative languages.

- Public notice rules require the applicant to determine whether a bilingual program is required at either the elementary or middle school nearest to the facility or proposed facility location. Bilingual education programs are determined on a district-wide basis. When students who are required to attend either school are eligible to be enrolled in a bilingual education program, some alternative language notice is required (newspaper notice).
- Since the school district, and not the schools, must provide the bilingual education program, these programs do not have to be located at the elementary or middle school nearest to the facility or proposed facility to trigger the alternative language notice requirement. If there are students who would normally attend the nearest schools eligible to be taught in a bilingual education program at a different location, alternative language notice is required.
- If triggered, publications of alternative language notices must be made in a newspaper or publication printed primarily in each language taught in the bilingual education program. The same newspaper(s) used for *Notice of Receipt and Intent to Obtain Permit* must be used for publication of the *Notice of Application and Preliminary Decision for an Air Quality Permit*. This notice is required if such a newspaper or publication exists in the municipality or the county where the facility is or will be located.
- The applicant must demonstrate a good faith effort to identify a newspaper or publication in the required language. If a newspaper or publication of general circulation published at least once a month in such language cannot be found, publishing in that language is not required, but signs must remain posted in the same location(s) utilized during the *Notice of Receipt of Intent to Obtain Permit* (1<sup>st</sup> public notice).
- Publication in an alternative language section or insertion within an English language newspaper does not satisfy these requirements.
- The applicant has the burden to demonstrate compliance with these requirements. You must fill out the **Public Notice Verification Form (Form TCEQ-20244)** indicating your compliance with the requirements regarding publication in an alternative language. **This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).**
- It is suggested the applicant work with the local school district to do the following:
  - (a) determine if a bilingual program is required in the district;
  - (b) determine which language is required by the bilingual program;
  - (c) locate the nearest elementary and middle schools; and
  - (d) determine if any students attending either school are entitled to be enrolled in a bilingual educational program.
- **If you determine that you must meet the alternative language notice requirements after receipt of the full public notice package, you are responsible for ensuring that the publication in the alternative language is complete and accurate in that language. Spanish notice templates are available through the Air Permits Division Web site at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html). All italic notes should be replaced with the corresponding Spanish translations for the specific application and published in the alternative language publication. Email a copy to Air Permits Division staff.**
- If you are required to publish notice in a language other than Spanish, you must translate the entire public notice at your own expense.

### Public Comment Period

- The public comment period will last at least **30 calendar days after publication of the last notice**.
- The comment period will be longer if the last day of the public comment period ends on a weekend or a holiday. In this case, the comment period will end on the next business day.
- The comment period for the permit may lengthen depending on whether a public meeting is held. If a public meeting is held, the comment period will be extended to the later of either the date of the public meeting or the end of the second notice period.

### Proof of Publication

- Check each publication to ensure that the articles were accurately published. If a notice was not published correctly you may be required to republish.
- For each newspaper in which you published, you must submit proof of publication that shows the notice, the date of publication, and the name of the newspaper to the Office of the Chief Clerk within **10 business days** after the date of publication. Acceptable proofs of publication are 1) copies of the published notice or 2) the newspaper clippings of the published notice. If you choose to submit copies of the published notice to the Office of the Chief Clerk, copies must be on standard-size 8½" x 11" paper and must show the actual size of the published notice (do not reduce the image when making copies). Published notices longer than 11" must be copied onto multiple 8½" x 11" pages. Please note, submitting a copy of your published notice could result in faster processing of your application. It is recommended that you maintain newspaper clippings or tear sheets of the notice for your records.
- You must submit an **affidavit of publication for air permitting and alternate language affidavit of publication for air permitting (if applicable)** to the Office of the Chief Clerk within **30 calendar days** after the date of publication. **You must use the enclosed affidavits of publication.** The affidavits must clearly identify the applicant's name and permit number. You are encouraged to submit the affidavit with the proof of publication described above.
- You must submit the **Public Notice Verification Form (Form TCEQ-20244)** to the Office of the Chief Clerk within **10 business days** of the end of this public comment period. You must use this form to certify that you have met alternative language notice requirements. **This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).**
- The **affidavits of publication, Public Notice Verification Form, and acceptable proof of publication of the published notices** should be emailed to [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov) or mailed to:

Texas Commission on Environmental Quality  
Office of the Chief Clerk, MC-105  
Attn: Notice Team / AIR Expedited Permitting  
P.O. Box 13087  
Austin, Texas 78711-3087

- Please ensure that the affidavit(s) you send to the Chief Clerk have all blanks filled in correctly.
- Photocopies of newspaper clippings, affidavits, and verifications must also be sent to those listed on the enclosed *Notification List* within the deadlines specified above.

### Failure to Publish and Submit Proof of Publication

You must meet all publication requirements. **If you fail to publish the notice or submit proof of publication on time**, the TCEQ may suspend further processing on your application or take other actions.

### Sign Posting

It is recommended that the signs that were put in place prior to publication of the first notice remain in place and be legible and visible until 30 days after publication of the *Notice of Application and Preliminary Decision* (either English or alternative language notice, whichever is later).

### Application in a Public Place

- You must provide a copy of the complete application, the executive director's preliminary decision (including the draft permit), the executive director's preliminary determination summary and the executive director's air quality analysis, (including any subsequent revisions), at a public place for review and copying by the public. This place must be in the county in which the facility is located or proposed to be located.
- A public place is one that is publicly owned or operated (ex: libraries, county courthouses, or city halls). Location selected must provide public access to the internet.
- This copy must be accessible to the public for review and copying. The copy must be available beginning on the first day of newspaper publication and remain in place until the commission has taken action on the application or the commission refers issues to the State Office of Administrative Hearings.
- If the application is submitted to the TCEQ with information marked as "CONFIDENTIAL," you are required to indicate which specific portions of the application are not being made available to the public. These portions of the application must be accompanied with the following statement: "Any request for portions of this application that are marked as confidential must be submitted in writing, pursuant to the Public Information Act, to the Texas Commission on Environmental Quality, Public Information Coordinator, MC-197, P.O. Box 13087, Austin, Texas 78711-3087."
- You must submit verification of file availability using the **Public Notice Verification Form (Form TCEQ-20244)** within **10 business days** after end of the publications' designated comment period. Do not submit the form verifying that the application was in a public place until after the comment period is complete. If a public meeting is held or second notice is required causing the public comment period to be extended, at a later date you will be required to verify that the application was in a public place during the entire public comment period. This form is available at [www.tceq.texas.gov/permitting/air/nav/air\\_publicnotice.html](http://www.tceq.texas.gov/permitting/air/nav/air_publicnotice.html).

### General Information

When contacting the Commission regarding this application, please refer to the permit number at the top of the *Notice of Application and Preliminary Decision*.

If you have questions or need assistance regarding publication requirements, please contact the Office of the Chief Clerk at (512) 239-3300 or the project reviewer listed in the cover letter.



TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

## AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §

COUNTY OF \_\_\_\_\_ §

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_, who being by me duly sworn, deposes and says that (s)he is (Name  
of Person Representing Newspaper)

the \_\_\_\_\_ of the \_\_\_\_\_  
(Title of Person Representing Newspaper) (Name of the Newspaper)

that said newspaper is generally circulated in \_\_\_\_\_, Texas;  
(The municipality or nearest municipality to the location of the facility or the proposed facility)

that the enclosed notice was published in said newspaper on the following date(s):

\_\_\_\_\_  
(Newspaper Representative's Signature)

Subscribed and sworn to before me this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
to certify which witness my hand and seal of office.

[Affix Seal]

\_\_\_\_\_  
Notary Public in and for the State of Texas

\_\_\_\_\_  
Print or Type Name of Notary Public

\_\_\_\_\_  
My Commission Expires

TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

## ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §

COUNTY OF \_\_\_\_\_ §

**BEFORE ME**, the undersigned authority, on this day personally appeared

\_\_\_\_\_, who being by me duly sworn, deposes and says that (s)he is (Name  
of Person Representing Newspaper)

the \_\_\_\_\_ of the \_\_\_\_\_,  
(Title of Person Representing Newspaper) (Name of the Newspaper)

that said newspaper is generally circulated in \_\_\_\_\_, Texas;  
(The **municipality or county** in which the facility or proposed facility is located)

that the enclosed notice was published in said newspaper on the following date(s):

\_\_\_\_\_  
(Newspaper Representative's Signature)

Subscribe and sworn to before me this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
to certify which witness my hand and seal of office.

[Affix Seal]

\_\_\_\_\_  
Notary Public in and for the State of Texas

\_\_\_\_\_  
Print or Type Name of Notary Public

\_\_\_\_\_  
My Commission Expires

## Notification List

It is the responsibility of the applicant to furnish the following offices with copies of the notices published, the *Affidavit of Publication for Air Permitting*, the *Alternative Language Affidavit of Publication for Air Permitting (if applicable)*, and a completed copy of the *Public Notice Verification Form (Form TCEQ-20244)*. Acceptable proof of publication and any affidavits and Form TCEQ-20244 should be emailed to [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov) or mailed to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, AIR Expedited Permitting, P.O. Box 13087, Austin, Texas 78711-3087.

**Electronic copies** should be submitted via email to the U.S. Environmental Protection Agency (EPA), **Region 6** at [R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov). Please contact Ms. Aimee Wilson ([wilson.aimee@epa.gov](mailto:wilson.aimee@epa.gov)) at (214) 665-7596 if you have any questions pertaining to electronic submittals to the EPA.

**Email copies to Mr. Joel Stanford at** [Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov)

**Hard copies** should be sent to the following:

Texas Commission on Environmental Quality  
Dallas/Fort Worth Regional Office  
2309 Gravel Dr  
Fort Worth, Texas 76118-6951

Texas General Land Office  
Upland Leasing Team Leader  
Professional Services  
P.O. Box 12873  
Austin, Texas 78711-2873

The Honorable Bruce Dawsey  
County Judge  
County Courthouse  
100 West Houston  
Sherman, TX 75090

The Honorable David Smith  
Mayor of Dorchester  
373 Main Street  
Dorchester, TX 75459

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## EXAMPLE A

### CONSOLIDATED NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN PERMIT AND NOTICE OF APPLICATION AND PRELIMINARY DECISION

#### PROPOSED AIR QUALITY PERMIT NUMBERS: 167047, PSDTX1602, and GHGPSDTX212

**APPLICATION AND PRELIMINARY DECISION.** BM Dorchester LLC, 1008 Southview Circle, Center, TX 75935-4537, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047, Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, and Greenhouse Gas PSD Permit GHGPSDTX212 which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. This application was submitted to the TCEQ on November 8, 2021. The proposed facility will emit the following air contaminants in a significant amount: carbon monoxide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide, sulfuric acid, and greenhouse gases. In addition, the facility will emit the following air contaminants: hazardous air pollutants and lead.

The degree of PSD increment predicted to be consumed by the proposed facility and other increment-consuming sources in the area is as follows:

#### Sulfur Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
3-hour	12	512
24-hour	4.5	91
Annual	0.3	20

#### PM<sub>10</sub>

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
24-hour	29	30
Annual	3	17

#### Nitrogen Dioxide

Maximum Averaging Time	Maximum Increment Consumed ( $\mu\text{g}/\text{m}^3$ )	Allowable Increment ( $\mu\text{g}/\text{m}^3$ )
Annual	0.4	25

PM<sub>2.5</sub>

Maximum Averaging Time	Maximum Increment Consumed (µg/m <sup>3</sup> )	Allowable Increment (µg/m <sup>3</sup> )
24-hour	8.7	9
Annual	1.4	4

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Dallas/Fort Worth regional office, and at the Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Dallas/Fort Worth Regional Office, 2309 Gravel Drive, Fort Worth, Texas.

**PUBLIC COMMENT.** You may submit public comments to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments in developing a final decision on the application.

**You may submit additional written public comments within 30 days of the date of newspaper publication of this notice in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.**

After the deadline for public comment, the executive director will consider the comments and prepare a response to all public comment. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application.**

**OPPORTUNITY FOR A CONTESTED CASE HEARING.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court. **A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; (6) a description of how you use the property which may be impacted by the facility; and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.**

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decisions on the application. The Commission may only grant a request for a contested case hearing on issues the requestor submitted in their timely comments that were not subsequently withdrawn. Issues that are not submitted in public comments may not be considered during a hearing.

**EXECUTIVE DIRECTOR ACTION.** If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the CID. If any timely hearing requests are received and not withdrawn, the executive director will not issue final approval of the permit and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

**INFORMATION AVAILABLE ONLINE.** These documents are accessible through the Commission's Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, the air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to application.  
<https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.689632,33.538174&level=13>.

**MAILING LIST.** You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

**AGENCY CONTACTS AND INFORMATION.** Public comments and requests must be submitted either electronically at [www14.tceq.texas.gov/epic/eComment/](http://www14.tceq.texas.gov/epic/eComment/), or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from BM Dorchester LLC at the address stated above or by calling Mr. Michael Meister, Trinity Consultants at (361) 883-1668.

Combined Notice Issuance Date: **DATE**



## Example B

### Publication Elsewhere in the Newspaper:

**TO ALL INTERESTED PERSONS AND PARTIES:**

BM Dorchester LLC, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047, Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, and Greenhouse Gas PSD Permit GHGPSDTX212, which would authorize construction of a Portland Cement at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. Additional information concerning this application is contained in the public notice section of this newspaper.

↑  
3"  
minimum

← Minimum 2 column widths or 4 inches →

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

DATE, 2024

MR JACOB BENDER  
CHIEF FINANCIAL OFFICER  
BM DORCHESTER LLC  
1008 SOUTHVIEW CIR  
CENTER TX 75935-4537

Re: Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047, PSDTX1602, and GHGPSDTX212  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bender:

The Texas Commission on Environmental Quality (TCEQ) has made a preliminary decision on the above-referenced application. In accordance with Title 30 Texas Administrative Code § 39.419(b), you are now required to publish Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision. You must provide a copy of this preliminary decision letter with the draft permit at the public place referenced in the public notice.

If you have any questions, please call Mr. Joel Stanford at (512) 239-0270, or write to the TCEQ, Office of Air, Air Permits Division, MC-163, P.O. Box 13087, Austin, Texas 78711-3087.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a long horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

cc: Air Section Manager, Region 4 - Dallas/Fort Worth

Project Number: 335160

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

DATE, 2024

THE HONORABLE BRUCE DAWSEY  
COUNTY JUDGE  
COUNTY COURTHOUSE  
100 WEST HOUSTON  
SHERMAN TX 75090

Re: Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047, PSDTX1602, and GHGPSDTX212  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Judge Dawsey:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. BM Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a long horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air  
Enclosure

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

DATE, 2024

THE HONORABLE DAVID SMITH  
MAYOR OF DORCHESTER  
373 MAIN STREET  
DORCHESTER TX 75459

Re: Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047, PSDTX1602, and GHGPSDTX212  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mayor Smith:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. BM Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air  
Enclosure

Jon Niermann, *Chairman*  
Bobby Janecka, *Commissioner*  
Catarina R. Gonzales, *Commissioner*  
Kelly Keel, *Executive Director*



## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

DATE, 2024

MR ERIC BRIDGES  
TEXOMA COUNCIL OF GOVERNMENTS  
1117 GALLAGHER DRIVE, SUITE 470  
SHERMAN TX 75090

Re: Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision  
Prevention of Significant Deterioration Permit  
Permit Numbers: 167047, PSDTX1602, and GHGPSDTX212  
BM Dorchester LLC  
Portland Cement Plant  
Dorchester, Grayson County  
Regulated Entity Number: RN111368437  
Customer Reference Number: CN605952373

Dear Mr. Bridges:

This letter serves as notification that the Texas Commission on Environmental Quality (TCEQ) has completed the technical review of the above application and has prepared a preliminary decision and draft permit. BM Dorchester LLC is now required to publish notice which would authorize construction of a Portland Cement Plant at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. You may view the following documents through the Texas Commission on Environmental Quality Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the TCEQ's preliminary decision which includes the draft permit, the TCEQ's preliminary determination summary, the air quality analysis, and, once available, the TCEQ's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. We will accept comments concerning the proposed project for a period of 30 days following publication of the public notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel Short", followed by a long horizontal line.

Samuel Short, Deputy Director  
Air Permits Division  
Office of Air

Enclosure

P.O. Box 13087 • Austin, Texas 78711-3087 • 512-239-1000 • [tceq.texas.gov](http://tceq.texas.gov)

How is our customer service? [tceq.texas.gov/customersurvey](http://tceq.texas.gov/customersurvey)  
printed on recycled paper

APP-1669

**AR-46**

**Legislative Notice**



**From:** eNotice TCEQ  
**Sent:** Monday, June 17, 2024 3:54 PM  
**To:** drew.springer@senate.texas.gov; reggie.smith@house.texas.gov  
**Subject:** TCEQ Notice - Grayson, Bm Dorchester LLC, RN111368437, 335160  
**Attachments:** TCEQ Notice - Permit 167047.pdf

This email electronically transmits an official document issued by the Air Permits Division of the Texas Commission on Environmental Quality.

You have received this email because either (a) you filed a document with the Office of the Chief Clerk that placed you on the official mailing list for the above referenced matter, or (b) notice to you is legally required. As authorized by Texas Water Code Section 5.128, this electronic transmittal is replacing the previous practice of hard copy distribution.

Amendments to Texas Government Code Section 552.137 prompted a change to the agency's privacy policy regarding confidentiality of certain email addresses. The revised privacy policy can be viewed at

[https://www.tceq.texas.gov/help/policies/electronic\\_info\\_policy.html](https://www.tceq.texas.gov/help/policies/electronic_info_policy.html)

The attached document is provided in an Adobe Acrobat .pdf format. If you cannot display the attachment, you may need to visit the Adobe web site (<http://get.adobe.com/reader>) to download the free Adobe Acrobat Reader software.

Senate Bill 709 (84th Texas Legislative Session, 2015) amended the Texas Water Code by adding new Section 5.5553, which requires the Texas Commission on Environmental Quality (TCEQ) to provide written notice to you at least thirty (30) days prior to the TCEQ's issuance of draft permits for applications that are located in your district.

**Bm Dorchester LLC** has applied to the TCEQ for air quality permitting actions regarding a Portland Cement Plant.

Application Received Date: November 8, 2021

Location: from the intersection of Highway 289 and Highway 902 East of Dorchester head east on Highway 902 for approximately 0.80 miles the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas, 75459

This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice: <https://gisweb.tceq.texas.gov/LocationMapper/?marker=-96.689632,33.538174&level=13>.

Air Quality Permits affected:

- Air Quality Permit **167047**
- Prevention of Significant Deterioration PSDTX1602
- Greenhouse Gas Prevention of Significant Deterioration GHGPSDTX212

You were previously sent notification for this application, but the draft permit was delayed.

TCEQ is preparing the initial draft permit for applicant review. At the time the draft permit is issued, the applicant will be required to publish notice in a newspaper of general circulation, and the TCEQ will provide a copy of the notice of draft permit to persons who have requested to be on a mailing list.

Questions regarding this email may be directed to Bonnie Evridge by calling 512-239-5222.

Issued: June 17, 2024

**AR-47**

**NAPD Public Notice Supporting Documentation**

**From:** Hunter Lohrenz <hunter.lohrenz@trinityconsultants.com>  
**Sent:** Monday, July 22, 2024 4:59 PM  
**To:** PROOFS; Joel Stanford; R6AirPermitsTX  
**Cc:** Stephen Beene; Mike Meister; jake@highrollergroup.com  
**Subject:** 2024-0722 Black Mountain Proof of Publication and Affidavit  
**Attachments:** 2024-0722 BM Dorchester Proof of Publication.pdf

To Whom It May Concern,

Trinity Consultants is sending this email on behalf of BM Dorchester LLC and in regards to the proof of publication and affidavits for the initial permit application for Permit No. 167047 and PSDTX1602. As is directed in the public notice package that was received on June 14, 2024, the proof of publication is attached to this email and is being submitted within 10 business days after the date of publication (published on July 9, 2024). Also included is the affidavit, which is being submitting within 30 calendar days after publication as directed. Thank you.

Best,

**Hunter Lohrenz**  
Consultant

P 972.661.8100 M 406.871.6616

12700 Park Central Dr., Ste. 600, Dallas, TX, 75251  
Email: [hunter.lohrenz@trinityconsultants.com](mailto:hunter.lohrenz@trinityconsultants.com)  
LinkedIn: [www.linkedin.com/in/hunter-lohrenz-8738141a3](https://www.linkedin.com/in/hunter-lohrenz-8738141a3)



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12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203 / [trinityconsultants.com](http://trinityconsultants.com)

July 22, 2024

**Via email:** [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov)

Texas Commission on Environmental Quality

Office of the Chief Clerk

Attn: Notice Team

*RE: Public Notice Requirements – Proof of Publication and Affidavit Form*

*Permit Numbers: 167047 and PSDTX1602*

*TCEQ Project Number: 335160*

*BM Dorchester LLC*

*Customer Reference Number: CN605952373*

*Regulated Entity Reference Number: RN111368437*

To Whom It May Concern:

BM Dorchester LLC (BM Dorchester) is constructing a Portland cement manufacturing facility located in Dorchester, Grayson County, Texas (Dorchester Facility). BM Dorchester has been assigned Customer Number (CN) 605952373. The Dorchester Facility has been assigned Texas Commission on Environmental Quality (TCEQ) Regulated Entity Number (RN) 111368437.

BM Dorchester submitted an initial permit application on November 8, 2021 and has since submitted revised modelling files per the TCEQ's request. As a part of the application process, the Dorchester Facility is required to publish a formal public notice in a newspaper of general circulation in the municipality nearest to the facility location. In accordance with the public notice guidance package received from the TCEQ on June 14, 2024, BM Dorchester has completed the following:

- ▶ Published a formal public notice on July 9, 2024 in "The Herald Democrat" circulated in Grayson County;
- ▶ Published an alternative language formal public notice on July 9, 2024 in "La Prensa Comunidad" circulated in Grayson County;
- ▶ Placed a copy of the Air Quality Permit Application at the public location, Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, for public viewing and copying, beginning December 16, 2021 and updated on July 9, 2024; and
- ▶ Prepared and posted English and Spanish signs per TCEQ requirements at the Dorchester Facility beginning July 15, 2024.

With this submittal, BM Dorchester is submitting the Affidavit of Publication for Air Permitting to the TCEQ via email within 30 calendar days after the date of publication.

The Dorchester Facility is required to submit copies of the aforementioned items to those listed on the Notification List. An electronic copy will be sent to [R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov) and Mr. Joel Stanford, TCEQ Air Permits Division, [Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov). Hard copies of these submittals are being mailed to the following, per the Instructions for Public Notice:

"

#### **HEADQUARTERS**

12700 Park Central Dr, Ste 2100, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203

APP-1675

Texas Commission on Environmental Quality  
Air Section Manager  
Dallas/Fort Worth Regional Office  
2309 Gravel Dr  
Fort Worth, Texas 76118-6951

Texas General Land Office  
Upland Leasing Team Leader  
Professional Services  
P.O. Box 12873  
Austin, Texas 78711-2873

The Honorable Bruce Dawsey  
County Judge  
County Courthouse  
100 West Houston  
Sherman, Texas 75090

The Honorable David Smith  
Mayor of Dorchester  
373 Main Street  
Dorchester, TX 75459

If you have any questions, please feel free to contact me at (972) 661-8100 or via email at [MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com).

Sincerely,

TRINTY CONSULTANTS



Michael Meister  
Principal Consultant

cc: U.S. EPA, Region 6 ([R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov))  
Mr. Joel Stanford, Air Permits Division ([Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov))  
Air Section Manager, TCEQ Region 4, DFW  
Upland Leasing Team Leader, Texas General Land Office  
The Honorable Bill Managers, County Courthouse  
The Honorable David Smith, Mayor of Dorchester  
Mr. Jake Bender, BM Dorchester LLC (electronic)



**ATTACHMENT 1**

**Affidavit of Publication for Air Permitting**

TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

### AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING

STATE OF TEXAS §

COUNTY OF Grayson §

**BEFORE ME**, the undersigned authority, on this day personally appeared

Sherry Groves, who being by me duly sworn, deposes and says that (s)he is (Name of Person Representing Newspaper)

the Agent of the Herald Democrat  
(Title of Person Representing Newspaper) (Name of the Newspaper)

that said newspaper is generally circulated in Dorchester, Texas;  
(The municipality or nearest municipality to the location of the facility or the proposed facility)

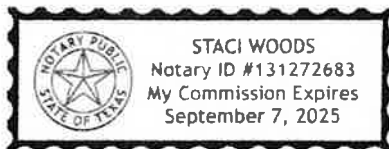
that the enclosed notice was published in said newspaper on the following date(s):

July 9, 2024

Sherry Groves  
(Newspaper Representative's Signature)

Subscribed and sworn to before me this the 22nd day of July, 2024  
to certify which witness my hand and seal of office.

[Affix Seal]



Staci Woods  
Notary Public in and for the State of Texas

Staci Woods  
Print or Type Name of Notary Public

September 7, 2025  
My Commission Expires

**ATTACHMENT 2**  
**English Publication Tear Sheets**

# Classifieds

IN PRINT AND ONLINE

- LINE ADS - ON LINE - UPDATED DAILY -

Visit our Web Site: [www.heralddemocrat.com](http://www.heralddemocrat.com)

785-992-0001 ext. 2189



dnelson@cherryroad.com

## Announcements

### Displays

Hi, this is Debbie... call me to sell your car, have a garage sale, have a rental or a help wanted opening. It's easy, we can process it over the phone. 785-992-0001 X 2189. Leave message, I'll call you back. Usually takes about five minutes to place.

## RENTAL

Houses For Rent  
\$500 to \$2000  
Also Vets. Owner Finance.  
\$5,000 down.  
Call 903-485-5464  
For More Info

## Apartments

### NEED AN AFFORDABLE APARTMENT?

Denison Housing Authority is accepting applications for apartments. Applicants will be placed on a waiting list until a vacancy is available. No application fee or long-term lease is required. Rent is based on household income. Water is paid. Tenants pay average of electrical allowance. Request application by email: [info@denisonha.com](mailto:info@denisonha.com) or phone 903-485-2850 or pick up at 330 N. 8th Avenue, Denison, TX. Denison Housing is EHO.

## PUBLIC NOTICE

Competitive sealed proposals for the Pottsboro ISD - Existing Middle School Administration Conversion - REBID for CSP 26-A Electrical are being accepted by Pottsboro Independent School District. Proposals may obtain an electronic copy of contract documents by contacting the Construction Manager, Gallagher Construction Services, 3501 Token Drive, Suite 100, Richardson, Texas 75082, 972-633-0566, [bidsgallagher@tx.com](mailto:bidsgallagher@tx.com), and at the website [gallagher@tx.com](http://gallagher@tx.com). An electronic copy of the contract for construction will also be furnished to area plan rooms.

Electronically submitted proposals shall be submitted to [bidsgallagher@tx.com](mailto:bidsgallagher@tx.com) and received before 2:00 PM, local time, Tuesday, July 23, 2024. Thereafter, all electronic proposals will be opened and tabulated by the Construction Manager. Any electronic submissions received after the closing time of 2:00 PM will not be accepted. A complete proposal tabulation will be made available on the Construction Manager's website as soon as practical after opening of electronic proposals. After proposal conferences will be conducted as necessary, and recommendations presented to the Owner for consideration of awarding contracts.

## PUBLIC NOTICE

If for some reason a proposal cannot be submitted electronically, hard copies shall be sent/delivered directly to Pottsboro ISD Administration Office, 1401 Katy Lane, Pottsboro, Texas 75076 and received, not postmarked, on or before 2:00 PM, local time, Tuesday, July 23, 2024. Any HARD COPY proposals received after the closing time of 2:00 PM will be returned unopened. Published in the Herald Democrat July 2, 9, 2024. 2437060

## NOTICE OF PUBLIC SALE

To satisfy a landlord's lien, PS Retail Sales, LLC will sell at public lien sale on July 24, 2024, the below-listed units, which may include but are not limited to: household and personal items, office and other equipment. The public sale of these items will begin at 11:15 AM and continue until all units are sold. Lien sale to be held at the online auction website: [www.auctiontreasures.com](http://www.auctiontreasures.com), where indicated. For online lien sales, bids will be accepted until 2 hours after the time of the sale specified.

**PUBLIC STORAGE**  
#77882 4316 Texoma Pkwy  
Sherman, TX 75090  
(903) 494-0916

Time: 12:15 PM

Sale to be held at [www.auctiontreasures.com](http://www.auctiontreasures.com).

Prescott, Ronald; Trevay, Charles; Love, Isaiah; Madrid, Ciribobal; Cruz, Minny; Cruz, Minny; Blisha, Hagerman, Kimberly; Buckner, Mark; Shary, Charles; Briggles, Emily; Sneed, Nikki; Rosa, Tammi; Clark, Chris

Public sale terms, rules, and regulations will be made available prior to the sale. All sales are subject to cancellation. We reserve the right to refuse any bid. Payment must be in cash or credit card-no checks. Buyers must secure the units with their own personal locks. To claim tax-exempt status, original RESALE certificates for each unit purchased is required. By PS Retail Sales, LLC, 701 Western Avenue, Glen Dale, CA 91021, (818) 244-8080.

Published in the Herald Democrat July 9, 16, 2024. 2432540

## NOTICE OF DRAWING FOR PLACE ON BALLOT

NOTICE IS HEREBY GIVEN OF DRAWING TO DETERMINE THE ORDER IN WHICH THE NAMES OF CANDIDATES ARE TO BE PRINTED ON THE BALLOT FOR THE SPECIAL ELECTION TO BE HELD ON SATURDAY, SEPTEMBER 14, 2024, IN SHERMAN, TEXAS. THE DRAWING WILL BE HELD AT 9:00 A.M. ON FRIDAY, JULY 12, 2024, IN THE CITY COUNCIL CHAMBERS, 220 W. MULBERRY.

## NOTICE OF SALE

NOTICE IS HEREBY GIVEN TO ALL INTERESTED PERSONS THAT THE FOLLOWING MOTOR VEHICLES WILL BE SOLD AT A PUBLIC AUCTION TO THE HIGHEST BIDDER. CASH ONLY WITH PAYMENT DUE AT END OF SALE. THE AUCTION WILL BE HELD TUESDAY AUG 6TH @ 9AM AT MIDWAY STORAGE FACILITY, 4026 TEXOMA PARKWAY, SHERMAN, TX 75090.

2001 HONDA ACCORD  
2001 MITSUBISHI ENDEAVOR  
2008 FORD F150  
2015 CHEVY MALIBU  
2009 MERCURY SABLE  
1991 CADILLAC ELDORADO  
2005 CHEVY TRAILBLAZER  
2007 CHEVY TAHOE  
2002 MAZDA PROTEGE  
2003 HONDA ELANTRA  
2000 FORD MUSTANG  
1996 MERCURY COUGAR  
2001 CHEVY MONTE CARLO  
2000 BUICK LESABRE  
2011 FORD EDGE  
1998 LEXUS RX  
2015 HONDA CIVIC  
2001 DODGE RAM 1500  
2012 HONDA CIVIC  
2014 NISSAN ALTIMA  
2016 DODGE DART  
2017 KIA FORTE  
2008 DODGE CANYON  
2005 KAWASAKI NINJA

SILVER  
GRAY  
BLACK  
GRAY  
WHITE  
WHITE  
GREEN  
GREEN  
MAROON  
BLACK  
BLACK  
BLACK  
SILVER  
SILVER  
GOLD  
BLACK  
SILVER  
SILVER  
RED  
RED  
BLACK  
GRAY  
BLACK

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1MEHM42WY628151  
1G6FL13B1MU504061  
1GNDLS100250292  
1GNEP13V92R270619  
JMI1J32592623923  
KMH4U8D0K056417  
1FA7F04XYF202097  
1MR1M6242T1P43586  
3C1WY1X318116184  
2G1WY53J9Y1248394  
2FMDKJ3C7B9A12228  
J7H01HTX062882  
1XN7R2F50F0016246  
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1N6A13AP8EC41595  
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## PUBLIC NOTICE

SHERMAN, TEXAS.  
LINDA ASHBY, CITY CLERK  
OFFICER CONDUCTING DRAWING

## AVISO DE SORTEO DE POSICIONES EN EL BOLETO DE VOTACION

CON ESTE AVISO SE DA AVISO DE UN SORTEO PARA DETERMINAR EL ORDEN EN EL QUE DEBEN IMPRIMIRSE LOS NOMBRES DE LOS CANDIDATOS EN LA BOLETA PARA LA ELECCION ESPECIAL QUE SE CELEBRARA EL SABADO 14 DE SEPTIEMBRE DE 2024 EN SHERMAN, TEXAS. EL SORTEO SE REALIZARA A LAS 9:00 A.M. EL VIERNES 12 DE JULIO DE 2024, EN LA CAMARA DEL CONCEJO MUNICIPAL, 220 W. MULBERRY, SHERMAN, TEXAS.

LINDA ASHBY, SECRETARIA DE LA CIUDAD  
FUNCIONARIA ENCARGADA DEL SORTEO

Published in the Herald Democrat July 9, 2024. 2453700

Application has been made with the Texas Alcoholic Beverage Commission for a Package Store Permit (P) and Local Distributor's Permit (LP) by ND Management 168 LLC (dba) Whitesboro Liquor, to be located at 1000 Highway 377 N. Ste D, Whitesboro, Grayson County, TX 76723. Officer(s) of the said entity: Dalin Mao - Manager; and Somonok Som - Manager. Published in the Herald Democrat July 9, 11, 2024. 2459150

## NOTICE TO CREDITORS OF THE ESTATE OF DONALD J. JACK SIKES

Notice is hereby given that Letters Testamentary upon the Estate of Donald Jack Sikes, Deceased, were granted to me, Jan Poyers on July 2, 2024, by the Probate Court of Grayson County, Texas in Cause No. 2024-270P. All persons having claims against said estate are hereby required to present the same to Jan Poyers within the time prescribed by law.

My address is:

c/o Michael D. Allen  
Abney, Toddler, Boyd & Hullett, P.C.  
1700 Redbud Blvd., Ste. 300  
McKinney, TX 75069

Published in the Herald Democrat July 9, 2024. 2460930

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## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



### EXAMPLE A

## CONSOLIDATED NOTICE OF RECEIPT OF APPLICATION AND INTENT TO OBTAIN PERMIT AND NOTICE OF APPLICATION AND PRELIMINARY DECISION

PROPOSED AIR QUALITY PERMIT NUMBERS: 167047, PSDTX1602, and HGPSDTX212

APPLICATION AND PRELIMINARY DECISION. Bai Donchen LLC, 1008 Southwest Circle, Cedar, TX 73912-4137, has applied to the Texas Commission on Environmental Quality (TCEQ) for a permit for the proposed facility. The proposed facility is a 100,000 sq. ft. building located at the intersection of Highway 291 and Highway 92 east of Donchen Road east on Highway 92 for approximately 0.30 miles. The site will be located directly north of Highway 92 after the intersection of Donchen Road. The proposed facility is a 100,000 sq. ft. building located at the intersection of Highway 291 and Highway 92 east of Donchen Road east on Highway 92 for approximately 0.30 miles. The site will be located directly north of Highway 92 after the intersection of Donchen Road. The proposed facility is a 100,000 sq. ft. building located at the intersection of Highway 291 and Highway 92 east of Donchen Road east on Highway 92 for approximately 0.30 miles. The site will be located directly north of Highway 92 after the intersection of Donchen Road.

The design of PSD treatment predicted to be consumed by the proposed facility and other treatment occurring within the area is as follows:

Maximum Averaging Time	Maximum Increment Consumed (µg/m3)	Allowable Increment (µg/m3)
3-hour	12	512
24-hour	4.5	96
Annual	0.3	20

Maximum Averaging Time	Maximum Increment Consumed (µg/m3)	Allowable Increment (µg/m3)
3-hour	39	30
24-hour	3	17

Maximum Averaging Time	Maximum Increment Consumed (µg/m3)	Allowable Increment (µg/m3)
Annual	0.4	25

Maximum Averaging Time	Maximum Increment Consumed (µg/m3)	Allowable Increment (µg/m3)
24-hour	8.7	8
Annual	1.4	4

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD need not violate any state or federal air quality standards and will not cause any significant adverse impact to air, vegetation, or visibility. All air contaminants have been evaluated, and "zero additional control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and presented a draft permit which, if approved, would establish the conditions under which the facility may operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary decision are available for public review and comment. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary decision are available for public review and comment. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary decision are available for public review and comment. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary decision are available for public review and comment.

PUBLIC COMMENT: You may submit public comments to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments, along with the executive director's decision on the application and will submit a response to all comments. The response to all comments will be submitted to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments, along with the executive director's decision on the application and will submit a response to all comments. The response to all comments will be submitted to the Office of the Chief Clerk at the address below.

You may submit additional written public comments within 10 days of the date of newspaper publication of this notice in the manner set forth in the AGENCY CONTACTS AND INFORMATION paragraph below.

After the deadline for public comment, the executive director will consider the comments and prepare a response to all comments. The response to all comments, along with the executive director's decision on the application and will submit a response to all comments. The response to all comments will be submitted to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments, along with the executive director's decision on the application and will submit a response to all comments. The response to all comments will be submitted to the Office of the Chief Clerk at the address below.

OPPORTUNITY FOR A CONTESTED CASE HEARING. A contested case hearing is a legal proceeding similar to a civil trial in state district court. A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name for a group or association, an official representative, mailing address, daytime phone number; (2) applicant's name and permit number; (3) the statement "I am requesting a contested case hearing"; (4) a specific description of how you would be adversely affected by the application; and (5) a statement from the facility in a very short summary to the general public (5) the location and distance of your property relative to the facility (6) a description of how you use the property which may be impacted. By the facility, and (7) a list of all disputed issues of fact that you submit during the comment period. If the request is made by a group or association, one or more members who have standing to request a hearing must be identified by name and physical address. The members of the group or association whose names to protect must also be identified. They may also submit your proposed application to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 10 days following this notice to the Office of the Chief Clerk, at the address provided in the information section below.

A contested case hearing will only be granted based on disputed issues of fact or mixed questions of fact and law that are relevant and material to the Commission's decision on the application. The Commission may only grant a request for a contested case hearing on issues that are relevant and material to the Commission's decision on the application. The Commission may only grant a request for a contested case hearing on issues that are relevant and material to the Commission's decision on the application. The Commission may only grant a request for a contested case hearing on issues that are relevant and material to the Commission's decision on the application.

EXECUTIVE DIRECTOR'S ACTION. If a timely contested case hearing request is not received or if all timely contested case hearing requests are withdrawn, the executive director may issue final approval of the application. The applicant to comments, along with the executive director's decision on the application, will be submitted to the Office of the Chief Clerk at the address below. The TCEQ will consider all public comments, along with the executive director's decision on the application and will submit a response to all comments. The response to all comments will be submitted to the Office of the Chief Clerk at the address below.

INFORMATION AVAILABLE ONLINE. These documents are accessible through the Commission's Web site at [www.tceq.texas.gov](http://www.tceq.texas.gov). The executive director's preliminary decision which includes a full permit, an executive director's preliminary decision, draft permit, and the executive director's preliminary decision are available for public review and comment. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary decision are available for public review and comment. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary decision are available for public review and comment.

MAILING LIST. You may wish to be placed on a mailing list to obtain additional information on the application by sending a request to the Office of the Chief Clerk at the address below.

AGENCY CONTACTS AND INFORMATION. Public comments and requests must be submitted either electronically at [www.tceq.texas.gov](http://www.tceq.texas.gov) or by mail to the Texas Commission on Environmental Quality, Office of the Chief Clerk, 4001 W. Loop West, Austin, Texas 78751-3027. Please be aware that any contact information you provide, including your name, phone number, email address and physical address will become part of the agency's public record. For more information about the permit application or the permitting process, please call the Public Education Program toll-free at 1-800-447-4447. To bring information in liquid waste form at 1-800-447-4447.

Further information may also be obtained from Bai Donchen LLC at the address stated above or by calling Mr. Michael Hester, Permit Consultant at (561) 883-1666.

Combined Notice / Issuance Date: June 14, 2024

On: 6/14/2024

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# LOCAL NEWS

## Charter school to break ground in Sherman

Staff reports

This week, a groundbreaking will be held for Sherman's first public charter school. Tuesday morning, Inspire Academies is supposed to break ground on its newest campus Sherman Inspire Academy to be located at 2310 S. Heritage Parkway in Sherman.

The free public charter school hopes to open in August of 2025 with 600 students in grades kindergarten through 12th.

"For more than 25 years, Inspire Academies has created and operated innovative schools serving thousands of students across Texas," a news release about the new school said. "The Sherman Inspire Academy state-of-the-art campus has been designed by award-winning Education Design

International and Grace Hebert Curtis Architects, LLC. The campus will welcome Sherman-area students at one K-12 location offering a close-knit community, rich learning experiences, and meaningful collaborations."

Inspire Academies has been in existence for 25 years.

In an article on approved charter schools released at the end of June, the Texas Tribune said, "Charter schools receive state funding based on average daily student attendance and do not receive money from local tax revenue like traditional public schools. They do not need to comply with as many state regulations as traditional school districts do, but the TEA says they are held to strict academic standards and expected to take an innovative approach to the classroom."

More than 400,000 students in the

state of Texas attend the less than 1,000 charter campuses in the state. There are more than 5 million grade school public students in Texas.

"The Texas Public Charter Schools Association opposes the notion that charter schools, which have also struggled with a lack of new state funding, take away resources from traditional public schools," the Tribune article said.

The Texas Education Agency's approval process for charter schools includes application reviews, an interview, a State Board of Education review and additional vetting by TEA.

"State approval can be revoked if a school's performance is persistently low," the article said.

"Since 2016, only 13% of the state's charter applications have been approved, according to the TEA."

## Denison Fire Rescue responds to 2 Fourth of July weekend drownings

Staff reports

Denison officials announced Sunday evening that Denison Fire Rescue responded to two separate drowning events.

Denison Fire Rescue worked to over the Fourth of July weekend to locate several drowning and near drowning victims this news release issued weekend, Herald Democrat

around 8 p.m. Sunday, the department said the events took place Thursday and Saturday near the Denison Dam spillway.

Fire Rescue responded around 8:30 p.m. Thursday to a potential drowning of two people.

"Upon arrival, crews located witnesses performing CPR on an 18-year-old male," the release said. "DFR crews continued CPR and transported the victim to a local hospital where he was pronounced deceased."

While on scene, crews located a 23-year-old female who was alert and was transported to a nearby hospital for near drowning.

The second incident took place around 4 p.m. Sunday. Denison Fire Rescue were called about a potential drowning.

"The Denison Fire Rescue/Denison Police Department dive team along with DFR shift members, ropes team, Texas Game Wardens, the Grayson County Sheriff's Office, and Corps of Engineer Park," the release said. "Rangers worked to locate the victim. Once located, the victim was pronounced deceased on scene."

### TO ALL INTERESTED PERSONS AND PARTIES:

BM Dorchester LLC, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 167047, Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1602, and Greenhouse Gas PSD Permit GHGSPSDTX212, which would authorize construction of a Portland Cement at the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459. This application was processed in an expedited manner, as allowed by the commission's rules in 30 Texas Administrative Code, Chapter 101, Subchapter J. Additional information concerning this application is contained in the public notice section of this newspaper.

## SE alumna Gibson places first nationally at NATS national student auditions

Southeastern

Southeastern Oklahoma State University alumna Lauren Manon Gibson placed first in her division at the National Student Auditions at the 58th National Association of Teachers of Singing (NATS) recently.

Gibson, a native of Antlers who graduated with her Bachelor of Music in vocal performance from Southeastern in December 2023, placed first in the prestigious national competition in the 4th/5th Year Treble category. She is a student of Dr. Jeremy Blackwood, Dean of Graduate Studies and Associate Professor of Voice at Southeastern.

"I'm so proud of Lauren for her top placement at the NATS national student auditions," Blackwood

said. "Watching her perform in such a competitive field and shine above the rest brings recognition to our fantastic music students and instructors. It was such a joy to see one of our best and brightest emerge as a national champion." Gibson qualified for the national competition by placing first in her category at the Texoma Regional NATS Student Auditions in November 2023.

"I am deeply honored and thrilled to have placed first in my category at the 58th NATS National Student Auditions," Gibson said after the competition. "This being my first big voice competition, I never expected to place, especially not in first. It was an illuminating experience to perform at such a prestigious level and to be recognized among so many talented performers. I

was constantly amazed by the skill and dedication from every student."

"I am incredibly grateful for the opportunity to attend this conference, with the support of my fantastic teacher Dr. Jeremy Blackwood and my wonderful mother. This accomplishment feels like the perfect way to wrap up my time at Southeastern Oklahoma State University as I prepare to embark on the next part of my educational journey. Thank you so much to everyone who has supported me along the way!"

Gibson is continuing as a graduate student in the Master of Music in Performance degree program in the Jacobs School of Music at the University of Indiana, under the tutelage of Distinguished Professor of Voice Carol Vaness.



Community  
CONVERSATIONS  
+ CherryRoad

# Hey Sherman Let's talk.

The Sherman Herald Democrat knows that what we do is a vital part of the community, we need your support in letting every one know. We know you get it, help others get it too.



Take our community  
survey and receive 4-  
weeks free. Help make  
#localmatter.

Give this to a  
friend and let  
them know you  
support  
community  
journalism.

**ATTACHMENT 3**

**Alternative Language Affidavit of Publication for Air Permitting**



TCEQ-Office of the Chief Clerk  
MC-105 Attn: Notice Team  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant Name: BM Dorchester LLC  
Permit No.: 167047 and PSDTX1602167047  
Application Received Date: November 8, 2021

**ALTERNATIVE LANGUAGE AFFIDAVIT OF PUBLICATION FOR AIR PERMITTING**

**STATE OF TEXAS §**

**COUNTY OF** Grayson **§**

**BEFORE ME**, the undersigned authority, on this day personally appeared

Kytinna Soto, who being by me duly sworn, deposes and says that (s)he is (Name  
of Person Representing Newspaper)

the Owner of the La Prensa Comundiad;  
(Title of Person Representing Newspaper) (Name of the Newspaper)

that said newspaper is generally circulated in Grayson county, Texas;  
(The municipality or county in which the facility or proposed facility is located)

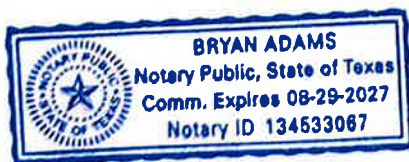
that the enclosed notice was published in said newspaper on the following date(s):

09 July 9, 2024

[Signature]  
(Newspaper Representative's Signature)

Subscribe and sworn to before me this the 9 day of July, 20 24  
to certify which witness my hand and seal of office.

[Affix Seal]



[Signature]  
Notary Public in and for the State of Texas

Bryan Adams  
Print or Type Name of Notary Public

08/29/2027  
My Commission Expires

**ATTACHMENT 4**  
**Alternative Language Publication Tear Sheets**

## COMISIÓN DE CALIDAD AMBIENTAL DE TEXAS

## ANEXO CONSOLIDADO DE RECEPCION DE SOLICITUD

NÚMEROS PROPUESTOS DE PERMISOS DE CAÍDAS  
DE LA RIE: 167047, PSUTX1601 y GIGPSUTX213

[illegible]

País	Temperatura Promedio (grados Celsius)	Humedad Promedio (%)	Presión Promedio (mmHg)
Estados Unidos	15.5	65	760
Francia	12.0	70	760
Japón	18.0	60	760
Brasil	25.0	80	760
India	28.0	75	760
China	10.0	60	760
Rusia	5.0	50	760
Argentina	16.0	65	760
Australia	22.0	60	760
Canadá	8.0	60	760
Reino Unido	10.0	70	760
Italia	14.0	65	760
Países Bajos	11.0	70	760
Suecia	7.0	60	760
Noruega	4.0	50	760
Finlandia	6.0	60	760
Dinamarca	9.0	65	760
Polonia	8.0	60	760
Czechia	9.0	60	760
Eslovaquia	10.0	60	760
Hungría	11.0	60	760
Rumania	12.0	60	760
Bulgaria	13.0	60	760
Grecia	14.0	60	760
Turquía	15.0	60	760
Irán	16.0	60	760
Arabia Saudita	17.0	60	760
Emiratos Árabes Unidos	18.0	60	760
Omán	19.0	60	760
Yemen	20.0	60	760
Sri Lanka	21.0	60	760
Malasia	22.0	60	760
Singapur	23.0	60	760
Indonesia	24.0	60	760
Filipinas	25.0	60	760
Vietnam	26.0	60	760
Camboya	27.0	60	760
Laos	28.0	60	760
Myanmar	29.0	60	760
Thailandia	30.0	60	760
Maldivas	31.0	60	760
Baréin	32.0	60	760
Arabia Saudita	33.0	60	760
Omán	34.0	60	760
Yemen	35.0	60	760
Sri Lanka	36.0	60	760
Malasia	37.0	60	760
Singapur	38.0	60	760
Indonesia	39.0	60	760
Filipinas	40.0	60	760
Vietnam	41.0	60	760
Camboya	42.0	60	760
Laos	43.0	60	760
Myanmar	44.0	60	760
Thailandia	45.0	60	760
Maldivas	46.0	60	760
Baréin	47.0	60	760
Arabia Saudita	48.0	60	760
Omán	49.0	60	760
Yemen	50.0	60	760
Sri Lanka	51.0	60	760
Malasia	52.0	60	760
Singapur	53.0	60	760
Indonesia	54.0	60	760
Filipinas	55.0	60	760
Vietnam	56.0	60	760
Camboya	57.0	60	760
Laos	58.0	60	760
Myanmar	59.0	60	760
Thailandia	60.0	60	760
Maldivas	61.0	60	760
Baréin	62.0	60	760
Arabia Saudita	63.0	60	760
Omán	64.0	60	760
Yemen	65.0	60	760
Sri Lanka	66.0	60	760
Malasia	67.0	60	760
Singapur	68.0	60	760
Indonesia	69.0	60	760
Filipinas	70.0	60	760
Vietnam	71.0	60	760
Camboya	72.0	60	760
Laos	73.0	60	760
Myanmar	74.0	60	760
Thailandia	75.0	60	760
Maldivas	76.0	60	760
Baréin	77.0	60	760
Arabia Saudita	78.0	60	760
Omán	79.0	60	760
Yemen	80.0	60	760
Sri Lanka	81.0	60	760
Malasia	82.0	60	760
Singapur	83.0	60	760
Indonesia	84.0	60	760
Filipinas	85.0	60	760
Vietnam			

Temperatura ambiente (°C)	Temperatura acqua (°C)	Temperatura aria (°C)
20	20	20

[illegible]

responso de la revista luego para cualquier otra publicación, al finalizar el mes de mayo de 2004, los comentarios y preguntas a esta respuesta a todos los correos.

**OPORTUNIDAD PARA UNA AUDIENCIA CONTENCIOSA.** Una vez que una controversia es un procedimiento legal paralelo a un proceso civil en el tribunal de distrito estatal. Una persona que padece virus afectada por los menores de contaminantes del aire de la instalación tiene derecho a su juicio oral ante un tribunal. Una solicitud de audiencia transaccional debe ser acompañada por: (1) un modelo de peticiones de grupo o asociación, que represente un conflicto; Asociación ambiental, asociación de médicos, etc., (2) un

En la serie dividida, respectivamente por la educación y las comunidades de la instalación de una misma o no ciudad al publicar en general. La educación y distancia de su propiedad en relación con la instalación. Si una divergencia de cómo no la propiedad que puede ser difícil por las instalaciones, y 77% de los de todos los sujetos en divergencia de hecho en esta población dan una al principio de la construcción. Si la educación en un grupo o asociación, una o más estructuras que tengan dentro de una misma estructura de las identidades por nombres y direcciones. También deben identificar los intereses que el grupo o asociación.

Las autoridades universitarias sólo se entenderán en base a currículos en desarrollo, o cuando existan meritos de hecho y derecho que sean relevantes y que permitan pagar las lecciones de la Comunidad sobre la sexualidad. La Comunidad puede entender una conducta de violencia contextualizada sobre violencia sexual y/o suicidio preventivo en una comunidad que no tiene que ser más que una

**DECLARACIÓN DEL DIRECTOR EJECUTIVO** Si no se requiere una declaración de conflicto de intereses, el director ejecutivo puede omitir esta declaración. Si el director ejecutivo desea declarar un conflicto de intereses, debe hacerlo en la declaración de conflicto de intereses. Si el director ejecutivo desea declarar un conflicto de intereses, debe hacerlo en la declaración de conflicto de intereses.

INFORMACIÓN DISPONIBLE EN ESPAÑOL. Los documentos son la  
 misma a través del sitio web de la Comisión de [www.icec.org/pressroom/](http://www.icec.org/pressroom/).  
 La Comisión promueve el acceso a esta información que incluye el intercambio de  
 datos, el desarrollo de la documentación por iniciativa del director ejecutivo  
 sobre la calidad del aire y temas no regulados, la realización del foro  
 interactivo a los comisionados y la edición del libro sobre este asunto. Además  
 tiene de su propia propiedad de los Comisionados (ICEC) utilizando el sistema  
 de gestión de información de personas de una red. La información

**LISTA DE CORREO** Puede pedir que lo incluyan en una lista de correo para obtener información adicional sobre esta actividad enviando un correo electrónico a [info@ciencia.org](mailto:info@ciencia.org) o llamando al 01-800-000000.

teléfono: 01603 267111-2082. También se puede solicitar información de manera gratuita por correo electrónico a: [info@bim-dorchester.com](mailto:info@bim-dorchester.com).  
 También se puede obtener más información de BIM Dorchester Ltd. en:

orindan a los inmigrantes, servicios que muchos en la comunidad fronteriza consideran muy necesarios. El alcalde de

...del refugio, diciendo: "En diciembre cuando recibimos alrededor de 3,000 solicitantes de asilo, no podríamos haberlo logrado sin Casa Anunciación y otros ONG."

laprensa.comunidad.com

gando que había "información importante en registros públicos" que sugería que el refugio estaba involucrado en el contrabando de personas y operaba como un escondite para inmigrantes ilegales. Estas acusaciones fueron rápidamente desmentidas por líderes locales y

En su demanda, Paxton argumentó que Texas quería revocar el registro de Casa

mitir que su oficina inspeccionara sus registros, afirmando que el refugio estaba operando de manera que violaba varios estatutos de delitos graves de Tex-

### Respuesta del refugio y la comunidad

El obispo Mark Seitz, de la Diócesis

aciones diciendo: "No nos dejaremos intimidar en nuestro trabajo para servir a Jesús y a nuestros hermanos y hermanas que huyen del peligro y buscan mantenerse

Casa Anunciación, una organización católica sin fines de lucro, sostiene que Paxton está tratando de cerrarlos porque

X 78476 | [info@laprensacomunidad.com](mailto:info@laprensacomunidad.com) | [www.laprensacomunidad.com](http://www.laprensacomunidad.com)

**PRESSA**



# Vitiligo: Comprendiendo la Condición de la Piel que Desafía la Pigmentación

El vitiligo es una enfermedad de la piel que, a pesar de su relativa prevalencia, sigue siendo uno de los trastornos menos comprendidos y conocidos tanto por el público en general como por la comunidad médica. Según los Institutos Nacionales de Salud de Estados Unidos (NIH, por sus siglas en inglés), este trastorno afecta entre el 0,5% y el 1,0% de la población mundial. Sin embargo, muchos casos no son reportados, lo que lleva a algunos investigadores a estimar que la condición podría afectar hasta el 1,5% de la población global.

El vitiligo se manifiesta con la pérdida de pigmentación en la piel y, en ocasiones, en el cabello, lo que resulta en la aparición de áreas blancas o pálidas. Esta pérdida de color es más evidente en personas de piel oscura, aunque el trastorno afecta a personas de todos los grupos étnicos con igual frecuencia. Es importante destacar que el vitiligo no es una enfermedad contagiosa. Cualquier persona, independientemente de su género o color de piel, puede desarrollar este trastorno. La enfermedad es crónica y se caracteriza por la aparición de parches blancos en la piel debido a la destrucción de los melanocitos, las células responsables de producir melanina, el pigmento que da color a la piel y la protege de los rayos solares. Cuando los melanocitos se dañan o destruyen, la piel pierde su color y se desarrolla el vitiligo.

El vitiligo puede aparecer en cualquier parte del cuerpo, pero es más común en áreas expuestas al sol, como la cara, el cuello y las manos. Aunque es más visible en personas de piel oscura, la variabilidad en su presentación es considerable entre diferentes individuos.

Existen dos tipos principales de vitiligo, clasificados según la distribución de la despigmentación en el cuerpo. El vitiligo segmentario, también conocido como unilateral, suele aparecer en una sola área del cuerpo y generalmente a una edad temprana. Puede afectar una pierna, un lado de la cara o varias áreas en un solo lado del cuerpo. Aproxima-



damente la mitad de las personas con este tipo de vitiligo también pueden experimentar la caída del cabello en las áreas afectadas.

El vitiligo no segmentario, que es la forma más común, se caracteriza por la aparición de parches simétricos en ambos lados del cuerpo. Este tipo de vitiligo puede subdividirse en acrofacial, que afecta la cara, cabeza, manos y pies; mucosal, que afecta las mucosas oral y genital; y universal, que es la forma más severa y rara, afectando entre el 80% y el 90% de la piel.

Según The Vitiligo Society, aproximadamente 70 millones de personas en el mundo tienen vitiligo, y entre el 20% y el 35% de estos pacientes son niños. Aunque puede desarrollarse a cualquier edad, el vitiligo suele comenzar a manifestarse alrededor de los 20 años y afecta tanto a hombres como a mujeres de cualquier origen étnico. Este trastorno es autoinmune y no meramente un problema "cosmético".

A pesar de los avances en la investigación, la causa exacta del vitiligo sigue siendo desconocida. No es una infección y no puede transmitirse de una persona a otra. La imprevisibilidad del vitiligo es otra de sus características; una vez que aparece la primera mancha, es imposible predecir cuánto piel se

verá afectada, y las manchas blancas suelen ser permanentes.

El vitiligo no causa síntomas físicos más allá de la despigmentación, aunque las áreas afectadas pueden quemarse fácilmente con el sol si no se protegen adecuadamente. Sin embargo, el impacto psicológico de la enfermedad puede ser significativo, especialmente si las manchas blancas aparecen en áreas visibles como la cara, el cuello, las manos o los genitales. La angustia emocional y psicológica asociada con el vitiligo puede ser severa, independientemente del color de piel de la persona afectada o de la extensión de la enfermedad.

Nina Goud, de la Asociación Británica de Dermatólogos, comentó a la BBC que el vitiligo puede tener un efecto devastador en la autoestima y el bienestar emocional de los pacientes. En algunos grupos étnicos, especialmente en aquellos con piel más oscura, la enfermedad puede causar una pérdida de identidad cultural, lo que agrava aún más el estigma y la angustia psicológica.

La evolución del vitiligo varía de una persona a otra. Algunas personas no notan cambios en sus manchas durante años, mientras

que en otros casos, el trastorno puede progresar rápidamente. En ocasiones, especialmente en niños, las manchas blancas pueden repigmentarse, aunque esto es poco común sin tratamiento.

El manejo del vitiligo suele incluir una combinación de tratamientos. La fototerapia, que implica la exposición a luz ultravioleta, se usa junto con medicamentos como corticosteroides aplicados tópicamente. Sin embargo, los corticosteroides son efectivos en menos del 25% de los pacientes y la fototerapia puede llevar a una repigmentación irregular, además de aumentar el riesgo de cáncer de piel a largo plazo.

Recientemente, se ha aprobado un nuevo tratamiento tanto en Estados Unidos como en la Unión Europea para el vitiligo no segmentario: Opzelura, cuyo principio activo es ruxolitinib.

Este medicamento, en forma de ungüento, se aplica directamente sobre las áreas afectadas y ha mostrado resultados prometedores. Aproximadamente la mitad de los pacientes que lo usaron dos veces al día experimentaron una mejoría significativa y alrededor de una sexta parte lograron una repigmentación completa en tres meses. No obstante, Opzelura tiene varias contraindicaciones, incluyendo efectos sobre el sistema inmune, acné e irritaciones en las áreas de aplicación, y su costo es elevado, alrededor de \$2,000 por tubo.

En resumen, el vitiligo es una enfermedad compleja que afecta a millones de personas en todo el mundo. Aunque no representa una amenaza física significativa más allá de la vulnerabilidad al sol en las áreas despigmentadas, su impacto emocional y psicológico es profundo.

La investigación continúa en busca de tratamientos más efectivos y accesibles, y una mayor comprensión del vitiligo podría llevar a mejores estrategias de manejo y apoyo para quienes viven con esta condición.

## EE.UU. alerta por aumento de dengue

EE.UU. ha emitido una alerta sanitaria debido al incremento de casos de dengue dentro de su territorio, tras meses de reportes en áreas previamente libres de la enfermedad. Las autoridades sanitarias nacionales han recomendado a los médicos estudiar y familiarizarse con los síntomas del dengue.

El dengue, transmitido por picaduras de mosquitos, ha aumentado globalmente, impulsado por el cambio climático. En apenas seis meses, varios países del Continente Americano han superado récords de casos anuales de dengue.



La Organización Mundial de la Salud declaró una emergencia en diciembre y Puerto Rico hizo lo propio en marzo. Aunque el dengue sigue siendo menos común en el territorio continental de EE.UU., los casos en los 50 estados han triplicado en comparación con el mismo período del año pasado. La mayoría de las infecciones fueron adquiridas en el extranjero, y aunque no hay evidencia de un brote actual, las autoridades advierten sobre la amenaza persistente de los mosquitos locales.

En su alerta emitida el martes, los Centros para el Control y la Prevención de Enfermedades aconsejaron a los médicos familiarizarse con los síntomas, indagar sobre los viajes recientes de los pacientes y considerar pruebas de dengue si es necesario.

El dengue se propaga mediante un mosquito de clima tropi-

cal cuya población se está extendiendo debido al cambio climático. Muchas personas infectadas no presentan síntomas, pero algunas sufren dolores de cabeza, fiebre y malestar general. Los casos graves pueden llevar a hemorragias, shock y muerte.

Las infecciones recurrentes son especialmente peligrosas. Hay cuatro tipos de virus del dengue: tipos 1, 2, 3 y 4. La infección por un tipo genera inmunidad de por vida contra ese tipo, pero una infección subsiguiente por otro tipo puede resultar en una enfermedad más severa.

Esta preocupación es particularmente relevante en Puerto Rico, que en las últimas dos décadas ha estado mayormente expuesto al dengue tipo 1. El mes pasado, la isla reportó su primera muerte por dengue de este año.

### A TODAS LAS PERSONAS Y PARTES INTERESADAS:

BM Dorchester LLC, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) la emisión de la Propuesta de Permiso de Calidad del Aire 167047, Permiso de Calidad del Aire para la Prevención del Deterioro Significativo (PSD) PSDTX1602 y Permiso de PSD de Gases de Efecto Invernadero GHGSPSDTX212, que autorizaría la construcción de un Cemento Portland en las siguientes direcciones de manejo: desde la intersección de la autopista 289 y la autopista 902 al este de Dorchester, dirijase hacia el este por la autopista 902 durante aproximadamente 0.80 millas; el sitio estará ubicado directamente al norte de la autopista 902 después de la intersección de Taylor Road, Dorchester, condado de Grayson, Texas 75459. Esta solicitud fue procesada de manera expedita, según lo permitido por las reglas de la comisión en el Título 30 del Código Administrativo de Texas, Capítulo 101, Subcapítulo J. Información adicional sobre esta solicitud se encuentra en la sección de avisos públicos de este periódico.

### A TODAS LAS PERSONAS Y PARTES INTERESADAS:

Raptor Ready Mix Inc, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ, por sus siglas en inglés) un Permiso Estándar de Calidad del Aire, Registro No. 176542L001, que autorizaría la construcción de una planta dosificadora de concreto ubicada desde la I-35E Norte hasta la salida 448. Round Grove Road West. Gire a la izquierda en Round Grove Road West. Vaya 3.4 millas a Duncan Lane y gire a la izquierda. Vaya 0.75 millas hasta Spinks Road. El sitio se encuentra en la esquina sureste de Duncan Lane y Spinks Road, Lewisville, Condado de Denton, Texas 75067. Información adicional sobre esta solicitud se encuentra en la sección de avisos públicos de este periódico.

### A TODAS LAS PERSONAS Y PARTES INTERESADAS:

Printpack, Inc., ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ) una licencia y renovación del Permiso de Calidad del Aire Número 9981, que autorizaría la modificación y la operación continua de una Planta de Impresión Flexográfica existente en 2005 South Great Southwest Parkway, Grand Prairie, condado de Tarrant, Texas 75051. Hay información adicional sobre esta solicitud contenida en la sección de avisos públicos de este periódico.

### A TODAS LAS PERSONAS Y PARTES INTERESADAS:

Technical Chemical Company, ha solicitado a la Comisión de Calidad Ambiental de Texas (TCEQ, por sus siglas en inglés) la renovación del permiso de calidad del aire número 114033, que autorizaría la continuación del funcionamiento de Technical Chemical Plant 2 situada en 400 Commerce Boulevard, Cleburne, Condado de Johnson, Texas 76033. Información adicional sobre esta solicitud se encuentra en la sección de aviso público de este periódico.

**AR-48**

**NAPD Public Notice Verification Documentation**



12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203 / [trinityconsultants.com](http://trinityconsultants.com)

August 21, 2024

**Via email:** [PROOFS@tceq.texas.gov](mailto:PROOFS@tceq.texas.gov)

Texas Commission on Environmental Quality

Office of the Chief Clerk

Attn: Notice Team

**RE: Public Notice Requirements – Public Notice Verification Form**

**Permit Numbers: 167047 and PSDTX1602**

**TCEQ Project Number: 335160**

**BM Dorchester LLC**

**Customer Reference Number: CN605952373**

**Regulated Entity Reference Number: RN111368437**

To Whom It May Concern:

BM Dorchester LLC (BM Dorchester) is constructing a Portland cement manufacturing facility located in Dorchester, Grayson County, Texas (Dorchester Facility). BM Dorchester has been assigned Customer Number (CN) 605952373. The Dorchester Facility has been assigned Texas Commission on Environmental Quality (TCEQ) Regulated Entity Number (RN) 111368437.

BM Dorchester submitted an initial permit application on November 8, 2021. As a part of the application process, the Dorchester Facility is required to publish a formal public notice in a newspaper of general circulation in the municipality nearest to the facility location. The Dorchester Facility previously published notices that did not include an alternative language notice, but it was brought to attention in the March 25, 2024 TCEQ Public Meeting that alternative notice is required due to the school district that otherwise would be required to provide a BEP has been granted an exception from the requirements. Therefore, a consolidated first and second notice was republished to include the alternate language provisions. In accordance with the public notice guidance package received from the TCEQ on June 14, 2024, BM Dorchester has completed the following:

- ▶ Published a formal public notice on July 9, 2024 in "The Herald Democrat" circulated in Grayson County;
- ▶ Published an alternative language formal public notice on July 9, 2024 in "La Prensa Comunidad" circulated in Grayson County;
- ▶ Placed a copy of the Air Quality Permit Application at the public location, Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas, for public viewing and copying, beginning December 16, 2021 and updated on July 9, 2024; and
- ▶ Prepared and posted signs per TCEQ requirements at the Dorchester Facility beginning July 9, 2024. Spanish signs were securely in place beginning July 15, 2024.

With this submittal, BM Dorchester is submitting the Public Notice Verification Form to the TCEQ via email within 10 calendar days after the end of the designated comment period.

The Dorchester Facility is required to submit copies to those listed on the Notification List. An electronic copy will be sent to [R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov) and Mr. Joel Stanford, TCEQ Air Permits Division, [Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov). Hard copies of these submittals are being mailed to the following, per the Instructions for Public Notice:

#### **HEADQUARTERS**

12700 Park Central Dr, Ste 600, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203

APP-1688



The Dorchester Facility is required to submit copies of the aforementioned items to those listed on the Notification List. Therefore, copies are also being sent to the following:

Texas Commission on Environmental Quality  
Air Section Manager  
Dallas/Fort Worth Regional Office  
2309 Gravel Dr  
Fort Worth, Texas 76118-6951

Texas General Land Office  
Upland Leasing Team Leader  
Professional Services  
P.O. Box 12873  
Austin, Texas 78711-2873

The Honorable Bruce Dawsey  
County Judge  
County Courthouse  
100 West Houston  
Sherman, Texas 75090

The Honorable David Smith  
Mayor of Dorchester  
373 Main Street  
Dorchester, TX 75459

If you have any questions, please feel free to contact me at (972) 661-8100 or via email at [MMeister@trinityconsultants.com](mailto:MMeister@trinityconsultants.com).

Sincerely,

TRINTY CONSULTANTS



Michael Meister  
Principal Consultant

cc: U.S. EPA, Region 6 ([R6AirPermitsTX@EPA.gov](mailto:R6AirPermitsTX@EPA.gov))  
Mr. Joel Stanford, Air Permits Division ([Joel.Stanford@tceq.texas.gov](mailto:Joel.Stanford@tceq.texas.gov))  
Air Section Manager, TCEQ Region 4, DFW  
Upland Leasing Team Leader, Texas General Land Office  
The Honorable Bruce Dawsey, County Courthouse  
The Honorable David Smith, Mayor of Dorchester  
Mr. Jake Bender, BM Dorchester LLC (electronic)

**ATTACHMENT 1**  
**Public Notice Verification Form**

**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: <b>BM Dorchester LLC</b>	
Site or Facility Name: <b>BM Dorchester</b>	
Application Received Date: <b>November 8, 2021</b>	
TCEQ Account Number (if applicable):	Permit Number: <b>167047, PSDTX1602, and GHGPSDTX212</b>
Regulated Entity Number (RN): <b>111368437</b>	Customer Number (CN): <b>605952373</b>
All applicants must <b>complete all applicable</b> portions of this form. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk <b>within 10 business days after the end of the designated comment period</b> . For more information regarding public notice, refer to the instructions in the public notice package.	
<b>Alternative Language Checklist</b>	
I have contacted the appropriate school district. <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>	
School District: <b>Howe ISD and Gunter ISD</b>	Phone Number: <b>903-745-4000 (Howe ISD)</b>
Person Contacted: <b>Giuliana Sheff (Howe ISD)</b> Consulted District Website (Gunter ISD)	Date: <b>11/01/2021 (Howe ISD); November 2021 (Gunter ISD)</b> : No BEP program communicated <b>03/25/2024: Alternative language notice requirement was communicated during TCEQ Public Meeting.</b>
Is a bilingual education program (BEP) required by the Texas Education Code in the district? <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span>	
<b>If answer is "NO," skip to first question in verification box on next page.</b> (Note: A BEP is different from "English as a Second Language" (ESL) program; and Elementary/Middle schools that only offer ESL will not trigger notice in an alternative language.)	
Notice in an alternative language is required if a BEP is <b>required</b> in the District, and <b>one</b> of the following conditions is met:	
1. students in the elementary or middle school nearest the facility are enrolled in a program at that school;	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. students from the elementary or middle school nearest the facility attend a BEP at another location; or	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. the school district that otherwise would be required to provide a BEP has been granted an exception from the requirements to provide the program, as provided for in 19 Texas Administrative Code 89.1207(a).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If the answer is "NO" to <b>1, 2, and 3 above</b> , then alternative language notice is <b>not required</b> .	
The name of the elementary school nearest to the proposed or existing facility is:	
<b>Summit Hill Elementary School</b>	
The name of the middle school nearest to the proposed or existing facility is:	
<b>Howe Middle School</b>	
The following language(s) is/are utilized in the bilingual program:	
<b>Spanish</b>	

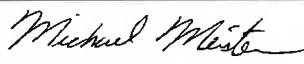
Applicant Name: **BM Dorchester LLC**

If notice in an alternative language is required, then applicants must publish alternative language notice(s) and post alternative language sign(s), as outlined in the *Instructions for Public Notice* and certify compliance with those requirements on this form.

**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: <b>BM Dorchester LLC</b>	
Site or Facility Name: <b>BM Dorchester</b>	
Application Received Date: <b>November 8, 2021</b>	
TCEQ Account Number (if applicable):	Permit Number: <b>167047, PSDTX1602, and GHGPSDTX212</b>
Regulated Entity Number (RN): <b>111368437</b>	Customer Number (CN): <b>605952373</b>
For more information regarding public notice, refer to the instructions in the public notice package.	
<b>Alternative Language Verification</b>	
1. A BEP is required by the Texas Education Code in the area addressed by this permit application and is subject to alternative language public notice requirements. <b>If "NO," skip 2 through 6 and complete signature, title, date, and name of applicant.</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2. The applicant has conducted a diligent search for a newspaper or publication of general circulation in both the municipality and county in which the facility is located (or proposed to be located).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3. A newspaper or publication <b>could not be found</b> in any of the alternative language(s) in which notice is required.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. The publishers of the <b>newspaper listed below refused to publish the notice</b> as requested, <b>and</b> another newspaper or publication in the same language and of general circulation <b>could not be found</b> in the municipality or county in which the facility is located (or proposed to be located).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Newspaper:	Language:
5. Proof of publication of the newspaper <b>alternative language</b> notice(s) and the requested affidavits have been sent to the TCEQ.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
6. Alternative language signs were posted as required by the TCEQ.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period.</b> Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk <b>within 10 business days after the end of the designated comment period.</b> The TCEQ will not accept this form if submitted prior to that date.	
Verified by (signature): <i>Michael Meister</i>	
Applicant: <b>Mr. Michael Meister</b>	
Title: <b>Principal Consultant</b>	Date: <b>08/21/2024</b>

**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: <b>BM Dorchester LLC</b>		
Site or Facility Name: <b>BM Dorchester</b>		
Application Received Date: <b>November 8, 2021</b>		
TCEQ Account Number (if applicable):	Permit Number: <b>167047, PSDTX1602, and GHGPSDTX212</b>	
Regulated Entity Number (RN): <b>111368437</b>	Customer Number (CN): <b>605952373</b>	
For more information regarding public notice, refer to the instructions in the public notice package.		
<b>New Source Review Permit Notice Verification (Complete this section, if applicable)</b>		
Proof of publication of the newspaper notices and the requested affidavits have been furnished in accordance with the regulations and instructions of the TCEQ.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Notice of Receipt of Application and Intent to Obtain Permit (1<sup>st</sup> Notice):</b>		
Required signs (for 1st notice) were posted in accordance with the regulations and instructions of the TCEQ.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
A copy of the administratively complete air quality application, and any revisions, were available for review and copying at the public place indicated below throughout the duration of the public comment period.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
The public place indicated below provides public access to the internet (for PSD, nonattainment, or FCAA 112(g) Permit).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<b>Notice of Application and Preliminary Decision (2<sup>nd</sup> Notice, if applicable):</b>		
A copy of the complete air quality application (including any subsequent revisions to the application), executive director's preliminary decision (which includes the draft permit), the preliminary determination summary and air quality analysis (if applicable), are available for review and copying at the public place indicated below from the first day after newspaper publication, and will remain available until either: (1) the TCEQ acts on the application; or (2) the application is referred to the State Office of Administrative Hearings (SOAH) for hearing	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Name of Public Place: <b>Howe Community Library</b>		
Address of Public Place: <b>315 S Collins Fwy</b>		
City: <b>Howe</b>	State: <b>Texas</b>	ZIP Code: <b>75459</b>
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period.</b> Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk <b>within 10 business days after the end of the designated comment period.</b> The TCEQ will not accept this form if submitted prior to that date.		
Verified by (signature): 		
Applicant: <b>Mr. Michael Meister</b>		
Title: <b>Principal Consultant</b>	Date: <b>08/21/2024</b>	



**Texas Commission on Environmental Quality  
Public Notice Verification Form  
Air Permit**

Applicant Name: <b>BM Dorchester LLC</b>		
Site or Facility Name: <b>BM Dorchester</b>		
Application Received Date: <b>November 8, 2021</b>		
TCEQ Account Number (if applicable):	Permit Number: <b>167047, PSDTX1602, and GHGPSDTX212</b>	
Regulated Entity Number (RN): <b>111368437</b>	Customer Number (CN): <b>605952373</b>	
For more information regarding public notice, refer to the instructions in the public notice package.		
<b>Federal Operating Permit (Title V) Notice Verification (Complete this section, if applicable)</b>		
I verify that the required signs were posted in accordance with the regulations and instructions of the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
I verify that proof of publication of the newspaper notices and the requested affidavits have been furnished in accordance with the regulations and instruction of the TCEQ.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
I verify that a copy of the complete air quality application (including any subsequent revisions to the application) and draft permit were available for review and copying at the public place indicated below throughout the duration of the public comment period.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Name of Public Place:		
Address of Public Place:		
City:	State:	ZIP Code:
<b>This form must be signed and dated by a designated representative acting on behalf of the applicant after the end of the designated comment period. Send this completed form to the TCEQ to the attention of the Office of the Chief Clerk within 10 business days after the end of the designated comment period. The TCEQ will not accept this form if submitted prior to that date.</b>		
Verified by (signature):		
Applicant:		
Title:	Date:	

**AR-49**

**TCEQ Response to Comments**

**TCEQ AIR QUALITY PERMIT NUMBERS 167047, GHGPSDTX212, and PSDTX1602**

<b>APPLICATION BY</b>	<b>§</b>	<b>BEFORE THE</b>
<b>BM DORCHESTER LLC</b>	<b>§</b>	<b>TEXAS COMMISSION ON</b>
<b>PORTLAND CEMENT PLANT</b>	<b>§</b>	<b>ENVIRONMENTAL QUALITY</b>
<b>DORCHESTER, GRAYSON COUNTY</b>	<b>§</b>	

**EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT**

The Executive Director of the Texas Commission on Environmental Quality (the commission or TCEQ) files this Response to Public Comment (Response) on the New Source Review Authorization application and Executive Director's preliminary decision.

As required by Title 30 Texas Administrative Code (TAC) § 55.156, before an application is approved, the Executive Director prepares a response to all timely, relevant and material, or significant comments. The Office of Chief Clerk received timely comments from the following persons: Senator Drew Springer, Representative Reggie Smith, Karla McDonald (Mayor of Howe), Clint Catching and Kevin Wilson (on behalf of the Howe Independent School District Board of Trustees), David Smith (Mayor of Dorchester, on behalf of the City Council of the City of Dorchester), Adam Cernero Meghan Cone, and Brad Morgan (on behalf of the Sherman Independent School District [ISD] Board of Trustees), Duncan C. Norton (on behalf of Grayson County, the Cities of Sherman and Dorchester, and the Sherman Economic Development Corporation "SEDCO"), Jim Schermbeck (on behalf of Downwinders at Risk), Cynthia J. Kaleri (on behalf of the Environmental Protection Agency [EPA] Region 6), Group A (*See Appendix A*), Group B (*See Appendix A*), and individual commentors (*See Appendix B*). This Response addresses all timely public comments received, whether or not withdrawn. If you need more information about this permit application or the permitting process, please call the TCEQ Public Education Program at 1-800-687-4040. General information about the TCEQ can be found at our website at [www.tceq.texas.gov](http://www.tceq.texas.gov).

**BACKGROUND**

Description of Facility

BM Dorchester LLC (Applicant) has applied to the TCEQ for a New Source Review Authorization under Texas Clean Air Act (TCAA) § 382.0518. This will authorize the construction of a new facility that may emit air contaminants.

This permit will authorize the Applicant to construct a Portland Cement Plant. The plant is to be located following the following driving directions: from the intersection of Highway 289 and Highway 902 east of Dorchester head east on Highway 902 for approximately 0.80 miles - the site will be located directly north of Highway 902 after the intersection of Taylor Road, Dorchester, Grayson County, Texas 75459.

Contaminants authorized under this permit include carbon monoxide, hazardous air pollutants, sulfuric acid, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, greenhouse gases, lead, and sulfur dioxide. The proposed facility will also emit greenhouse gases.

### Procedural Background

Before work is begun on the construction of a new facility that may emit air contaminants, the person planning the construction must obtain a permit from the commission. This permit application is for an initial issuance of Air Quality Permit Number 167047, GHGPSDTX212, and PSDTX1602.

The permit application was received on November 8, 2021, and declared administratively complete on November 18, 2021. The Notice of Receipt and Intent to Obtain an Air Quality Permit (NORI, first public notice) for this permit application was published in English on December 19, 2021, in the *Herald Democrat*. The Notice of Application and Preliminary Decision for an Air Quality Permit (NAPD, second public notice) was published on February 22, 2024, in English in the *Herald Democrat*. A Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision (Consolidated NORI and NAPD, third public notice) was published in English on July 9, 2024, in the *Herald Democrat* and in Spanish on July 9, 2024, in *La Prensa*. A public meeting was held on March 25, 2024, at 7:00 PM at the Hilton Garden Inn Denison/Sherman/At Texoma Event Center, 5015 South U.S. 75, Denison, Texas 75020. The notice of public meeting was mailed on February 9, 2024, and an amended notice of public meeting was mailed on February 13, 2024. The public comment period ended on August 8, 2024. Because this application was received after September 1, 2015, it is subject to the procedural requirements of and rules implementing Senate Bill 709 (84th Legislature, 2015).

### COMMENTS AND RESPONSES

#### COMMENT 1: Health Effects / Air Quality / Cumulative and Additive Effects

Commenters expressed concern about the effect of the emissions from the proposed project on the air quality and health of people, particularly sensitive populations such as the elderly, children, and people with existing medical conditions. Commenters stated that they or members of their family have preexisting health conditions that would make them more susceptible to adverse health effects from the plant's emissions. Commenters are concerned that the emissions proposed to be authorized may cause or exacerbate health conditions, including but not limited to allergies, rheumatoid arthritis, psoriatic arthritis, asthma, heart attacks, autism, cancer, heart conditions, Chronic Obstructive Pulmonary Disease (COPD), organ damage, diabetes, lung disease, autoimmune diseases, pulmonary embolisms, emphysema, pulmonary fibrosis, cystic fibrosis, respiratory illnesses, reproductive issues, skin and eye issues, black lung, osteoarthritis, high blood pressure, respiratory problems, ear problems, Post Traumatic Stress Disorder (PTSD), sarcoidosis, silicosis, sinusitis, strokes, tachycardia, thyroid issues, and vitiligo. Commenters are concerned that children will be exposed to contaminants during outdoor activities or that they will not be able to go outside. Commenters expressed concern regarding emissions of crystalline silica, heavy metals, and toxic chemicals such as dioxins, furans, mercury, polychlorinated biphenyls (BCP's), benzopyrene (BAP), and polyaromatic hydrocarbons (PAH's). Commenters expressed concern that the project would cause odor nuisances. Commenters expressed concern the proposed facility will contribute to ozone, global warming, and climate change. Commenters are concerned that the Applicant is trying

to obtain a permit before the new EPA standards are passed. Jim Schermbeck expressed concern that air quality standards are outdated. Rex Glendenning expressed concern regarding radioactive emissions. Deirdre Diamond expressed concern regarding cumulative effects, asking that the impact analysis take into consideration emissions from existing Concrete Batch Plants in the area as well as applications that are still in the permitting process. Ronald Vanbuskirk expressed concern that the proposed project would cause smelt and smog-filled air. Duncan C. Norton expressed concern that the site will not comply with the National Ambient Air Quality Standards (NAAQS) or the National Emission Standards for Hazardous Air Pollutants (NESHAP). Jeremy Devore expressed concern that the permit would cause nonattainment status. Michael Fannin wants to know the carbon footprint of the proposed plant.

### EPA Consideration

Cynthia J. Kaleri expressed appreciation for TCEQ's consideration of the EPA's early concerns regarding the representativeness of the monitored background concentrations and the emissions estimates utilized in the ozone MERPs analysis and strongly encourages the TCEQ to thoroughly review and notify the EPA of any such proposal to relax the most recent proposed emission representations or averaging periods associated with limit compliance.

(Group A, Novin Abdi, Silvia Adams, Randy Adams, Janice Akins, Samantha Allison, Luz Arce, Amber Armendariz, Ralph H. Armstrong, Katrina Lynn Arsenault, Art Arthur, Charles Ashley, Amy Ashlock, Andrea Paulette Aslam, Sesily Babekuhl, Cynthia Baker, Willies Carl Ballou, Douglas Glenn Banner, Kelly Denise Barnes, Darla Barr, Robert Bauer, Heather Beaver, Nelson Beaver, Ashley Beck, Francis Beck, Patti Beggs, Deanna Bell, Lander Bethel, Tonya Bingham, Liz Birchall, Cliff Blackstock, Ashley Blanton, Tammy Bohannon-Yule, Nancy Bond, Nolan E. Bond, Linda Bowers, Amber Bratt, Kristopher Daniel Bravo, Virginia Brawley, Ashlin Bridwell, Cheryl Brociek, Ron Brockner, Emily Brooks, Jan Broomall, Lafefel Brown, Nancy Brown, Jeffrey Brown, Tiffany Broyles, Jeremiah D. Broyles, Erika Bryan, Jamie Buckalew, Homer Bullard, Jennifer Bullard, Brenna Butler, Christa Call, Veronica Calzada, Sarah Campbell, Tommy Joe Carney, Holly Castleberry, Clint Catching, Cary Catching, Shane Cavender, Adam Cernero, Nicole Chambers, Bobby Luke Chandler, Kristin Chandler, Bobby Chandler, Megan C. Chandler, Art Clayton, Robert Clough, Steve Thomas Cohea, Margaret Coleman, Lee Collins, Karla K. Colwell, Meghan Cone, Charli Cotten, R. D. Cozad, Skyler Cozad, Traber Cozad, Camryn Craddock, Cassady A. Craddock, Matthew Crain, Amanda Crawford, Andrew Crawford, James Crews, Melissa Gail Croney, Brian Culp, Donald Ray Cummings, Karen L. Cummings, Karen Cummings, Lindsay Cummings, Kristen Cunningham, Tracy R. Curry, Atul Dave, Angela Davidson, Wes Davidson, Chanel Ann Davis, Cynthia L. Davis, Alicia Davis, Karla Graham Davis, Bruce Dawsey, Bruce W. Dawsey, Shawna Dawson, Heidi Debner, Thomas G. Debner, Rebecca Demel, Jeremy Devore, Jeremy W. Devore, Jeremy Q. Devore, Mary Gail Devore, Jeremy W. Devore, Bethany Devore, Deirdre Diamond, Joanne Dickey, Melissa Doan, Kimberly Stewart Dodson, Kathleen Dophied, Judy Searcy Dryden, Robert E. Dryden, Judith S. Dryden, Searcy Dryden, Leslie M Dulack, Michael Dulack, Christina N. Dunlap, Sherry Duran, Cindy Durrant, Michael Joseph Elliott, Mark L. England, William Engle, Cendy Y. Escalera, Nayeli Escalera-Solis, Rachel Evans, Michael Fannin, Jeremiah Broyles (on behalf of First Class North Texas [FCNT]), Courtney Fierro, Laura Fincher, Lisa Flaggert,

Lisa Marie Flaggert, James N. Flanery, Adam Fleming, Lindsey Flores, Harold Foster, William Foster, Frank Edward Gadek, Andrea Ganow, Chris Gardner, Lori Gardner, Renny Gehman, Rex Glendenning, Rosa Goodenow, Lora Gordon, Anabelle Graham, Misty Gray, Laura Green, Linda J. Greenfield, Austin Grooms, Brandon Grooms, Rachel Grooms, Joshua Grooms, Richard Oran Gross, Jennifer Haeg, Teresa M. Hall, Damon L. Moore Hall, Ginger Ham, Dave Hammond, Matt Hardenburg, Letitia Harris, Amy Hartel, Christine Heck, Patricia Hedrick, Moses Hejny, Lisa Hejny, Sarah Henry, Joann Hensley, Alyssa Hernanadez, Katerina Hess, Jerry Dean Hestand, Debbie Hester, Dwayne Hicks, Michael S. Hignight, Carol Hill, Melissa Hill, Melinda Hill, Amy Hoffman-Shehan, Suzanne Hooks, Charity Horne, Robin A. Horner, Scott Horner, Helen Horton, Sherry Howard, Jen Huff, Alice Hughes, Meghan Hughes, Mandy Hummel, Laura T. Hunt, Lori Huntsman, Debbie Hurd, Billie Charels Ingram, Heather Jacques, Phyllis D. James, Michael Jefferson, Rachel Jenkins, Chris Jennings, Suzanna Dryden Jensen, Brandon Johnson, Liberty Johnson, Linda Kay Johnson, Lori Jones, Debbie Elaine Judkins, Carl Kalbfleisch, Cynthia J. Kaleri, Mary Karam, Kenyon Kemp, Dina Kenemore, Brittany Kennedy, James Kimbrel, Ken King, Laura L. King, Geri V. King, Cody M. King, Laura Kirilloff, Debbie Kirkpatrick, Keith Kisselle, Anthony J. Kordosky, Cindy Kvaal, Rick Kvaal, Greg L. Laird, Austin Lambert, Benjamin T. Landgraf, Chris Landino, William Landrum, Terri Langford, Julie Lanicek, Jason R. Lankford, Jason Lankford, Patrick Latona, Val Lauerhahs, Rhonda Lawson, Wayne Lee, James Lewellen, Kylee Likarish, Victor Lissiak, Paul Daniel Lopez, Trudy Lucas, Jim Lucas, Eric Lunde, Shelley Luther, Ronald Clay Lynch, Dakotah Mahan, Brian Mai, Sarah Mallory, Rickey J. Malta, Casey Mandi, Rose M. Marr, Michael Gene Marsh, Mickie Martin, Brittany Martin, George Mason, Catherine Matuella, Patsy Mauldin, Dusty Wayne Mayer, William Mayer, Traci McCarthy, Claudia L. McClure, Kathleen McClure, Les McConnell, Garrett McCown, Vivian Robin McCoy, Karla McDonald, Larry McDonald, Toya McEwen, Lauren McNutt, Patrick Neal McNutt, Kevin Meissner, Amy Meyer, Davida Miorin, Cindy Mitchell, Michael J. Mitchusson, Lynn M. Mitchusson, Mehrdad Moayedi, Joyce L. Moore, Grover Franklin Moore, Angela Moreau, Brad Morgan, Mary Morgan, Jason Morin, Shandi Morris, Amarise Morris, Andronica Morris, Matthew Morris, Zadrian Morris, Terry Morrison, Marthann Morrow, Ashley Morrow, Karen Murphy, Lucy Myer, Rick Myer, Jason Lee Naramor, Mitaj Nathwani, Sharon Nelson, Jacob Nelson, Andeelea Anderson Nichols, Danny Thomas Nichols, Chris Nicoloff, Marie Nixon, Paul Nixon, Rose Marie Nixon, Brandon Norris, Jennifer Norris, Brian E. Norris, Tera Norris, Erica Northrup, Duncan C. Norton, Brent Omdahl, Brent E. Omdahl, Angie Onley, Bonita L. Overbey, Jeff Overstreet, Jeffrey Tyler Overstreet, Paula Overstreet, Nikolaus Owen, Martha Paben, James Parrish, Angela Patton, Melisa Patzer, Holland Paula, Debra Payne, Jose Fernando Pena, Jody Perry, Emily Powell, Taylor P. Powell, Lindsay Price, Joshua D. Price, Delfina Prisock, Chelsey Pulcheon, Kathy Raner, Justin Neal Raner, Alan Redd, Patsy A. Reeves, Laura Reeves, Richard Reeves, J. Renfro, Kevin Diaz Reyes, Tara Rice, Cindy Risk, Naif Risk, Mary Roberts, Kylynn Robinson, Douglas Ray Robison, Judy Carol Robison, Luanne Robison, Mark Douglas Robison, Brad Robnett, Mona Robnett, Liz Rocamontes, Elizabeth Rodriguez, Jennifer Rollins, Sharla Ross, Kara Royston, Brad Rucker, Kayli Rushing, Bettye Russell, Brian Russell, Linda Russell, Linda Sue Russell, Russell Rutherford, Christina R. Rykens, Carrie Saindon, Jim Schermbeck, Jarod Schmitt, Joann Schnitker, Bradley J. Schnitker, Mary J. Scott, Betty Scott, Racheal Sedmack, Doreen Shacklee, True Shaw, Rosa Shelton, Gary Shields, Kenda Sinclair, Sharon Slaughter, David Smith, Reggie Smith, Wendy Smith, Derek Smith, Kyle Smith, Dustin Smith, Leann Smith, Jeff Randall Spencer, Julia Spencer, Frances Sprabary, Drew Springer, Sara



Sprinkle, Kristy Stachmus, Penny Stahl, Roxanne Standerfer, James Stewart, Robert Stewart, Shirley Stewart, Alice Stewart, Alice Faye Stewart, Chandler Strawn, James Stringfield, Dana Strong, Crystal Stueve, Sathappun Subbiah, James Sutherland, Kenneth Svehlak, Sue Svehlak, Meghan Swindle, Griffin Tammy, Betty Jean Taylor, Thomas L. Taylor, Thomas Leland Taylor, Shawn C. Teamann, Cristi Tenant, Alyssa Thomas, Dana Thornhill, Julie Travis, Yolanda Trevino, Tonya Troxtell, Griffin Underwood, Kristi Utley, Diana Vanbuskirk, Ronald Vanbuskirk, Mickinze Vanherpen, Denise Vawter, Marilyn Sue Vest, Becky Vincent, Larry W. Vincent, Kimberly Vodry, Mark Vodry, Jenny Vonbehren, Jaymison Bella Voto, Campbell Voto, Jay Dee Voto, Jay Voto, Leonard G. Waldrum, Paula Walker, Phillip Walker, Bihfang Wang, Brian Wang, John Ward, Cameryn P. Warren, Kevin Wasp, Jacqueline Wassom, Manual Watson, Shelbie Watts, Lanisha Weaver, Rudy Weems, Cynthia Weems, Cynthia L. Weems, Casey Weinmann, Monique Whaley, Steve Whaley, Amy Wheeler, Joseph White, Jennifer White, Edward Whitfield, Monica L. Whitfield, Jeff Whitmire, Carolyn Wildman, Teresa Wildman, Gabriel Williams, Ruth E. N. Cox Williamson, Jennifer Williamson, Jeffrey Wilmoth, Kevin Wilson, Dustin Ray Wilson, Krista Lucas Wynn, Angela Zarallo, Rebecca Zey, Savanna Zinn, Tracie Zweifel-Gibson, Angela Wilson, Cynthia Zinn, David G. Sileven, Dorothy Schmoker, Gary Schnitker, Lainie Ramsay, Nancy Jan Shaw, Paula Neely, Robin Sears, Shayla Wheeler, Pat Piaschyk, Angela Onley, Borming Wang, Kenneth J. King, Elizabeth Rocamontes)

**RESPONSE 1:** The Executive Director is required to review permit applications to ensure they will be protective of human health and the environment. For this type of air permit application, potential impacts to human health and welfare or the environment are determined by comparing the Applicant's proposed air emissions to appropriate state and federal standards and guidelines. These standards and guidelines include the NAAQS, TCEQ Effects Screening Levels (ESLs), and TCEQ rules. As described in detail below, the Executive Director determined that the emissions authorized by this permit are protective of both human health and welfare and the environment.

### NAAQS

The U.S. Environmental Protection Agency (EPA) created and continues to evaluate the NAAQS, which include both primary and secondary standards, for pollutants considered harmful to public health and the environment.<sup>1</sup> Primary standards protect public health, including sensitive members of the population such as children, the elderly, and those individuals with preexisting health conditions. Secondary NAAQS protect public welfare and the environment, including animals, crops, vegetation, visibility, and buildings, from any known or anticipated adverse effects from air contaminants. The EPA has set NAAQS for criteria pollutants, which include carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter less than or equal to 10 microns in aerodynamic diameter (PM<sub>10</sub>), and PM less than or equal to 2.5 microns in aerodynamic diameter (PM<sub>2.5</sub>).

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<sup>1</sup> 40 CFR 50.2

The likelihood of whether adverse health effects caused by emissions from the facility could occur in members of the general public, including sensitive subgroups such as children, the elderly, or people with existing respiratory conditions or other preexisting conditions, was determined by comparing the facility's maximum predicted air dispersion modeling concentrations to the relevant state and federal standards and ESLs. TCEQ staff used modeling results to verify that predicted ground-level concentrations from the proposed facility are not likely to adversely impact public health and welfare. The overall evaluation process provides a conservative prediction that is protective of public health. The modeling predictions were reviewed by the TCEQ Air Dispersion Modeling Team, and the modeling analysis was determined to be acceptable. The Applicant used the American Meteorological Society (AMS)/EPA Regulatory Model (AERMOD) modeling system to provide a reasonable worst-case representation of potential impacts from the proposed emissions on the area surrounding the facility. *See* Response 2 for additional information concerning the modeling and Response 12 concerning emissions calculations.

The Applicant conducted a NAAQS analysis for NO<sub>2</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, Pb, and O<sub>3</sub>. The first step of the NAAQS analysis is to compare the proposed modeled emissions against the established de minimis level. Predicted concentrations (GLC<sub>max</sub><sup>2</sup>) below the de minimis level are considered to be so low that they do not require further NAAQS analysis. Table 1 contains the results of the de minimis analysis.

**Table 1. Modeling Results for PSD De Minimis Analysis in Micrograms per Cubic Meter (µg/m<sup>3</sup>)**

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
NO <sub>2</sub>	1-hr	19	7.5
NO <sub>2</sub>	Annual	0.4	1
CO	1-hr	769	2000
CO	8-hr	276	500
PM <sub>10</sub>	24-hr	10	5
PM <sub>10</sub>	Annual	3	1
PM <sub>2.5</sub> (NAAQS)	24-hr	7.2	1.2
PM <sub>2.5</sub> (NAAQS)	Annual	1.3	0.13
PM <sub>2.5</sub> (Increment)	24-hr	8.7	1.2
PM <sub>2.5</sub> (Increment)	Annual	1.4	0.13
SO <sub>2</sub>	1-hr	12	7.8
SO <sub>2</sub>	3-hr	12	25
SO <sub>2</sub>	24-hr	4.5	5
SO <sub>2</sub>	Annual	0.3	1

The pollutants below the de minimis level should not cause or contribute to a violation of the NAAQS and are protective of human health and the environment.

<sup>2</sup> The GLC<sub>max</sub> is the maximum ground level concentration predicted by the modeling.

The Applicant conducted a full NAAQS analysis (PSD NAAQS and Minor NSR NAAQS) for those pollutants above de minimis to account for cumulative effects by including an evaluation of all on-property sources, applicable off-property sources, and representative monitored background concentrations. The de minimis analysis modeling results indicate 1-hr SO<sub>2</sub>, 24-hr and annual PM<sub>10</sub>, 24-hr and annual PM<sub>2.5</sub>, and 1-hr NO<sub>2</sub> exceed the respective de minimis concentration and require a full impacts analysis. Results of the NAAQS analysis are presented below in Table 2 and Table 3 below.

The total concentration was determined by adding the GLC<sub>max</sub> to the appropriate background concentration. Background concentrations are obtained from ambient air monitors across the state and are added to the modeled concentration (both on-property and off-property sources) to account for sources not explicitly modeled. The ambient air monitors were selected to ensure that they are representative of the proposed site. The total concentration was then compared to the NAAQS to ensure that the concentration is below the standard. For any subsequent projects submitted pertaining to this or any other facility in the area, the air quality analysis for that project will have to include the emissions authorized by this project, as well as other applicable off-property sources, if a full impacts analysis is required.

**Table 2. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLC <sub>max</sub> ] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	11	16	27	196
PM <sub>10</sub>	24-hr	10	82	92	150
PM <sub>2.5</sub>	24-hr	6	20	26	35
PM <sub>2.5</sub>	Annual	1.3	7.5	8.8	9
NO <sub>2</sub>	1-hr	87	See discussion*	87	188

\* A background concentration for NO<sub>2</sub> was obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The Applicant determined the 98th percentile of the annual distribution of the maximum 1-hr concentrations for each hour of the day (using data from 2020-2022), consistent with EPA guidance. These background values were then used in the model (as hourly background scalars) to be combined with model predictions, giving a total predicted concentration. The use of the monitor was determined to be reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site.

**Table 3. Total Concentrations for Minor NSR NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLC <sub>max</sub> ] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
Pb	3-mo	0.0001	0.02	0.0201	0.15

The NAAQS analysis results are below the standard for each pollutant, should not cause or contribute to violation of the NAAQS, and are protective of human health and the environment.

#### Air Quality Monitoring

The de minimis analysis modeling results indicate that 24-hr PM<sub>10</sub> exceeds the respective monitoring significance level and requires the gathering of ambient monitoring information. Additionally, the de minimis analysis modeling results indicate that 24-hr SO<sub>2</sub>, annual NO<sub>2</sub>, and 8-hr CO are below their respective monitoring significance level, as Shown in Table 4 below.

**Table 4. Modeling Results for PSD Monitoring Significance Levels**

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	Significance (µg/m <sup>3</sup> )
SO <sub>2</sub>	24-hr	4.5	13
PM <sub>10</sub>	24-hr	10.1	10
NO <sub>2</sub>	Annual	0.4	14
CO	8-hr	276	575

The GLC<sub>max</sub> for all pollutants and averaging times represent the maximum predicted concentrations over five years of meteorological data.

The updated NO<sub>x</sub> emission rates for the kiln (EPN 21-SK-230) are less than the representations made in the original modeling demonstration. The applicant did not update the NO<sub>2</sub> modeling for this demonstration. The annual NO<sub>2</sub> result reported above in Table 3 is conservative.

The applicant evaluated ambient PM<sub>10</sub> and PM<sub>2.5</sub> monitoring data to satisfy the requirements for the pre-application air quality analysis. A background concentration for PM<sub>10</sub> was obtained from the EPA AIRS monitor 481130050 located at 717 South Akard St. Dallas, Dallas County. The high, second high monitored concentration from 2020-2022 was used for the 24-hr value (82 µg/m<sup>3</sup>). The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site. The background concentration was also used in the NAAQS analysis.

Background concentrations for PM<sub>2.5</sub> were obtained from the EPA AIRS monitor 481210034 located at Denton Airport South, Denton, Denton County. The applicant calculated the three-year average (2020-2022) of the 98th percentile of the annual distribution of the 24-hr concentrations for the 24-hr value (20 µg/m<sup>3</sup>). The applicant used a three-year average (2020-2022) of the annual concentrations for the annual value (7.5 µg/m<sup>3</sup>). The use of the monitor is reasonable based on the applicant's review of land use, county population, county emissions, and a quantitative review of emissions surrounding the area of the monitor site relative to the project site. The background concentrations were also used in the NAAQS analysis.

Since the project has a net emissions increase of 100 tpy or more of VOC or NO<sub>x</sub>, the applicant evaluated ambient O<sub>3</sub> monitoring data to satisfy the requirements for the pre-application air quality analysis. The applicant identified the Pilot Point ozone monitor (EPA AQS 481211032) as a conservative monitor for the proposed project site location. The applicant further noted how the Pilot Point monitor is located within the Dallas-Fort Worth (DFW) ozone non-attainment area and summarized the 2020-2022 ozone design value for the monitor without further refinement. The Air Dispersion Modeling Team (ADMT) has reviewed the ozone monitoring data for further refinement and this review is discussed below.

Initially, during the modeling protocol development, the applicant had proposed using the Greenville ozone monitor (EPA AQS 482311006) for the proposed project site location. The ADMT had commented that the proposed project site location is likely to be located downwind of the DFW ozone non-attainment area more often than the selected Greenville monitor, based on wind data, and it is likely that the Greenville monitor would not be representative of the proposed project site location for all wind directions and should not be exclusively used in the pre-application analysis.

The ADMT reviewed monitoring data from two additional ozone monitors to identify ozone concentrations during times when the proposed project site location could have been located downwind of the DFW ozone non-attainment area – the above-mentioned Pilot Point monitor and the Frisco monitor (EPA AQS 480850005). Collectively, the information from these two monitors, along with the Greenville monitor, gives a complete analysis for the proposed project site location.

The Pilot Point ozone monitor is located to the southwest of the proposed project site location. A sector was defined with an origin at the Pilot Point monitor and that covered the extent of the modeled receptor grid surrounding the proposed project site location. The sector was then used to identify wind directions favorable for transport towards the proposed project site location (220–265 degrees). Ozone data were reviewed during these wind directions for years 2020-2022 and the highest fourth highest daily maximum hourly value from all three years was 64 ppb. This would be a conservative metric for the ozone design value; the ozone design value is based on a three-year average of the fourth highest daily maximum rolling 8-hr average.

The Frisco ozone monitor is located to the south-southwest of the proposed project site location. Similar to the Pilot Point ozone monitor described above, a sector was defined with an origin at the Frisco monitor and that covered the extent of the modeled receptor grid surrounding the proposed project site location. The sector was then used to identify wind directions favorable for transport towards the proposed project site location (178–215 degrees). Ozone data were reviewed during these wind directions for years 2020-2022 and the highest fourth highest daily maximum rolling 8-hr average value from all three years was 69 ppb. This would be a conservative metric for the ozone design value; the ozone design value is based on a three-year average of the fourth highest daily maximum rolling 8-hr average.

The Greenville ozone monitor has an ozone design value of 63 ppb for the years 2020-2022.

### PSD Increment Analysis

The PSD program limits the extent to which air quality may be allowed to deteriorate in areas where pollutant concentrations are below the NAAQS (attainment areas). Increases in pollutant concentrations over the background are limited to certain increments, which are values specified by EPA at 40 CFR § 52.21(c). When the de minimis analysis modeling indicates that a criteria pollutant exceeds its respective de minimis concentration, a PSD increment analysis is necessary for those criteria pollutants for which EPA has established an increment. The de minimis analysis modeling results indicate that 24-hour and annual PM<sub>10</sub> and 24-hour and annual PM<sub>2.5</sub> exceed the respective de minimis concentrations and require a PSD increment analysis. The results of the PSD Increment Analysis are shown in Table 5 below.

**Table 5. Results for PSD Increment Analysis**

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	Increment (µg/m <sup>3</sup> )
PM <sub>10</sub>	24-hr	29	30
PM <sub>10</sub>	Annual	3	17
PM <sub>2.5</sub>	24-hr	8.7	9
PM <sub>2.5</sub>	Annual	1.4	4

### Ozone Analysis

The Applicant performed an O<sub>3</sub> analysis as part of the PSD Air Quality Analysis (AQA). The Applicant evaluated project emissions of O<sub>3</sub> precursor emissions (NO<sub>x</sub> and VOC) based on a Tier 1 demonstration approach consistent with the EPA's Guideline on Air Quality Models (GAQM). Specifically, the applicant used a Tier 1 demonstration tool developed by the EPA referred to as Modeled Emission Rates for Precursors (MERPs). Using data associated with the worst-case source for NO<sub>x</sub> and VOC, the applicant estimated an 8-hr O<sub>3</sub> concentration of 0.99718 ppb. When the estimates of ozone concentrations from the project emissions are added together, the results are less than the de minimis level, as shown in Table 6 below.

**Table 6. Modeling Results for Ozone PSD De Minimis Analysis in Parts per Billion (ppb)**

Pollutant	Averaging Time	GLC <sub>max</sub> (ppb)	De Minimis (ppb)
O <sub>3</sub>	8-hr	0.997	1

### Additional Impact Analysis

The Applicant performed an Additional Impacts Analysis as part of the PSD AQA. The applicant conducted a growth analysis and determined that population will not significantly increase as a result of the proposed project. The applicant conducted a soils and vegetation analysis and determined that all evaluated criteria pollutant concentrations are below their respective secondary NAAQS. The applicant meets the Class II visibility analysis requirement by complying with the opacity requirements of 30 TAC Chapter 111. The Additional Impacts Analyses are reasonable and possible adverse impacts from this project are not expected.



The ADMT evaluated predicted concentrations from the proposed project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Wichita Mountains Wilderness, is located approximately 225 kilometers (km) from the proposed site.

The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration of 7 µg/m<sup>3</sup> occurred approximately 243 meters from the property line towards the west. The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration occurring at the edge of the receptor grid, 10.6 km from the proposed sources, in the direction of the Wichita Mountains Wilderness Class I area, is 0.526 µg/m<sup>3</sup>. The Wichita Mountains Wilderness Class I area is an additional 214.4 km from the edge of the receptor grid. Therefore, emissions of H<sub>2</sub>SO<sub>4</sub> from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

The predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times, are all less than de minimis levels at a distance of 7.3 km from the proposed sources in the direction of the Wichita Mountains Wilderness Class I area. The Wichita Mountains Wilderness Class I area is an additional 217.7 km from the location where the predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

#### Effects Screening Levels (ESLs) – Health Effects Analysis

To evaluate potential impacts of non-criteria pollutants, a health effects analysis was performed. ESLs are specific guideline concentrations used in TCEQ's evaluation of certain non-criteria pollutants. These guidelines are derived by the TCEQ's Toxicology Division and are based on a pollutant's potential to cause adverse health effects, odor nuisances, and effects on vegetation. Health-based ESLs are set below levels reported to produce adverse health effects, and are set to protect the general public, including sensitive subgroups such as children, the elderly, or people with existing respiratory conditions. The TCEQ's Toxicology Division specifically considers the possibility of cumulative and aggregate exposure when developing the ESL values that are used in air permitting, creating an additional margin of safety that accounts for potential cumulative and aggregate impacts. Adverse health or welfare effects are not expected to occur if the air concentration of a pollutant is below its respective ESL. If an air concentration of a pollutant is above the screening level, it is not necessarily indicative that an adverse effect will occur, but rather that further evaluation is warranted.

The health effects analysis is performed using the TCEQ guidance Air Permit Reviewer Reference Guide – APDG 5874 - Modeling and Effects Review Applicability (MERA) process.<sup>3</sup> The MERA is a step-by-step process to evaluate the potential impacts of non-criteria pollutants which are evaluated against the ESL for each chemical species. The initial steps are simple and conservative, and as the review progresses through the process, the steps require more detail and result in a more refined analysis. If the contaminant meets the criteria of a step, the review of human health and welfare effects for that

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<sup>3</sup> See APDG 5874 guidance document.

chemical species is complete and is said to “fall out” of the MERA process at that step because it is protective of human health and welfare. Any non-criteria pollutants proposed to be authorized which were below their respective ESLs are considered to have satisfied the MERA criteria and would not be expected to cause adverse health effects. As described above, if an air concentration of a pollutant is above the ESL, it is not indicative of an adverse effect but rather that further evaluation is warranted.

The potential for odor nuisance is reviewed through the use of ESLs. All pollutants, except for those identified in Table 7 below satisfy the MERA criteria and therefore are not expected to cause adverse health effects. The pollutants identified in Table 7 did not meet the criteria of the MERA guidance document and required further analysis.

**Table 7. Minor NSR Site-wide Modeling Results for Health Effects**

Pollutant	CAS#	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	GLC <sub>max</sub> Location	ESL (µg/m <sup>3</sup> )
ammonia	7664-14-7	1-hr	17	Eastern Property Line	180
hydrogen chloride	7647-01-0	1-hr	0.3	--	190
hydrogen chloride	7647-01-0	Annual	0.01	--	7.9
mercury	7439-97-6	1-hr	0.0004	--	0.25
portland cement	65997-15-1	1-hr	53	Southern Property Line	50
portland cement	65997-15-1	Annual	1	15m N	5
silica, crystalline (quartz)	14808-60-7	1-hr	2	Northern Property Line	14
silica, crystalline (quartz)	14808-60-7	Annual	0.07	Southern Property Line	0.27

Site-wide modeling was performed and demonstrated that all predicted concentrations except for 1-hour portland cement will not exceed the ESL. The TCEQ Toxicology Division conducted an analysis for 1-hour portland cement, which was the only pollutant with a predicted concentration above its ESL. The TCEQ Toxicology Division evaluated potential exposures and assessed human health risks to the public. Modeling predicts that the short-term GLC<sub>max</sub>/ni for routine emissions of Portland cement will exceed its short-term ESL of 50 µg/m<sup>3</sup> by 1.1 times, with a predicted corresponding frequency of one-times ESL exceedance at the GLC<sub>max</sub>/ni of 1 hour per year. However, the modeled long-term GLC<sub>max</sub>/ni for Portland cement was far below its annual ESL of 5 µg/m<sup>3</sup>. Therefore, considering the magnitude and frequencies of the short-term ESL exceedances at the GLC<sub>max</sub>/ni, the conservative nature of the modeling assumptions using worst-case scenarios and meteorological conditions, public exposure is unlikely at this site, and the fact that the long-term ESL was never exceeded at any receptors, the predicted short- and long-term emissions of portland cement are allowable. In conclusion, based on the modeled representations presented, the Toxicology Division determined no short- or long-term adverse health effects are expected to occur among the general public as a result of exposure to the proposed emissions from this facility.

Therefore, the Toxicology Division determined that the described impacts are acceptable given the conservative nature of both the ESLs and the emissions estimates. Additionally, these original estimates were rendered irrelevant by the revisions later submitted by the applicant, because the dust collector efficiency was doubled, providing filters which are twice as effective in terms of efficiency. This more than halved the emissions from the dust collectors (all sources which handle cement exhaust through dust collectors/baghouse). This would have also halved the concentrations in the model (since concentrations and emission rates are directly related), putting the 1-hour well below the ESL. However, the applicant did not elect to re-evaluate the ESL modeling, leaving the more conservative estimates.

#### Heavy Metals, Dioxins and Furans, and Organic Hazardous Air Pollutants (HAPS)

The heavy metals, mercury or lead could potentially be present in trace amounts in limestone, clays, sands, bauxite, or iron ore used in clinker production. Mercury and lead from cement kilns are specifically regulated by the EPA due to their potential presence, toxicity, and ability to be quantified. Both of these metals were modeled against ESLs and NAAQS, respectively. Other potentially present heavy metals are not expected to be in sufficient concentrations to merit further analysis or regulation. Additionally, mercury has an extremely low effects screening level and is expected to be the most frequently occurring heavy metal in cement. As an example, the short-term ESL for chromium is  $3.6 \mu\text{g}/\text{m}^3$ . The ESL for cadmium is  $5.4 \mu\text{g}/\text{m}^3$ . The short-term ESL for mercury is  $0.25 \mu\text{g}/\text{m}^3$ . Therefore, for cement kilns, demonstrating that emissions of mercury (which are expected in higher amounts) are within health effects guidelines effectively serves as a demonstration that other metals would be expected to not contribute to adverse health effects. Similarly, lead is specifically regulated in terms of allowable emissions from cement kilns and additionally was modeled against its NAAQS standard (results are above). Higher concentrations of heavy metals are typically associated with kilns which burn hazardous waste. The draft permit does not allow the burning of hazardous waste as a fuel at this proposed facility.<sup>4</sup> Additionally, the Applicant modeled against the portland cement ESL. This ESL was developed to account for all compounds which could be found in cement and provide a path for a single modeling demonstration which accounts for all species which could be present in the mixture. Portland cement had a predicted 1-hour exceedance of the ESL of  $53 \mu\text{g}/\text{m}^3$  compared to a 1-hour ESL of  $50 \mu\text{g}/\text{m}^3$ . These emissions were therefore reviewed by the Toxicology Division. The Toxicology Division does not anticipate any short- or long-term adverse health effects to occur among the general public as a result of exposure to the proposed emissions from this facility. This demonstration was also performed prior to the Applicant accepting a more stringent requirement on baghouse control levels. These requirements effectively halved emissions from most sources of portland cement dust. This would have resulted in a predicted concentration below the ESL; however, the Applicant left the demonstration at the more conservative number and did not perform a subsequent demonstration at the new lower emission rate. Therefore, this analysis was extremely conservative.

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<sup>4</sup> See EPA Report to Congress on Cement Kiln Dust, December 31, 1993, available at <https://archive.epa.gov/epawaste/nonhaz/industrial/special/web/pdf/chap-3.pdf>.

Dioxins and furans are terms for a wide range of compounds. Specifically, for the cement industry EPA defines these as tetra-, penta-, hexa-, hepta-, and octa-chlorinated dibenzo dioxins and furans. Additionally, organic hazardous air pollutants (HAPS) can occur due to organics which can occur in some limestone formations. These are defined by the EPA as, "...the sum of the concentrations of compounds of formaldehyde, benzene, toluene, styrene, m-xylene, p-xylene, o-xylene, acetaldehyde, and naphthalene...".<sup>5</sup> The TCEQ does not typically request speciated modeling of these general categories of pollutants, rather it relies upon regulation of stack emission limits for the categories found in 40 CFR 63 (NESHAP) Subpart LLL. The draft permit reflects this rule in requirements for stack concentrations of both categories of pollutants. The EPA states in its Final Rule: Portland Cement Manufacturing Residual Risk and Technology Review Fact Sheet ([https://www.epa.gov/sites/default/files/2018-07/documents/pc\\_neshap\\_rtr\\_final\\_rule\\_fact\\_sheet.pdf](https://www.epa.gov/sites/default/files/2018-07/documents/pc_neshap_rtr_final_rule_fact_sheet.pdf)): "After conducting a risk analysis of facility emissions under the fully implemented MACT standards, EPA found no appreciable health or ecological risks due to air toxics emissions and, thus, risks are acceptable." The same document states that, "MACT standards protect public health with an ample margin of safety, and protect against adverse environmental effects." Therefore, compliance with 40 CFR 63 (NESHAP) Subpart LLL rules relating to compounds such as dioxins and furans and organic HAPS (as well as other hydrocarbons as regulated with the VOC limit) is expected to result in protectiveness. The Applicant performed all demonstrations required by EPA NAAQS standards and TCEQ permitting practices for cement kilns.

#### State Property Line Analysis (30 TAC Chapter 112)

Because this application has sulfur emissions, the Applicant conducted a state property line analysis to demonstrate compliance with TCEQ rules for net ground-level concentrations for sulfur dioxide (SO<sub>2</sub>), hydrogen sulfide (H<sub>2</sub>S), and sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), as applicable. This analysis demonstrated that resulting air concentrations will not exceed the applicable state standard, as shown in Table 8 below.

**Table 8. Site-wide Modeling Results for State Property Line**

Pollutant	Averaging Time	GLC <sub>max</sub> (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	12	1021
H <sub>2</sub> SO <sub>4</sub>	1-hr	22	50
H <sub>2</sub> SO <sub>4</sub>	24-hr	7	15

The proposed emissions increases have been adequately represented and included in the impact analysis. Additionally, TCEQ staff and the ADMT have reviewed the proposed emissions from sources, represented source parameters and locations, point and area source representations, and background concentrations. Based on the data and representations, TCEQ staff and ADMT determined that the modeling analysis was acceptable.

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<sup>5</sup> 40 CFR 63.1341.

In summary, based on the Executive Director's staff review, it is not expected that existing health conditions will worsen, or that there will be adverse health effects on the general public, sensitive subgroups, or the public welfare and the environment as a result of proposed emission rates associated with this project. Please *see* Response 15 for additional information regarding BACT and Response 12 for additional information regarding emissions sources and calculations used to support the application.

### Greenhouse Gases

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is no NAAQS or PSD increment for GHGs. The EPA Administrator has recognized that human-induced climate change has the potential to be far-reaching and multi-dimensional. See Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 75 Fed. Reg. 66496, 66497 (Dec. 15, 2009). Climate change modeling and evaluations of risks and impacts are typically conducted for changes in emissions that are orders of magnitude larger than the emissions from individual projects that might be analyzed in permit reviews. Quantifying the exact impacts attributable to a specific GHG source obtaining a permit in specific places and points would not be possible with current climate change modeling.<sup>6</sup> Thus, EPA has concluded it would not be meaningful to evaluate impacts of GHG emissions on a local community in the context of a single permit.

The TCEQ has determined that an air quality analysis for GHG emissions would provide no meaningful data and has not required the Applicant to perform one. As stated in the preamble to the TCEQ's adoption of the GHG PSD program, the impacts review for individual air contaminants will continue to be addressed, as applicable, in the state's traditional minor and major NSR permits program per 30 TAC Chapter 116 and 30 Tex. Reg. 2629, 2904 (April 11, 2014).

### Crystalline Silica Emissions

Crystalline silica was modeled by the applicant due to its potential presence in cement and its ingredients. All predicted concentrations were below their respective ESLs, as shown above.

### Climate Change

EPA has stated that unlike the criteria pollutants for which EPA has historically issued PSD permits, there is NAAQS for Greenhouse Gases (GHGs), including no PSD increment. Climate change modeling and evaluations of risks and impacts are typically conducted for changes in emissions that are orders of magnitude larger than the emissions from individual projects that might be analyzed in permit reviews. Thus, EPA has concluded it would not be meaningful to evaluate impacts of GHG emissions on a local community in the context of a single permit. For these reasons, the TCEQ has determined that an air quality analysis for GHG emissions would provide no meaningful data and has not required the Applicant to perform one. Based on EPA policies, the TCEQ only regulates GHG emissions when they are associated with federal

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<sup>6</sup> See EPA PSD and Title V Permitting Guidance for GHGs, March 2011 at 48.

major source projects and permits which emit the associated pollutants. This permit does trigger federal major source review and therefore is required to quantify and evaluate GHG emissions, authorized under greenhouse gas permit no. GHGPSDTX212.

#### Emissions from the Quarry and Roads

The TCEQ's jurisdiction is established by the Legislature and is limited to the issues set forth in statute. Accordingly, the TCEQ does not have jurisdiction to enforce employee safety regulations promulgated by the Occupational Safety and Health Association (OSHA) or to consider employee health when determining whether to approve or deny an application for an air authorization. As stated in Response 25, the TCEQ does not have jurisdiction to regulate mines, quarries, or associated blasting. Mines and quarries are specifically excluded from the definition of facility in the TCAA § 382.003(6); therefore, modeling related to mining and quarry operations are outside the scope of review of this application.

The TCEQ does regulate nuisance dust. Accordingly, provisions for visible emissions at the property line, for using a street sweeper on plant roads, and for their paving, maintenance and cleaning were included in the draft permit.

#### EPA Consideration

No proposal was made during the review period to relax emissions, rather the Applicant gradually reduced emission proposals over the course of the review. No reduction was made to averaging periods. EPA provided comments throughout the review process. EPA was in the loop continuously throughout the NO<sub>x</sub> reductions/modeling progress.

#### Summary

In summary, based on the Executive Director's staff review, it is not expected that existing health conditions will worsen, or that there will be adverse health effects on the general public, sensitive subgroups, or the public welfare and the environment as a result of proposed emission rates associated with this project.

#### COMMENT 2: Modeling Details

##### Adequacy of the PSD Modeling Protocol

Commenters expressed general concern regarding representations made in the modeling submittal and question whether the PSD modeling protocol was adequate.

##### Model Representations and Approaches

Commenters questioned the representations made in the modeling submittal, including the represented meteorological data, wind speeds, elevations, surface roughness, off-property sources, receptors, represented stack heights, background concentration representations, and monitor selection. Commenters question the accuracy of the modeling submittal if the information used was not obtained directly from the site. Commenters express concern that local wind data was not utilized,



referring to a local 'weather station' residents installed themselves, and further comment that the terrain classification is incorrect by not using the 'post-build out information'.

#### Monitoring Ambient Conditions

Duncan C. Norton expressed concern that the modeling did not properly account for ambient conditions.

#### Non-Regulated Sources in Model

Commenters request that the Applicant be required to represent mining and quarry operations, truck hauling emissions, and blasting emissions in their modeling submittal in addition to the representations of the cement plant itself.

#### PSD Increment

Commenters expressed concern that the modeling did not correctly calculate incremental PSD emissions.

#### Nearby Facilities and Nonattainment Status

Jeremy Devore questioned a list of facilities in proximity to the proposed plant as it relates to modeling and monitor selection, and further expressed concern that the permit would cause nonattainment status.

#### Modeling Protocol Cycles

David Smith questioned the completion date of the modeling protocol, asking for an explanation of either 'non-posting' or back dating the modeling protocol completion date.

#### Modeling of Lead and Mercury

Mr. Smith asks how far the modeling says mercury and lead emissions will be spread, and in what prevailing wind direction.

#### Changes to the Model and TCEO Approval of Impacts

Deirdre Diamond expressed concern that the application was not originally approved due to the initial modeling submittal showing that there would be a significant deterioration in air quality, further asking what values were not within allowable limits and questioning what changed in the application to meet the new standards for the permit to later be approved.

### Deficiency Responses

Ms. Diamond cited various deficiency items from the ADMT with regard to the Electronic Modeling Evaluation Workbook (EMEW) review and various modeling submittals, asking how and when each deficiency item was addressed, how each item was updated, how each item was reviewed and approved for accuracy, and asks how the applicant complied with all current modeling standards.

### Accuracy of the Model

Ms. Diamond asks if the modeling reflects the most accurate depiction of the impact to the local environment.

### Off-Property Sources

Ms. Diamond asks how TCEQ factored in outside and off property sources in the modeling submittal, asks what outside and off property sources were represented, and asks how a permit can be approved when the modeling results are just below the current standards. Ms. Diamond asks how the area is not considered as a nonattainment area when factoring in the cumulative and surrounding air quality from nearby concrete batch plants.

### Receptor Grids

Ms. Diamond asks what receptor sites were identified during the modeling process, what the predicted values are, what numerical changes to air quality are for each pollutant analyzed and asks for the furthest distance of a receptor identified in the modeling.

(Nancy Brown, Kristin Chandler, Megan C. Chandler, Cassady A. Craddock, Linda Carol Crain, Bruce Dawsey, Jeremy Devore, Jeremy W. Devore, Deirdre Diamond, Judith S. Dryden, Harold C. Foster, Chloe Grooms, Joshua Grooms, Lisa Hejny, Lori Huntsman, Suzanna Dryden Jensen, Ken King, Rick Kvaal, Cindy Kvaal, William Landrum, Christopher A. Lopez, Jim Lucas, Trudy Lucas, Karla McDonald, Davida Miorin, Cindy Mitchell, Duncan C. Norton, Jeff Overstreet, Sherry Perrin, Kathy Raner, Justin Neal Raner, Russell Rutherford, Bradley J. Schnitker, Marci Schnitker, Peter Schulze, Betty Scott, David Smith, Wendy Smith, Sr Bobby Overbey Sr., Chandler Strawn, Sathappun Subbiah, Tonya Troxtell, Becky Vincent, Mark Vodry, Kimberly Vodry, Leonard G. Waldrum, Cynthia L. Weems)

**RESPONSE 2:** Grayson County is currently designated as being in attainment or unclassifiable for all pollutants. An impacts analysis was conducted for this project and demonstrates that the proposed facility will not cause or contribute to an exceedance of the NAAQS; therefore, the project is not expected to cause the county to be designated as nonattainment.

### Adequacy of the PSD Modeling Protocol

A modeling protocol provides information and details on how the AQA will be conducted. The applicant provided a modeling protocol with the submittal of the air permit application. This modeling protocol was reviewed by the TCEQ's Air Dispersion Modeling Team (ADMT), and comments were sent to the applicant. The applicant made revisions to the modeling protocol to address ADMT comments, and this cycle repeated up to the submittal of the air quality analysis.

### Model Representations and Approaches

For this air permit application, appropriate site-specific air dispersion modeling was performed. The applicant used the EPA-preferred AERMOD air dispersion modeling program to provide an estimate of the worst-case potential impacts on the area surrounding the proposed project site. The modeling procedures, methodology, predictions, and results were reviewed by ADMT, and the analysis was determined to be acceptable.

The purpose of the air dispersion modeling analysis for the New Source Review (NSR) preconstruction permitting program is to estimate reasonable worst-case pollutant concentrations using representative meteorological data, acceptable modeling techniques, and source data represented in the air permit application. The collection and use of on-site meteorological data is not a requirement when conducting air dispersion modeling in support of the NSR preconstruction permitting program. TCEQ and EPA guidance allow for the use of off-site meteorological data collected by a nearby National Weather Service (NWS) station when conducting air dispersion modeling provided that the NWS meteorological data are representative for the project site. An important component to meteorological data representativeness is whether or not the worst-case meteorological conditions have been sufficiently represented in the meteorological dataset. With five years of hourly NWS meteorological data used in the air dispersion modeling analysis, the worst-case meteorological conditions have been sufficiently represented in the dataset.

With respect to terrain used for the project site location, the applicant will be held to the representations made for the terrain elevations used for the proposed sources. And these could reflect project site preparation and/or grading work.

### PSD Increment

Air dispersion modeling is not used to calculate incremental Prevention of Significant Deterioration (PSD) emissions. However, the PSD increment analysis conducted for this air permit application evaluated the proposed emissions and emissions from nearby off-property increment consuming sources. The results for the increment analysis demonstrate the proposed emissions would not cause or contribute to a PSD increment violation.

### Nearby Facilities and Nonattainment Status

Jeremy Devore questioned a list of facilities in proximity to the proposed plant as it relates to modeling and monitor selection. Mr. Devore identified regulated entities (RNs) located within 10 kilometers (km) of the project site and noted that they were not included in the off-property inventory. The commentor also provided an excerpt from the modeling protocol (*Table 7-8. Emissions Inventory Data for PM<sub>2.5</sub> Sources within 10 km of Site and Monitor*) and noted how the Panda Sherman Power station is the only company reported as being included. Below is a summary for each of the identified RNs located within 10 km of the project site:

- RNs 100671619, 100739929, 100858299, 100954346, 101469237, 103064853, 110823325, and 111213443 – emissions from these RNs were explicitly modeled in the air quality analysis.
- RNs 100217223, 110780335, and 111112314 – emissions from these RNs were accounted for in the AQA with ambient monitoring data.
- RN 100603737 – not permitted for SO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub>.
- RNs 102863081, 106503014, and 111053344 – permits are no longer active and void.
- RNs 105672687 and 108772588 – no longer active RN numbers.

The excerpt provided from the modeling protocol is a listing of RNs located within 10 km of the project site and within 10 km of an ambient monitor, and their associated emissions data for PM<sub>2.5</sub>. These emissions data are from the State of Texas Air Reporting System database and are reported by the RNs to TCEQ annually. Not all RNs are required to report emissions data (see Title 30 Texas Administrative Code § 101.10 for reporting requirements); therefore, this list is not meant to represent all RNs. These emissions data are used with other supporting information to justify the use of ambient monitoring data in the air quality analysis.

Also, regarding this excerpt, the commentor questioned the value of zero for PM<sub>2.5</sub> for Atrium Companies. For the most recent emissions reporting year (2022), Atrium Companies only reported emissions for volatile organic compounds.

### Monitoring Ambient Conditions

The purpose of the air dispersion modeling analysis for the NSR preconstruction permitting program is to estimate reasonable worst-case pollutant concentrations using representative meteorological data, acceptable modeling techniques, and source data represented in the air permit application. The collection and use of on-site meteorological data is not a requirement when conducting air dispersion modeling in support of the NSR preconstruction permitting program. TCEQ and EPA guidance allow for the use of off-site meteorological data collected by a nearby NWS station when conducting air dispersion modeling provided that the NWS meteorological data are representative for the project site. An important component to meteorological data representativeness is whether or not the worst-case meteorological conditions have been sufficiently represented in the meteorological dataset. With five years of hourly NWS meteorological data used in the air dispersion modeling analysis, the worst-case meteorological conditions have been sufficiently represented in the dataset.

### Non-Regulated Sources in Model

TCEQ does not have regulatory jurisdiction over quarry operations or any associated blasting, roads, or trucks per THSC § 382.003(6). Accordingly, the TCEQ rules do not require an applicant to analyze emissions resulting from quarry operations, blasting, roads, or the use of trucks in an individual permit application. The draft permit forbids the use of blasting as a nuisance dust prevention measure, and the Applicant has represented that it will not be necessary for quarrying activities. No air dispersion modeling was requested or required specifically relating to the quarry, roads, or trucks. However, mobile sources are accounted for as part of the background concentration used as part of NAAQS analysis.

### Modeling Protocol Cycles

Multiple modeling protocols were provided during the air permit application review process. The reviews conducted for the modeling protocols were completed on the following dates: December 8, 2021; May 19, 2022; August 23, 2022; and January 23, 2023. There was no modeling protocol cycle during the time between March 28, 2023 and March 31, 2023.

### Modeling of Lead and Mercury

The maximum predicted concentration of mercury occurred approximately 2.5 km to the south-southeast of the project site property. For the lead model predictions, the maximum predicted concentration occurred along the northwestern project site property line. Maximum predicted concentrations of mercury and lead were less than the ESL and NAAQS, respectively, at all modeled locations.

The model does not explicitly determine how far the emissions will spread. Calculations performed by the model will be conducted for all receptors included in the modeling analysis, even at those receptors located at distances that are not reachable given the hourly transport data. The model used in the air quality analysis, AERMOD, is appropriate to use for transport distances over which steady-state assumptions occur, out to 50 km.

### Changes to the Model and TCEQ Approval of Impacts

The air permit application underwent numerous deficiency cycles and revisions related to the proposed NO<sub>x</sub> emissions. TCEQ worked closely with the EPA on modeling approaches and did not accept the applicant's originally proposed NO<sub>x</sub> emission rates and resultant expected effects on air quality in the area of the proposed project. The applicant revised the air permit application and proposed NO<sub>x</sub> limits which were roughly one third of the amount originally proposed. This was achieved through proposing and accepting a permit limit of 0.54 lbs of NO<sub>x</sub> per ton of clinker. This limit is much more stringent than the 1.50 lbs of NO<sub>x</sub> per ton of clinker which other cement kilns in the US are required to comply with. This will be achieved through the use of a selective catalytic reduction (SCR) technology (widely used in other industries since the 1950s, and in cement kilns in Europe since 2001) or a combination of SCR and Selective Non-Catalytic Reduction (SNCR) to reduce NO<sub>x</sub>. This draft permit limit and the attendant reduction in emissions from the kiln resulted in ADMT approval of the

modeling analysis and its approach. Additionally, the Applicant later requested more stringent bagfilter requirements for most sources (which reduced PM emissions) and demonstrated compliance with the revised annual PM<sub>2.5</sub> NAAQS standard.

### Deficiency Responses

The AQA submitted by the applicant was reviewed by TCEQ's ADMT, and comments were sent to the applicant. The applicant provided responses and made updates to the AQA to address ADMT comments, and this cycle repeated up to the acceptance of the air quality analysis. The Applicant addressed all items identified by the TCEQ and ADMT staff, and responses to each item can be found in the permit file. *See* Response 10 regarding Application Representations and the Permit Review Process, and Response 9 regarding Access to Permit Documents.

The modeling procedures, methodology, predictions, and results were reviewed by ADMT, and the analysis was determined to be acceptable. The review process involves several parts. The first part of the process is to review the modeling methodology. Usually, the methodology is prescribed by established standard modeling procedures or practices. An example would be a NAAQS demonstration. First, the applicant models their net emissions increase to determine if a significant increase in any criteria pollutant's concentration in ambient air would be predicted. If the increase in concentration is not significant, then the demonstration would be complete. If the increase in concentration is significant, then a full NAAQS demonstration would follow. The prescribed methodology is to model all the sources at the site and all surrounding sources of the pollutant that could contribute to the area surrounding the site where the proposed increase is significant. A representative monitored background value would then be added to this result. The second part is to review the model inputs for consistency with the modeling report and the air permit application. The applicant is expected to represent all input data, e.g., source identifiers, elevations, locations, and exit parameters; building and structure locations, elevations, and dimensions; meteorological data for the proper period; and elevations of receptors where concentrations are calculated. ADMT checks all representations against what was actually modeled. The third part of the review is to determine whether the source characterizations are representative and/or appropriate. A vent or stack is easily represented as a point source; however, for other types of sources with emissions not originating from a vent or stack, the representation can vary. ADMT determines whether the source characterizations are representative or, if not, are represented in a conservative manner such that predicted concentrations should overestimate what ambient air concentrations would be.

### Accuracy of the Model

The purpose of the air dispersion modeling analysis for the NSR preconstruction permitting program is to estimate reasonable worst-case pollutant concentrations using representative meteorological data, acceptable modeling techniques, and source data represented in the air permit application.



### Off-Property Sources

For purposes of evaluating off-property sources, the applicant considered multiple items: explicitly modeling off-property sources, ambient monitoring data, project-level modeling results, and distances and magnitude of emissions. The off-property sources evaluated in the AQA are documented in the analysis provided by the applicant.

The AQA submitted by the applicant has been deemed acceptable, that is, the applicant has demonstrated the operation of the proposed facilities would not cause or contribute to a NAAQS or PSD increment violation, exceed a state property line standard, or adversely affect human health and welfare. As a result, the project is not expected to cause the county to be designated as nonattainment for any criteria pollutant.

### Receptor Grids

The air dispersion modeling utilizes receptor grids for prediction of concentrations at specific points in the model. The applicant used receptor grids that began at the fence line and extended outward to determine model predictions in ambient air. Therefore, what the commenter referred to as "receptor sites" do not need to be identified. The ESL based analyses can utilize specific locations on the modeled grid to determine the nature of certain receptors, specifically whether they are industrial or non-industrial. In this case the area surrounding the proposed project site was considered non-industrial. The maximum predicted concentration at the fence line or beyond for each pollutant are reported above.

The modeled receptor grid extended from the fence line out to approximately 10 kilometers (km) for all pollutants and analyses except for the 1-hr NO<sub>2</sub> analysis. The 1-hr NO<sub>2</sub> analysis had a receptor grid that extended from the fence line out to approximately 25 km.

### COMMENT 3: Dust / Nuisance / Winds

Commenters expressed concern about dust generated by the proposed project and that it may create nuisance dust conditions. Commenters expressed concern that the prevailing winds would carry dust and particulate matter to their homes, vehicles, and to the surrounding area. Jeffrey Brown expressed concern that the proposed emissions would contaminate nearby air handling systems. Jeffrey Overstreet asks if surrounding cities have been contacted with information about the average wind speed and direction that will push emissions into surrounding areas

David Smith expressed concern that PM which is fogged out of the air, dries, and becomes airborne again when the wind changes direction has not been considered in the application.

(Janice Akins, Samantha Allison, Amber Armendariz, Art Arthur, Sesily Babekuhl, Willies Ballou, Willies Carl Ballou, Robert Bauer, Heather Beaver, Ashley Beck, Francis Beck, James C. Boles, Jeffrey Brown, Jennifer Bullard, Veronica Calzada, Megan C. Chandler, Lee Collins, R. D. Cozad, Amanda Crawford, Stephanie Davidson, Bruce Dawsey, Thomas G. Debner, Jeremy Q. Devore, Jeremy Devore, Kathleen Dophied,

Judith S. Dryden, Michael Fannin, James N. Flanery, Adam Fleming, Bobby Fletcher, Lindsey Flores, Harold Foster, Frank Edward Gadek, Austin Grooms, Joshua Grooms, Jennifer Haeg, Ginger Ham, Dave Hammond, Jim L. Harvey, Lisa Hejny, Moses Hejny, Sarah Henry, Donna Hepner, Melissa Hill, Don Horn, Robin A. Horner, Scott Horner, Jen Huff, Alice Hughes, Lori Huntsman, Suzanna Dryden Jensen, Cynthia J. Kaleri, Ken King, Geri V. King, Laura L. King, Peggy Klas, Detra Klas, Anthony J. Kordosky, Rick Kvaal, Cindy Kvaal, William Landrum, Julie Lanicek, Jason R. Lankford, Jason Lankford, Patrick Latona, Mary Little, Christopher A. Lopez, Eric Lunde, Brian Mai, George Mason, Catherine Matuella, Dusty Wayne Mayer, William Mayer, Traci McCarthy, Traci McCarthy, Karla McDonald, Angela Moreau, Mary Morgan, Sharon Nelson, Paul Nixon, Margie Noel, Erica Northrup, Angie Onley, Bonita L. Overbey, Bobby N. Overbey, Jeff Overstreet, Jody Perry, Joshua D. Price, Lindsay Price, Delfina Prisock, Craig Rabe, Kathy Raner, Justin Neal Raner, Richard Reeves, Patsy A. Reeves, Joy Roberts, Mona Robnett, Brian Russell, Linda Russell, Shannon Ryan, Carrie Saindon, Joann Schnitker, Betty Scott, Derek Smith, David Smith, Drew Springer, Sara Sprinkle, James Stewart, Alice Stewart, Robert Stewart, Shirley Stewart, Chandler Strawn, Sathappun Subbiah, James Sutherland, Kenneth Svehlak, Sue Svehlak, Thomas Leland Taylor, Thomas L. Taylor, Julie Travis, Tonya Troxtell, Kristi Utley, Diana Vanbuskirk, Jenny Vonbehren, Jay Voto, Leonard G. Waldrum, Leonard G. Waldrum, Cameryn P. Warren, Manual Watson, Ronnie Whiteley, Rebecca Zey, Tracie Zweifel-Gibson, Gary Schnitker, Paula Neely, Robin Sears, Angela Onley, Borming Wang, Kenneth J. King)

**RESPONSE 3:** The primary activities that have the potential to emit particulate matter (i.e. dust) resulting from this project are the processing, storage, and handling of raw materials. All of the potential dust concentrations from the permitted sources have been evaluated based on operating parameters represented in the application and compared to the federal criteria mentioned above. The proposed permit contains the required control processes to minimize dust. When a company operates in compliance with the proposed permit there should be no deterioration of air quality or the generation of dust such that it impacts visibility. While nuisance conditions are not expected if the facility is operated in compliance with the terms of the permit, operators must also comply with 30 TAC § 101.4, which prohibits nuisance conditions.

Emission calculations are based on worse case emission scenarios for each facility. Air dispersion modeling is performed with worst case data which includes the effects of terrain, structures, wind, and temperature. Therefore, because a successful model demonstration shows that there should be no adverse effects from operations of the proposed plant under the worst-case conditions, normal operations will also have no expected adverse impacts.

#### **COMMENT 4: Environmental Concerns**

Commenters expressed concern about the effect of the proposed project on flora, fauna, and the surrounding environment. Commenters expressed concern about the potential impacts to nearby wildlife and plants, including but not limited to farmland, crops, pets, ranches, tree farms, livestock, cattle, horses, butterflies, bees, opossums, coyotes, bobcats, squirrels, geese, ducks, hawks, falcons, migratory birds, bald eagles, red bellied woodpeckers, and other endangered species. Commenters expressed concern regarding the impact on a nearby wildlife refuge. Jan Broomall expressed

concern for their miniature horse business, stating that their property is a certified wildlife habitat and bluebird sanctuary. Melissa Gail Croney expressed concern that wildlife in the area would be pushed out of their natural habitats and force them into the surrounding neighborhoods because of the project. Jeffery Overstreet asks how the proposed project will affect his cattle, specifically the quality of their meat and ability to reproduce, as well as asks how the project will affect hay quality and if it will impact the selling price. Mr. Overstreet also asks how the terrain will change due to the plant.

(Novin Abdi, Silvia Adams, Janice Akins, Ralph H. Armstrong, Ralph Armstrong, Art Arthur, Amy Ashlock, Andrea Paulette Aslam, Sesily Babekuhl, Keith Baehmann, Willies Ballou, Willies Carl Ballou, Darla Barr, Heather Beaver, Ashley Beck, Francis Beck, Blake C. Beeson, Deanna Bell, Gary Bennett, Tonya Bingham, James C. Boles, Nolan E. Bond, Nancy Bond, Linda Bowers, Paul David Bowers, Kristopher Daniel Bravo, Ashlin Bridwell, Jan Broomall, Nancy Brown, Jeremiah Broyles, Marie Burns, Brenna Butler, Veronica Calzada, Eric Cantu, Tommy Joe Carney, Cary Catching, Paula A. Cavender, Shane Cavender, Andrew Cellars, Corey Chambers, Nicole Chambers, Bobby Luke Chandler, Kristin Chandler, Laura Childress, Art Clayton, Robert Clough, Margaret Coleman, Lee Collins, Traber Cozad, Camryn Craddock, Cassady A. Craddock, Matthew Crain, Melissa Gail Croney, Donald Ray Cummings, Karen Cummings, Atul Dave, Angela Davidson, Alicia Davis, Julie Davis, Bruce Dawsey, Bruce W. Dawsey, Shawna Dawson, Thomas G. Debner, Jeremy Q. Devore, Jeremy Devore, Mary Gail Devore, Jeremy W. Devore, Joanne Dickey, Tiffany Drake, Judy Searcy Dryden, Robert E. Dryden, Judith S. Dryden, Searcy Dryden, William Engle, Angelica Escalera, Rachel Evans, Michael Fannin, Barrett Fannin, Lisa Flaggert, Lisa Marie Flaggert, Adam Fleming, Lindsey Flores, Frank Edward Gadek, Andrea Ganow, Rex Glendenning, Roberto Gonzalez, Patricia C. Gonzalez, Misty Gray, Linda J. Greenfield, Brandon Grooms, Joshua Grooms, Chloe Grooms, Rachel Grooms, Jennifer Haeg, Teresa M. Hall, Ginger Ham, Matt Hardenburg, Jim L. Harvey, Rod Hawkins, Patricia Hedrick, Moses Hejny, Lisa Hejny, Sarah Henry, Joann Hensley, Donna Hepner, Amy Hertel, Katerina Hess, Dwayne Hicks, Melissa Hill, Amy Hoffman-Shehan, Suzanne Hooks, Don Horn, Charity Horne, Scott Horner, Helen Horton, Jen Huff, Alice Hughes, Laura T. Hunt, Debbie Hurd, Billie Charels Ingram, Phyllis D. James, Suzanna Dryden Jensen, Liberty Johnson, Elizabeth Jones, Jake Jones, Mary Karam, James Kimbrel, Geri V. King, Laura L. King, Ken King, Keith Kisselle, Anthony J. Kordosky, Cindy Kvaal, Irms Kyle, Amanda Lambert, Chris Landino, William Landrum, Julie Lanicek, Jason R. Lankford, Val Lauerhahs, Crystal Lawson, Rhonda Lawson, Patsy Lemaster, Kylee Likarish, Victor Lissiak, Trudy Lucas, Eric Lunde, Dakotah Mahan, Rickey J. Malta, Josh Marr, Michael Gene Marsh, Monica Martin, Brittany Martin, George Mason, Catherine Matuella, Dusty Wayne Mayer, Traci McCarthy, Traci McCarthy, Claudia L. McClure, Les McConnell, Garrett McCown, Vivian Robin McCoy, Karla McDonald, Kevin Meissner, Davida Miorin, Michael J. Mitchusson, Joyce L. Moore, Mary Morgan, Jason Morin, Shandi Morris, Matthew Morris, Terry Morrison, Ashley Morrow, Sierra Mueller, Karen Murphy, Rick Myer, Chris Nicoloff, Marie Nixon, Marye Jean Norman, Duncan C. Norton, Angie Onley, Melinda Ortle, Jeff Overstreet, Jeffrey Tyler Overstreet, Paula Overstreet, Tyler Overstreet, Nikolaus Owen, James Parrish, Trent Patterson, Holland Paula, Jody Perry, Emily Powell, Lindsay Price, Delfina Prisock, Chelsey Pulcheon, Craig Rabe, Kathy Raner, Justin Neal Raner, Alan Redd, Laura Reeves, Kevin Diaz Reyes, Charity Riley, Mary Roberts, Mark Douglas Robison, Brad Robnett, Mona Robnett, Elizabeth Rodriguez, Mel Ronduen, Sharla Ross, Kara Royston, Bettye Russell, Linda Sue Russell,

Carrie Saindon, Jim Schermbeck, Marci Schnitker, Bradley J. Schnitker, Mary J. Scott, Betty Scott, Racheal Sedmack, True Shaw, David Sims, Sharon Slaughter, David Smith, Reggie Smith, Derek Smith, Leann Smith, Randall Spencer, Cynthia Annk Spencer, Sara Sprinkle, Roxanne Standerfer, Robert Stewart, Shirley Stewart, Alice Faye Stewart, Stephanie Strawn, Chandler Strawn, Dana Strong, Sathappun Subbiah, James Sutherland, Kenneth Svehlak, Sue Svehlak, Meghan Swindle, Thomas Taylor, Thomas L. Taylor, Thomas Leland Taylor, Shawn C. Teamann, Cristi Tenant, Alyssa Thomas, Dana Thornhill, Julie Travis, Tonya Troxtell, Kristi Utley, Diana Vanbuskirk, Mickinze Vanherpen, Marilyn Sue Vest, Becky Vincent, Larry W. Vincent, Kimberly Vodry, Mark Vodry, Darren W., Leonard G. Waldrum, Bihfang Wang, Brian Wang, Mingyan Ward, John Ward, Cameryn P. Warren, Jacqueline Wassom, Manual Watson, Shelbie Watts, Cynthia L. Weems, Casey Weinmann, Joseph White, Jennifer White, Edward Whitfield, Jeff Whitmire, Teresa Wildman, Gabriel Williams, Jennifer Williamson, Krista Lucas Wynn, Angela Zarallo, Rebecca Zey, Tracie Zweifel-Gibson, , Angela Wilson , David G. Sileven , Kaaren J. Teuber , Paula Neely , Robin Sears, Borming Wang, Sara Salinas)

**RESPONSE 4:** The secondary NAAQS are those the EPA Administrator determines are necessary to protect public welfare and the environment, including animals, crops, vegetation, visibility, and structures, from any known or anticipated adverse effects associated with the presence of a contaminant in the ambient air. Because the emissions from this facility should not cause an exceedance of the NAAQS, air emissions from this facility are not expected to adversely impact land, livestock, wildlife, crops, or visibility, nor should emissions interfere with the use and enjoyment of surrounding land or water. Please see Response 1 for an evaluation of this project's impacts in relation to the NAAQS. In addition, 30 TAC § 101.4 prohibits the discharge of contaminants which may be injurious to, or adversely affect, animal life.

Compliance with rules and regulations regarding endangered species is handled at the state level by the Texas Parks and Wildlife Department and at the federal level by the United States Fish and Wildlife Service. It is incumbent upon an applicant to request and acquire any additional authorizations that may be required under state or federal law, and to follow all applicable state and federal rules and regulations. However, if operated in accordance with the requirements of the permit, adverse impacts from the proposed plant are not expected.

#### **COMMENT 5: Additional Studies**

Commenters requested that an environmental impact study (EIS) be conducted prior to authorization of this project. Commenters ask if the Applicant has produced a study of the local limestone, including an expulsion test showing what organic compounds and pollutants will be generated in daily operation.

(Tiffany Drake, Chloe Grooms, Joshua Grooms, Lisa Hejny, Scott Horner, Terri Langford, Jost Marr, Russel Rutherford, Mark Vodry, Kimberly Vodry)

**RESPONSE 5: Environmental Assessments and Environmental Impact Statements (EIS)** are a specific requirement for federal agencies under the National Environmental Policy Act (NEPA). An EIS is not required for state actions such as this permit. However, both the TCAA and the TCEQ rules provide for an extensive review of the application to ensure that emissions from the proposed facility will not violate the NAAQS and will not be expected to adversely affect human health or the environment. A health effects review was conducted for the proposed facilities during the permit review and the permit was found to be protective of human health and the environment.

**COMMENT 6: Water / Hazardous Waste / Other Authorizations**

Commenters expressed concern about the amount of water the plant would need for its operations, stating that the area already has low water availability and that the plant would exacerbate the water supply and water table. Several commenters expressed concern that the proposed plant will cause water contamination and negatively impact water sources in the area, including but not limited to creeks, the water table, public and private drinking water wells, the floodplain, groundwater, aquifers runoff, lakes, swimming holes, the watershed, and ponds. Commenters expressed concern regarding the proposed project as it relates to acid rain. Commenters request a written plan be submitted for the contamination of the Choctaw and Trinity watershed systems. Commenters are concerned that water was not considered as part of the PSD permit requirements. Commenters request investigations from Texas Parks and Wildlife (TPWD), EPA, and the Department of Homeland Defense regarding possible water contamination of the Trinity River and Choctaw Watershed. Commenters express concern that a hazardous waste permit has not been obtained. Jeff Overstreet asks how the Applicant will remove excessive water from their property, and asks how the plant will impact erosion, flooding, and swelling of creeks. Mr. Overstreet asks what will happen if the Applicant accidentally damages the aquifer and where residents will get water if that is the case.

Jody Perry asked about waste disposal and if there would be recycling. Manual Watson expressed concern that local wastewater systems will not be able to keep up. Jan Broomall expressed concern that the proposed project would generate toxic waste. Judy Searcy Dryden expressed concern regarding the flood plain, stormwater runoff, and potential acid rain runoff. Jost Marr expressed concern that the Applicant would build the plant without obtaining any other required permits.

(Group A, Silvia Adams, Randy Adams, Janice Akins, Luz Arce, Ralph H. Armstrong, Katrina Lynn Arsenault, Art Arthur, Andrea Paulette Aslam, Sesily Babekuhl, Willies Ballou, Willies Carl Ballou, Douglas Glenn Banner, Kelly Denise Barnes, Robert Bauer, Heather Beaver, Ashley Beck, Francis Beck, Blake C. Beeson, Patti Beggs, Deanna Bell, Gary Bennett, Liz Birchall, Nancy Bond, Nolan E. Bond, Ashlin Bridwell, Lorie Brockner, Ron Brockner, Jan Broomall, Laffel Brown, Nancy Brown, Tiffany Broyles, Jeremiah D. Broyles, Veronica Calzada, Shane Cavender, Nicole Chambers, Bobby Luke Chandler, Kristin Chandler, Megan C. Chandler, Art Clayton, Karla K. Colwell, Katie Courange, R. D. Cozad, Skyler Cozad, Traber Cozad, Camryn Craddock, Cassady A. Craddock, Matthew Crain, Amanda Crawford, Melissa Gail Croney, Karen Cummings, Kristen Cunningham, Tracy R. Curry, Atul Dave, Chanel Ann Davis, Alicia Davis, Bruce Dawsey, Bruce W. Dawsey, Shawna Dawson, Jeremy Q. Devore, Jeremy Devore, Deirdre

Diamond, Joanne Dickey, Kathleen Dophied, Judy Searcy Dryden, Robert E. Dryden, Judith S. Dryden, Searcy Dryden, Cindy Durrant, Michael Joseph Elliott, Mark L. England, William Engle, Cendy Y. Escalera, Blanca Nayeli Escalera-Solis, Rachel Evans, Michael Fannin, Lisa Flaggert, Adam Fleming, Lindsey Flores, Harold Foster, William Foster, Frank Edward Gadek, Andrea Ganow, Chris Gardner, Rex Glendenning, Lora Gordon, Austin Grooms, Joshua Grooms, Brandon Grooms, Chloe Grooms, Richard Oran Gross, Jennifer Haeg, Ginger Ham, Matt Hardenburg, Letitia Harris, Jim L. Harvey, Patricia Hedrick, Lisa Hejny, Moses Hejny, Sarah Henry, Joann Hensley, Jerry Dean Hestand, Debbie Hester, Michael S. Hignight, Melissa Hill, Amy Hoffman-Shehan, Suzanne Hooks, Charity Horne, Scott Horner, Robin A. Horner, Helen Horton, Alice Hughes, Mandy Hummel, Laura T. Hunt, Lori Huntsman, Debbie Hurd, Billie Ingram, Rachel Jenkins, Suzanna Dryden Jensen, Elizabeth Jones, Lori Jones, Debbie Elaine Judkins, Mary Karam, Brittany Kennedy, Geri V. King, Ken King, Laura L. King, Geri V. King, Peggy Klas, Detra Klas, Vanetta Klok, Rick Kvaal, Cindy Kvaal, Irms Kyle, Benjamin T. Landgraf, William Landrum, Julie Lanicek, Jason R. Lankford, Patrick Latona, Val Lauerhahs, Wayne Lee, Kylee Likarish, Christopher A. Lopez, Jim Lucas, Trudy Lucas, Eric Lunde, Ronald Clay Lynch, Dakotah Mahan, Brian Mai, Sarah Mallory, Rickey J. Malta, Jost Marr, Michael Gene Marsh, Brittany Martin, Catherine Matuella, Patsy Mauldin, William Mayer, Traci McCarthy, Les McConnell, Vivian Robin McCoy, Karla McDonald, Larry McDonald, Lauren McNutt, Kevin Meissner, Amy Meyer, Davida Miorin, Michael J. Mitchusson, Mehrdad Moayed, Angela Moreau, Matthew Morris, Terry Morrison, Sierra Mueller, Karen Murphy, Rick Myer, Jason Lee Naramor, Mitaj Nathwani, Sharon Nelson, Jacob Nelson, Sarah Newtown, Andeelea Anderson Nichols, Danny Thomas Nichols, Chris Nicoloff, Marie Nixon, Margie Noel, Erica Northrup, Brent Omdahl, Brent E. Omdahl, Angie Onley, Bonita L. Overbey, Jeff Overstreet, Paula Overstreet, James Parrish, Trent Patterson, Melisa Patzer, Sherry Perrin, Jody Perry, Emily Powell, Lindsay Price, Delfina Prisock, Kathy Raner, Justin Neal Raner, Alan Redd, Patsy A. Reeves, Kevin Diaz Reyes, Cindy Risk, Naif Risk, Mark Douglas Robison, Mona Robnett, Liz Rocamontes, Elizabeth Rodriguez, Sharla Ross, Kara Royston, Kayli Rushing, Brian Russell, Linda Russell, Linda Sue Russell, Christina R. Rykens, Carrie Saindon, Joann Schnitker, Bradley J. Schnitker, Mary J. Scott, Betty Scott, Racheal Sedmack, True Shaw, Rosa Shelton, Gary Shields, David Sims, Sharon Slaughter, David Smith, Reggie Smith, Wendy Smith, James Southerland, Jeff Randall Spencer, Frances Sprabary, Bobby Overbey Sr., Penny Stahl, Roxanne Standerfer, Robert Stewart, Shirley Stewart, Chandler Strawn, Sathappun Subbiah, James Sutherland, Kenneth Svehlak, Sue Svehlak, Betty Jean Taylor, Shawn C. Teamann, Cristi Tenant, Alyssa Thomas, Dana Thornhill, Lisa Tibbets, Yolanda Trevino, Tonya Troxtell, Marilyn Sue Vest, Becky Vincent, Mark Vodry, Kimberly Vodry, Jenny Vonbehren, Jaymison Bella Voto, Leonard G. Waldrum, Bihfang Wang, Brian Wang, Cameryn P. Warren, Kevin Wasp, Jacqueline Wassom, Manual Watson, Shelbie Watts, Cynthia L. Weems, Monique Whaley, Steve Whaley, Joseph White, Edward Whitfield, Jeff Whitmire, Krista Lucas Wynn, Rebecca Zey, Tracie Zweifel-Gibson, David G. Sileven, Dorothy Schmoker, Jennita Wingate, Kaaren J. Teuber, Lainie Ramsay, Nancy Jan Shaw, Robin Sears, Angela Onley, Borming Wang, Kenneth J. King, Elizabeth Rocamontes)



**RESPONSE 6:** Although the TCEQ is responsible for the environmental protection of air and water as well as the safe management of waste, this proposed permit will regulate the control and abatement of air emissions only. Therefore, issues regarding water quality or discharge and the handling of waste are not within the scope of this review. However, the Applicant may be required to apply for separate authorizations for water quality, water usage, or the handling of waste. This permit does not authorize the discharge of pollution into a body of water or the storage or handling of hazardous waste. Acid Rain requirements are addressed through the Federal Acid Rain Program. The requirement to obtain an Acid Rain Permit is independent of the requirement to obtain a NSR permit.

#### **COMMENT 7: Public Notice**

Commenters expressed general concern regarding the Public Notice publication and expressed concern that Public Notice requirements were not met. Multiple commenters expressed concern by the lack of response to comments submitted during the public comment period, asking the TCEQ to thoroughly address and answer concerns raised by community members. Multiple commentors state that they should be considered an affected person with the right to request a contested case hearing, not just those that live within a specific radius of the proposed project.

David Smith expressed concern that the Applicant did not fulfill the posting requirements and did not truly or fairly represent the date of notice, further expressing concern that the notice occurred around Christmas. Mr. Smith also stated the notice did not provide the public enough time to respond with comments, asks for a re-notice to be published, asks that the public have the maximum allowable time to respond with comments, and asks that the public be able to participate in any hearing.

(Ron R. Brockner, Jeremy W. Devore, Kenneth Griffin, William Landrum, Josh Marr, Karla McDonald, Brian Norris, Sherry Perrin, Cynthia Reyes, Betty Scott, David Smith, Bobby Overbey Sr., Chandler Strawn, Sathappun Subbiah, Manual Watson, Cynthia L. Weems)

#### **Number of Comments**

David Smith questioned the number of comments represented to have been submitted regarding this project, specifically asking why the counts reflected on the website (TCEQ Commissioner's Integrated Database [CID]) to view public comments have fluctuated each time he has tried to view them.

#### **Sign Posting and Public Comment Period**

David Smith questions the date TCEQ CID shows as first public notice having been completed, stating that the Applicant's posted signs were not posted in both English and Spanish during the entire comment period and therefore first public notice should not be considered complete.

### Bilingual Notice and Public Participation / Environmental Justice

Commenters expressed concern that the Applicant misrepresented the nearby school district and applicability to bilingual notice requirements, further expressing concern bilingual notice requirements were not fulfilled because public notice was not published in Spanish. Kristopher Daniel Bravo commented that by failing to provide adequate bilingual communication, TCEQ is perpetuating systemic barriers that disproportionately affect Hispanic people and undermine their civil rights. Mr. Bravo further asked that the TCEQ prioritize bilingual outreach efforts to ensure that all residents have equal access to information and opportunities to participate in the decision-making process, regardless of language proficiency. Paul Daniel Lopez commented that the lack of bilingual outreach regarding the proposed project ignores the cultural and linguistic needs of the Hispanic community and potentially violates their civil rights. Jay Voto asks why they were not notified by mail about the public meeting.

(Willies Carl Ballou, Kristopher Daniel Bravo, Cassady A. Craddock, Jeremy Q. Devore, Jeremy Devore, Harold C. Foster, Austin Grooms, Joshua Grooms, Chloe Grooms, Lisa Hejny, Laura T. Hunt, Suzanna Dryden Jensen, Paul Daniel Lopez, Angela Moreau, Sarah Myrick, Jeff Overstreet, Jose Fernando Pena, Kathy Raner, Justin Neal Raner, Russell Rutherford, Bradley J. Schnitker, Marci Schnitker, David Smith, Jay Voto)

### Increment Analysis

Janice Akins questioned the specific increments represented on the Public Notice publication, stating that they are from 2021 and may be out of date.

**RESPONSE 7:** TCEQ welcomes public participation in the permitting process. The Executive Director instructs applicants to provide public notice as required by commission rules, in accordance with statutory requirements. Specifically, the TCAA § 382.056 requires that an applicant publish notice. Notice must be published in a newspaper of general circulation in the municipality in which the proposed facility is located or proposed to be located. The notice must include a description of the facility, information on how an affected person may request a public hearing, pollutants the facility will emit, and any other information the TCEQ requires by rule. The commission also requires that notice be published in an alternative language if the elementary or middle school nearest the proposed facility offers a bilingual education program as required by Texas Education Code Chapter 29, Subchapter B. The TCEQ adopted rules for these public notice requirements in 30 TAC § 39.603, Public Notice of Air Quality Applications, Newspaper Notice.

As described in the Procedural Background above, The Notice of Receipt and Intent to Obtain an Air Quality Permit (first public notice, NORI) for this permit application was published in English on December 19, 2021, in the *Herald Democrat*. The Notice of Application and Preliminary Decision for an Air Quality Permit (second public notice, NAPD) was published on February 22, 2024, in English in the *Herald Democrat*. A Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision (third public notice, consolidated NORI and NAPD) was published in English on July 9, 2024, in the *Herald Democrat* and in

Spanish on July 9, 2024, in *La Prensa*. To demonstrate compliance with public notice requirements, applicants are required to provide the Office of the Chief Clerk with copies of the published notice and a publisher's affidavit verifying facts related to the publication, including that the newspaper is a paper of general circulation in the municipality in which the proposed facility is located or proposed to be located.

TCEQ rules also require that a public meeting be held if a member of the legislature who represents the general area in which the facility is located requests a public meeting or if the Executive Director determines that there is a substantial or significant degree of public interest. *See* 30 TAC § 55.154(c)(2). A public meeting was held on March 25, 2024, at 7:00 PM at the Hilton Garden Inn Denison/Sherman/At Texoma Event Center, 5015 South U.S. 75, Denison, Texas 75020. The notice of public meeting was mailed on February 9, 2024, and an amended notice of public meeting was mailed on February 13, 2024. The public comment period ended on August 14, 2024, following publication of a third combined notice due to updates to the application and to perform Spanish language publication in order to correct deficiencies in the previous public notice. Additionally, signs were required to be re-posted for the duration of the comment period in both English and Spanish.

Any member of the public may submit comments on the application. This Response is the written response to all formal comments received during the comment period for the application. Directions for accessing a copy of this Response on the TCEQ CID will be mailed to each person who submitted a formal comment or who requested to be on the mailing list for this permit application and provided a mailing address. All timely formal comments received are included in this Response and are considered before a final decision is reached on the permit application. This Response provides a final 30-day period to request a contested case hearing.

In order for an issue to be considered at a contested case hearing, it must have been first raised in a comment or in a request for a contested case hearing during the public comment period by the affected person or group requesting the hearing. The Commissioners' decision whether to grant a contested case hearing is based in part on the information the requester submits. When requesting a hearing, it is necessary to demonstrate that the requester is an "affected person," in order to be granted party status. This means that the requester must be personally affected by the permit decision and that granting the permit would specifically affect the requester in ways not shared by the general public – for example, by impairing the requester's health or safety or by interfering with the use or enjoyment of the requester's property. Affected persons may request a contested case hearing to challenge the Executive Director's decision on an application. The applicant may directly refer the application to the State Office of Administrative Hearings for a contested case hearing, instead of waiting for the Commission to make a determination on whether the case should be referred.

The public notice rules applicable to this application are described above. An overview of public participation for applications filed after September 1, 2015 is available on the TCEQ website at: [https://www.tceq.texas.gov/agency/decisions/participation/permitting-participation/pub\\_part.html](https://www.tceq.texas.gov/agency/decisions/participation/permitting-participation/pub_part.html). *See* Response 10 for more information about the permitting process.

### Number of Comments

The Office of the Chief Clerk counts comments as they arrive and they subsequently classify them – specifically, whether they fall as a general comment, a contested case hearing request, a meeting request, or all of these. These comment counts fluctuate as comments are manually sorted into categories and changed from “comments” to, for instance, “contested case hearing request.” For projects with a high volume of comments, it is typical for counts to fluctuate and change as the comments are gone through one by one and sorted into their categories.

### Sign Postings and Public Comment Period

Title 30 TAC § 39.604 requires that signs be placed at the site of the existing or proposed facility. The sign(s) must state that an air permit application has been filed, the proposed permit number, and how the public may contact the commission for further information.

Each sign placed at the site must be located within ten feet of every property line paralleling a public highway, street, or road. Signs must also be visible from the street, meet lettering requirements, meet size requirements, and be spaced at not more than 1,500-foot intervals. A minimum of one sign, but no more than three signs are required along any property line paralleling a public highway, street, or road. Finally, in cases which notice is required to be published in an alternative language, the applicant must also post signs in the applicable alternative language.

The Applicant provided verification to the Office of the Chief Clerk in accordance with 30 TAC § 39.605 that signs were posted at the proposed site in accordance with 30 TAC § 39.604. The Applicant provided verification to the Office of the Chief Clerk in accordance with 30 TAC § 39.605 that signs were posted at the proposed site in accordance with 30 TAC § 39.604. During the first public notice, the signs were not displayed or went missing. Comment periods and sign posting durations can be extended by TCEQ, and in this case the comment period was extended by the number of days the signs were observed to be missing.

### Bilingual Notice and Public Participation / Environmental Justice

TCEQ and the Applicant both attempted to contact the Howe ISD to determine whether or not a Bilingual Education Program was required in the district. The administrative staff failed to return phone calls. However, due to public input relating to which local school district was the correct one and claims that a Bilingual Education Program was required for Howe ISD, TCEQ required the applicant to publish a Consolidated Notice of Receipt of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision (third public notice), providing updated notice for the application in both English and Spanish. This was published in Spanish on July 9, 2024, in *La Prensa*.

Air permits evaluated by the TCEQ are reviewed without reference to the socioeconomic or racial status of the surrounding community. The TCEQ is committed to protecting the health of the people of Texas and the environment regardless of location. A health effects review was conducted for the proposed facilities during the permit review and the permit was found to be protective of human health and the environment. The TCEQ encourages participation in the permitting process. The Office of the Chief Clerk works to help the public and neighborhood groups participate in the regulatory process to ensure that agency programs that may affect human health or the environment operate without discrimination and to make sure that concerns are considered thoroughly and are handled in a way that is fair to all. You may contact the Office of the Chief Clerk at 512-239-3300 for further information. More information may be found on the TCEQ website: [Title VI Compliance at TCEQ - Texas Commission on Environmental Quality - www.tceq.texas.gov](#).

A member of the public may request to be put on a mailing list for a specific permit or for a county. Additionally, anyone who provides a comment, requests a public meeting, or requests a contested case hearing is automatically added to the mailing list. For more information, please visit [Overview: Public Participation in Environmental Permitting - Texas Commission on Environmental Quality - www.tceq.texas.gov](#).

### Increment Analysis

The results of the PSD increment analysis are required to be included in Notice of Application and Preliminary Decision if the analysis threshold is triggered. The PSD increment is the amount of pollution an area is allowed to increase. PSD increments prevent the air quality in clean areas from deteriorating to the level set by the NAAQS. The NAAQS is a maximum allowable concentration "ceiling." A PSD increment, on the other hand, is the maximum allowable increase in concentration that is allowed to occur above a baseline concentration for a pollutant. The increment analysis reflects the project's modeling demonstration against fixed increments which cannot be exceeded. The PSD increment has not changed since the NORI was published in 2021.

### COMMENT 8: Public Meeting

Colin Drew Hunter commented that an in-person public meeting should be granted instead of hiding behind computers because of COVID-19, further stating that the public has the right to publicly face the Applicant and TCEQ. Bonita L. Overbey questioned the location of the public meeting and asks why it could not be held at the church located near the proposed project site. Liberty Johnson commented that the public meeting had too much technical jargon that left the community with more questions that the Applicant and TCEQ were not in a position to answer. Sarah Myrick expressed concern that the TCEQ provided advice on how to get the public meeting scheduled before the PM<sub>2.5</sub> standard change took effect. Ray H. Purdom asks why there wasn't any type of illustration or drawings at the public meeting to show what the proposed plant will look like, such as an architecture type plan, general layout of the facility, map to show the location and plant size, or any existing photos.

Deirdre Diamond expressed concern that an individual was removed from the public meeting, specifically requesting another public meeting where 'the right to free speech is protected and the Texas Bill of Rights is not violated by removing affected parties,' further stating that removal of the individual violates the open meetings act. Ms. Diamond expressed concern regarding the length of the public meeting, stating that it was too limited.

Jeremy Devore expressed concern regarding the hotel staff at the public meeting being unhelpful, expressed concern that no provisions were made to assist individuals with disabilities to navigate the venue or access the meeting area, and expressed concern that attendees were 'unjustly threatened with expulsion.' Mr. Devore commented that TCEQ failed to plan for logistical challenges, including the size of the venue compared to the turnout.

(Jeremy Devore, Deirdre Diamond, Colin Drew Hunter, Sarah Myrick, Bonita L. Overbey)

**RESPONSE 8:** Title 30 TAC § 55.154(c)(2) requires that a public meeting be held if a member of the legislature who represents the general area in which the facility is located requests a public meeting or if the TCEQ Executive Director determines that there is substantial or significant degree of public interest. A public meeting was held on March 25, 2024, at 7:00 PM at the Hilton Garden Inn Denison/Sherman/At Texoma Event Center, 5015 South U.S. 75, Denison, Texas 75020. The notice of public meeting was mailed on February 9, 2024, and an amended notice of public meeting was mailed on February 13, 2024.

The location was selected by the Applicant and agreed to by TCEQ due to the potential size of the crowd, its availability, and ability to accommodate venue requirements. 30 Texas Administrative Code § 55.154(b) requires that a meeting be held in the county where the facility is, or is proposed to be, located. Over 400 people attended the public meeting, and it was necessary that a venue was selected that would be able to safely accommodate a crowd of this size.

TCEQ staff strives to explain technical issues in as simple terms as possible. Additionally, individuals had the opportunity to provide additional public comment requesting clarification or asking additional questions after the close of the public meeting. The public comment period closed on August 14, 2024, three and a half months after the close of the meeting.

The Applicant was required to provide an additional protectiveness demonstration showing compliance with the revised PM<sub>2.5</sub> NAAQS standard. After TCEQ reviewed the demonstration, the Applicant was then required to publish additional notice and make the revised protectiveness demonstration available for public review and comment. TCEQ elected to proceed with scheduling a public meeting following the initial declaration of technical completeness rather than wait for the new PM<sub>2.5</sub> standard implementation given uncertainties about the effective dates and nature of the standard.



There is no requirement in state rules or statute for an Applicant to post printed illustrations or drawings at the public meeting. This information was available in copies of the application which were required to be made available during the public comment period.

Individuals who are disruptive, abusive, or who are considered a security risk can and will be removed from public meetings. The purpose of a public meeting is to take public comments. These comments can be submitted online during the comment period and are not considered differently than those which are given at a public meeting. Similarly, a public meeting cannot last indefinitely, and its length is often constrained by the venue. Everyone that wished to make a public comment on the record was provided the opportunity at the public meeting.

There are not fixed requirements in TCEQ rules relating to venue for a public meeting, other than that the meeting must be held in county in which the proposed plant will be located. TCEQ staff in the Office of the Chief Clerk provide applicants with requirements that must be met by the selected venue, including compliance with the American with Disabilities Act, and a size necessary to accommodate the number of people expected at a meeting. During the time before the start of the meeting as people were coming in, it was decided that more seating was necessary, and additional chairs were provided. Most people were able to find seating at the venue. Applicants are instructed to select a venue of suitable size is based on the number of comments received.

#### **COMMENT 9: Access to Permit Documents**

Deirdre Diamond asks for a copy of the permit applications sent to her directly via e-mail.

(Deirdre Diamond)

**RESPONSE 9:** Title 30 TAC § 39.405 requires the Applicant to provide copies of the application and the Executive Director's preliminary decision at a public place in the county in which the facility is located or proposed to be located. The rules also require the public have an opportunity to review and copy these materials. In addition, the application, including any subsequent revisions to the application, must be available for review for the duration of the comment period. The Applicant represented that the application was made available at the Howe Community Library, 315 South Collins Freeway, Howe, Grayson County, Texas. In addition, a copy of the application was also available at the TCEQ Dallas/Fort Worth Regional Office and the TCEQ Central Office. The comment period closed on August 14, 2024.

The TCEQ is committed to upholding the Public Information Act (PIA) and ensuring public access to its records. All TCEQ records are available for public viewing unless one of the exceptions to disclosure listed in the PIA Applies. Please see <https://www.tceq.texas.gov/agency/data/records-services/reqinfo.html> for more information regarding Public Information Requests.

Beginning in July 2024, for applications administratively complete after June 1, TCEQ has posted administratively and technically complete applications on the agency website, and in the future, members of the public will be able to download these applications from this site. That was not available for this permit application.

#### **COMMENT 10: Application Representations / Permit Review**

Commenters question the representations made in the application, stating that there are numerous inaccuracies and misrepresentations. Commenters are concerned that the Applicant is using misinformation to circumvent proper processes and appear to be polluting less or more compliant than they actually will be. Commenters expressed concern that the Applicant is not being transparent about their application representations. Commenters expressed general concern regarding the TCEQ air permitting process. Commenters expressed concern that the application did not identify all potential sources of emissions. Wendy Smith expressed concern that the permit application did not include an authorized signature. Duncan C. Norton expressed concern that the application materials do not demonstrate compliance with 30 TAC § 116.11. David Smith questioned if the application followed EPA standards.

Commenters expressed concern that the Applicant and consultant received help from the TCEQ to correct mistakes made in the application. Commenters expressed concern that an entirely new permit application was submitted, stating this was used to circumvent all prior public comments.

#### **Additional Impacts Analysis**

Commenters are concerned that the Applicant claimed the proposed plant will not result in an increase of additional heavy industry businesses, including concrete plants, stating that the claim is most likely false.

#### **Small Business Classification and Number of Employees**

David Smith questioned the application representation of the company having fewer than 100 employees.

#### **GHG Permit Number**

Janice Akins expressed confusion as to why the title page of the application did not list the GHG permit number, while the 'special conditions' section did.

(Group A, Janice Akins, Art Arthur, Jeremiah D. Broyles, Tiffany Broyles, Art Clayton, James Matt Cooper, Camryn Craddock, Cassady A. Craddock, Linda Carol Crain, Bruce W. Dawsey, Bruce Dawsey, Jeremy Q. Devore, Jeremy W. Devore, Jeremy Devore, Deirdre Diamond, Judy Searcy Dryden, Judith S. Dryden, Jesse Farrer, Harold C. Foster, Kenneth Griffin, Austin Grooms, Chloe Grooms, Matt Hardenburg, Lisa Hejny, Moses Hejny, Amy Hoffman-Shehan, Robin A. Horner, Laura T. Hunt, Phyllis D. James, Suzanna Dryden Jensen, William Landrum, Crystal Lawson, Jim Lucas, Trudy Lucas, Shelley Luther, Brian Mai, Jost Marr, Josh Marr, Davida Miorin, Angela Moreau, Jason Morin, Duncan C. Norton, Jeff Overstreet, Delfina Prisock, Kathy Raner, Justin Neal Raner, Russell Rutherford, Bradley J. Schnitker, Marci Schnitker, David Smith, Wendy Smith, Mark Vodry, Kimberly Vodry, Jay Voto, Jeff Whitmire, Kevin Wilson, Dorothy Schmoker)

**RESPONSE 10:** The TCAA provides the TCEQ with jurisdiction over air quality permitting in Texas. The Executive Director's staff conducts both an administrative and technical review of all applications received by the agency. The first step of the application review process is an administrative review which verifies the following:

- The correct application was submitted;
- The application and any associated forms have been signed by the appropriate Responsible Official;
- The company is an entity legally entitled to do business in Texas;
- The information is accurately recorded in the TCEQ's Central Registry;
- The appropriate application fee was received;
- The mailing addresses for the company and site are USPS validated; and
- There are no delinquent fees owed by the company.

Additionally, the administrative reviewer completes the draft first public notice package. Once a project is declared administratively complete, the application and the first notice package (Notice of Receipt of Application and Intent to Obtain Air Permit - NORI) are made available for public review. The air quality permit application then undergoes a technical review. During the technical review, the permit reviewer evaluates the following:

- All sources of regulated air contaminants at the proposed facility have been properly identified;
- Appropriate controls have been proposed for each emission source, including Best Available Control Technology (BACT) at a minimum;
- Emission calculations have been completed correctly using approved methodology and appropriate emission factors;
- Proposed emissions meet applicable state and federal requirements to be considered protective (in this case done through the use of air dispersion modeling, or an AQA);
- Compliance history for the site and the operator; and
- Public notice requirements are fulfilled.

Once all emission rates have been verified, the draft permit is created, and the application is deemed technically complete. The draft permit includes a Maximum Allowable Emissions Rate Table (MAERT), which limits the quantity of emissions an applicant may emit into the atmosphere. The emissions tabulated in the MAERT are also used as the input for the air dispersion modeling evaluation to determine if any adverse effects to public health, welfare, or physical property are expected to result from a facility's proposed emissions. The draft permit also includes the operational representations, which are documented in the draft Special Conditions and are the basis upon which the emissions were determined. If the Executive Director determines that the permit meets all applicable rules and regulations, the Executive Director then makes a preliminary decision recommending that the permit be issued. In other words, the Executive Director's preliminary decision indicates that the technical review is complete.

In addition, an applicant is bound by its representations in the application and those representations become an enforceable part of the permit, including production rates, authorized emission rates, and equipment. If the Applicant deviates from the representations made in the application, on which the permit was developed, the Applicant may be subject to enforcement action.

#### Application Representations

The Air Permits Division and other applicable TCEQ staff have conducted a thorough review of this permit application to ensure it meets the requirements of all applicable state and federal standards. As stated above, an applicant is bound by its representations in the application and those representations become an enforceable part of the permit, including production rates, authorized emission rates, and equipment. If the Applicant deviates from the representations made in the application, on which the permit was developed, the Applicant may be subject to enforcement action.

#### TCEQ Deficiencies, Mistake Corrections, and New Application Concerns

During the review process, the reviewer can and does often state expectations, suggest revisions, or state the utility of aspects such as more stringent control device requirements. The technical review ensures that the application and representation comply with state and federal law, in addition to TCEQ rules and requirements. Permit applications are routinely updated during the review process, and the application is not considered static. Updates the application do not invalidate prior public comments, though they can result in changes to how the comments are responded to later on in the process. All timely comments received on the Application will be addressed in this RTC.

### Additional Impacts Analysis

The Applicant performed an Additional Impacts Analysis as part of the PSD air quality analysis. The analysis includes the aspect of associated growth. Associated growth is defined by the EPA as industrial, commercial, and residential growth that will occur in the area due to the source. The applicant conducted a growth analysis and determined that population in the plant area will not significantly increase as a result of the proposed project. The amount of projected residential growth depends on the size of the work force, the number of new employees, and the availability of housing in the area. Given consideration of these aspects, the conclusion that significant growth of population will not occur in Grayson County and nearby counties due to construction of this facility was considered acceptable.

### Small Business Classification and Number of Employees

The question in the PI-1 relating to the number of employees and gross receipts is part of a series of questions to determine whether a company qualifies as a small business. If a company qualifies as a small business and is a minor source, then they are not required to publish Example B. In this case the answer for this new company is irrelevant because the emissions are greater than the major source threshold. Therefore, the small business exemption from publishing Example B cannot be claimed regardless of the number of employees.

### GHG Permit Number

Permit numbers are included on a number of documents issued by TCEQ. After an applicant submits an initial permit application, permit numbers are assigned. These are included on relevant official documents when the final permit is issued. There is no requirement for an applicant to include all of the permit numbers on documents that they submit.

### COMMENT 11: Area Map

Commenters state that Highway 902 was mislabeled and should be represented as Farm-to-Market Road 902. Commenters express concern that the map only shows 3,000 feet bordering the property and state that several residences and schools are missing from the area map representation. Commenters further state that ignoring individual residences is a ploy to circumvent further investigation from the TCEQ. Commenters are concerned that the provided area map did not reflect nearby food supply businesses or the nearby airport. Duncan C. Norton expressed concern that the provided area map did not include representations of a nearby rural airport, further stating that the location is not compatible with surrounding land use and does not comply with TCEQ distance limitation rules. Judy Searcy Dryden expressed concern that the application represented an incorrect address for the plant location, stating it does not exist. Ms. Dryden also requests that a 5,000-foot radius be considered in the map, along with the associated mine/quarry and its data.

(Group A, Jeremy Devore, Jeremy Q. Devore, Judy Searcy Dryden, Chloe Grooms, Joshua Grooms, Suzanna Dryden Jensen, Duncan C. Norton, Jeff Overstreet, Kathy Raner, Neal Raner, Justin Neal Raner, Russell Rutherford, Marci Schnitker, David Smith, Wendy Smith, Mark Vodry, Kimberly Vodry)

**RESPONSE 11:** A farm to market road is a form of highway. Therefore, either the FM label or the use of the term Highway was considered acceptable in describing where the facility would be located. FM 902 or Highway 902 is the only road in Dorchester with that number associated. It was evident from the comments submitted that people are aware of the location of the proposed facility.

An area map must be submitted with an NSR permit application. The area map must include a true north arrow, accurate scale, the entire plant property, the location of the property relative to prominent geographical features, and a 3,000-foot radius for scale reference purposes. There is no requirement to label food supply businesses or aerodromes. The area map is a legacy requirement from when reviewers lacked easy access to computerized mapping. It not used in any sort of analysis. The documents submitted with the application and the supplemental use of software-based mapping tools were sufficient to allow the permit reviewer to confirm that the representations provided were accurate. The air dispersion modeling does not in any way involve the area map which is submitted with the application. The property line includes the area associated with the quarry. There are no distance limitations in applicable state or federal rules or laws relating to cement kilns.

#### **COMMENT 12: Emission Rates and Calculations**

Commenters questioned the accuracy and methodology for determining the emission rates for the proposed project. Duncan C. Norton expressed concern that the application materials do not demonstrate that the emissions calculations are correct and based on appropriate scientific methodology. Crystal Lawson commented that calculations are from 2021 and asks if the calculations have been updated to reflect 2023 or 2024 calculation methodologies and air quality standards. Janice Akins questioned the conservativeness of the represented emissions calculations.

(Janice Akins, Crystal Lawson, Duncan C. Norton)

**RESPONSE 12:** Emissions from this facility were determined by the use of EPA's Compilation of Air Pollutant Emission Factors, AP-42 Manual (AP-42 Section 1.4 Tables 1.4-1 and 1.4.2 (July 1998) and AP-42, 13.2.4 "Aggregate Handling and Storage Piles"); outlet grain loading based calculations, mass balance equations, federal standards (NSPS Subpart F, MACT Subpart LLL), TCEQ APDG 6422 Fugitive Guidance, and a BACT limitation basis. Greenhouse gas emissions were calculated using equation A-1 from 40 CFR Part 98, Subpart A. Emission rates are calculated using conservative emission factors and methodology. The TCEQ ensures the conservative nature of these calculations by evaluating each emission point at the maximum material throughput on both an hourly and an annual basis. The analysis also conservatively assumed the operating schedule of facilities or activities at the site as 24-hours per day. All of the methodologies utilized represent current practices.



The Applicant represented the appropriate methodologies to control and minimize emissions and utilized corresponding control efficiencies when calculating the emission rates. As provided in 30 TAC § 116.116(a), the Applicant is bound by these representations, including the represented performance characteristics of the control equipment. In addition, the permit holder must operate within the limits of the permit, including the emission limits as listed in the MAERT.

**COMMENT 13: Proximity to Affected States, Tribal Nations, Class I Areas, and Notification Requirements**

Commenters expressed concern that the Applicant represented the proposed plant will be located further than 100 kilometers from an affected state, tribal nation, or Class I Area. Commenters expressed concern that the Applicant has not notified or considered the affected States, tribal nations, or federal land managers with regard to the proposed project. Commenters ask that consideration be given to the Hagerman Wildlife Refuge and its future potential to be designated as a Type 1 refuge.

(Janice Akins, Paula A. Cavender, Shane Cavender, Cassady A. Craddock, Bruce Dawsey, Jeremy Q. Devore, Jeremy Devore, Chloe Grooms, Joshua Grooms, Moses Hejny, Suzanna Dryden Jensen, Josh Marr, Jost Marr, Jeff Overstreet, Emily Powell, Kathy Raner, Justin Neal Raner, Russell Rutherford, Bradley J. Schnitker, Marci Schnitker, David Smith, Wendy Smith, Mark Vodry, Kimberly Vodry)

**RESPONSE 13:** Class 1 federal lands include areas such as national parks, national wilderness areas, and national monuments. These areas are granted special air quality protections under Section 162(a) of the federal Clean Air Act.

The applicant performed an Additional Impacts Analysis as part of the PSD AQA. The ADMT evaluated predicted concentrations from the proposed project to determine if emissions could adversely affect a Class I area. The nearest Class I area, Wichita Mountains Wilderness, is located approximately 225 kilometers (km) from the proposed site.

The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration of 7 µg/m<sup>3</sup> occurred approximately 243 meters from the property line towards the west. The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration occurring at the edge of the receptor grid, 10.6 km from the proposed sources, in the direction of the Wichita Mountains Wilderness Class I area is 0.526 µg/m<sup>3</sup>. The Wichita Mountains Wilderness Class I area is an additional 214.4 km from the edge of the receptor grid. Therefore, emissions of H<sub>2</sub>SO<sub>4</sub> from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

The predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times, are all less than de minimis levels at a distance of 7.3 km from the proposed sources in the direction of the Wichita Mountains Wilderness Class I area. The Wichita Mountains Wilderness Class I area is an additional 217.7 km from the location where the predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Wichita Mountains Wilderness Class I area.

TCEQ Form PI-1 provides guidance for informational purposes only on where to submit copies of the application and instructs applicants to retain records of such. TCEQ does not have the ability to determine if, for instance, other state agencies or tribal authorities have received copies of applications, nor does it verify such as part of the permit review process, and the form itself states that no data is required to be submitted as verification of this.

The Clean Air Act designated 158 areas in the United States as mandatory federal Class I areas when it was amended in 1977. These areas include international parks, national wilderness areas larger than 5,000 acres, national memorial parks larger than 5,000 acres and national parks larger than 6,000 acres. This classification did not include National Wildlife Refuges like Hagerman National Wildlife Refuge.

#### **COMMENT 14: Fuel Options and Raw Materials**

Commenters are concerned about the proposed fuel options represented in the application. Commenters are concerned about the burning of plastic waste, medical waste, industrial waste, and coal as fuel. Commenters ask if ecofriendly fuel options or renewable energy fuel alternatives were considered. Commenters expressed concern that the Applicant may use fuels other than the natural gas that was represented in the permit application. Commenters question how the Applicant represented use of natural gas if there are no natural gas lines near the proposed facility. Deirdre Diamond asks what type of natural gas is being used, who supplies it, and asks how much can be burned as allowed by the permit. Robert E. Dryden expressed concern about the burning of plastic waste as fuel. David Smith asks what raw materials testing has been done to estimate represented mercury and lead emissions. Judy Searcy Dryden expressed concern that the Applicant will have to utilize alternative fossil fuels, such as coal, to achieve the high temperatures required for cement production, which would be more destructive to the surrounding area.

(Group A, Ashley Beck, Francis Beck, Deirdre Diamond, Judy Searcy Dryden, Robert E. Dryden, Rex Glendenning, Donald E. Godwin, Suzanna Dryden Jensen, Julie Lanicek, Garrett McCown, Amy Meyer, Mitaj Nathwani)

**RESPONSE 14:** The draft permit limits fuels to natural gas containing no more than 5 grains of total sulfur per 100 dry standard cubic feet (dscf). Plastic waste is not proposed as a fuel. TCEQ does not have jurisdiction to require applicants to consider renewable energy fuel options. Natural gas is capable of generating the heat needed for the cement kiln. Natural gas is a mixture of hydrocarbons, primarily methane. There are no "types" of natural gas, but the TCEQ limits sulfur content which can be present in the fuel. Emissions of lead and mercury are related to raw materials used by the facility as feedstock to make cement, not fuel materials. The Applicant will be required to monitor emissions of mercury and lead emitted by the kiln to demonstrate compliance with the permit limitations and federal limitations. The review of the permit application does not include an analysis of where or how the applicant intends to acquire the fuel used in the plant.

## **COMMENT 15: Best Available Control Technology**

### **General BACT Questions**

Commenters questioned the best available control technology (BACT) proposed in the application. Matthew Muniz asked for a list of all expected outputs and controls represented in the application, along with examples of their effectiveness. Lisa Hejny asks if there is a detailed plan to utilize equipment that is truly BACT and produces a maximum reduction of all pollution and emissions. Duncan C. Norton expressed concern that the Application materials do not demonstrate that the site will have adequate air pollution control measures and will not utilize BACT. Lari Alexis Taylor-Barker asks if the emissions proposed appear to be on par with other cement plants, asks for details as to how pollution will be reduced or lowered, and asks how the carbon footprint can be reduced with outdated technologies. Crystal Lawson asks if BACT means best available technology based on the Applicants' finances, or if it is based on industry standards. Ms. Lawson further asks what the Applicant considers as BACT and if this will change if their finances change.

### **Opacity**

Jeremy Devore questioned how the Applicant will meet the five percent opacity requirement.

### **Thermal Oxidizer**

David Smith requests that the applicant be required to utilize a Thermal Oxidizer to control emissions.

### **Use of Enclosures**

Mr. Smith questions how a two- or three-sided shed is able to have 85 percent or more containment and asks what is done with the slurry from the foggers that collect a portion of the dust and pollutants.

Cynthia J. Kaleri commented that EPA requests clarification on the following items with regard to use of the "three-tiered" approach as opposed to EPA's "Top-Down" methodology for determining BACT:

- **Kiln System BACT Analysis for Carbon Monoxide**; Ms. Kaleri requests that TCEQ explain the rationale for accepting the Applicant's overall CO BACT proposal as at least equivalent to what has been accepted in recent permit reviews for the same industry and explain how such a proposal is based on the maximum degree of reduction achievable accounting for technical feasibility and economic reasonableness. Ms. Kaleri commented that the EPA was unable to identify the TCEQ's analysis of any site-specific differences or the effects of these differences on the achievability of lower CO BACT limitations imposed in recent permit reviews. Ms. Kaleri requests a discussion which explicitly identifies any compelling technical differences between the Applicant's proposed processes and the processes of other plants within the same industry, and any technical considerations and supporting documentation reviewed that impacted TCEQ's

decision to support the current CO BACT proposal as opposed to the other comparable BACT determinations (e.g., feed material organic carbon content, kiln design, infeasibility of add-on controls (RTO), collateral NO<sub>x</sub> emissions, etc.). Finally, Ms. Kaleri requests that if any of the CO BACT determinations in recent permit reviews were determined to be irrelevant because of the associated limits accepted as BACT have not yet been demonstrated in practice, or that TCEQ believes these lower limits represent "beyond BACT" determinations, that this be included in the explanation as applicable.

- Kiln System BACT Analysis for Ammonia: Ms. Kaleri expressed concern that the application and TCEQ's Preliminary Determination Summary (PDS) simply state that an ammonia emission rate of 35 ppmv at 7 percent oxygen on a 30-day rolling average represents BACT, stating that no information on the BACT determinations for the same process and/or industry was identified within the administrative record. Ms. Kaleri requests that the TCEQ explain the rationale for accepting the Applicant's overall ammonia BACT proposal as at least equivalent to what has been accepted in recent permit reviews for the same industry.
- Kiln System BACT Analysis for Particulate Matter: Ms. Kaleri expressed concern that neither the permit application for the TCEQ's PDS explain the basis for the selection of the proposed condensable PM limitation, how the proposed BACT determination is comparable, or the primary drivers in condensable PM limit variability from other similar sources, citing other kiln BACT determinations provided in the RACT/BACT/LAER Clearinghouse (RBLC) which appear to be based upon an outlet grain loading basis, filterable PM per ton basis, or total PM basis. Ms. Kaleri requests that TCEQ explicitly identify the origin of the proposed emission rate (e.g., basis of emission factor, similar source stack testing, etc.) and the rationale behind determining representativeness of the proposed condensable PM emissions limitation.

(Jeremy Devore, Chloe Grooms, Lisa Hejny, Suzanna Dryden. Jensen, Cynthia J. Kaleri, William Landrum, Crystal Lawson, Matthew Muniz, Duncan C. Norton, Jeff Overstreet, Russell Rutherford, David Smith, Lari Alexis Taylor-Baker, Mark Vodry, Kimberly Vodry, David G. Sileven)

**RESPONSE 15:** Best available control technology (BACT) is an air pollution control method for a new or modified facility that through experience and research, has proven to be operational, obtainable, capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility. BACT may be numerical limitations, the use of an add-on control technology, design considerations, the implementation of work practices, or operational limitations. The Applicant has represented in the permit application that BACT will be used for the proposed new and modified sources.

The contaminants authorized by this permitting action will be carbon monoxide, hazardous air pollutants, sulfur dioxides, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less, sulfur dioxide, sulfuric acid, lead, and greenhouse gases. The primary control measures applied to this facility are as follows in the below table:

**Table 9: Best Available Control Technology**

Source Name	EPN	Best Available Control Technology Description
Kiln System	21-SK-230	<p><b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b>            Add on control: Baghouse at 0.002 grains per dry standard cubic foot (gr/dscf). 5% opacity. <i>This exceeds state and PSD BACT.</i></p> <p><b>PM, PM<sub>10</sub>, PM<sub>2.5</sub> (filterable):</b> 0.02 lbs. PM per ton of clinker on a 1-hour average and a rolling 12-month average</p> <p><b>PM, PM<sub>10</sub>, PM<sub>2.5</sub> (condensable):</b> 0.28 lbs. PM per ton of clinker on a 1-hour average, 30-day rolling average, and a rolling 12-month average.</p> <p><b>CO:</b>            No add on controls. Proper design and operation.</p> <p>BACT determination based on other kilns. 9.0 lbs of CO/ton of clinker on a 1-hour average and 30-day rolling average. 3.0 lbs. of CO/ton of clinker on a rolling 12-month average. CO emission rates are in part driven by the composition and concentration of organic materials in the kiln feed and vary regionally dependent on the nature of the quarried limestone. The proposed rate is consistent with other Texas kilns using limestone from this general region, though this can vary by quarry. TCEQ was unable to locate any cement kilns using add on controls for specifically for CO control. Good combustion practices with proper design and operation were determined as BACT.</p>

Source Name	EPN	Best Available Control Technology Description
		<p><b>NO<sub>x</sub>:</b>            Add on and other control: Selective Catalytic Reduction (SCR) system or combination of SCR and Selective Non-Catalytic Reduction (SNCR) system, staged combustion, low NO<sub>x</sub> burners, good combustion practices. Notably the proposed NO<sub>x</sub> rate greatly exceeds RBLC PSD and state BACT requirements, which is typically 1.5 lb/ton of clinker compared to the 0.54 lb/ton of clinker proposed.</p> <p>0.54 lbs. of NO<sub>x</sub> per ton of clinker on a 1-hour rolling average, 30-day rolling average, and 12 month rolling average.</p> <p><b>SO<sub>2</sub>:</b>            Add on and other control: Scrubber with a represented control efficiency of 90%, the alkali absorption inherent in the pre-calciner kiln, and the use of low sulfur content natural gas as fuel.</p> <p>0.60 lbs. SO<sub>2</sub> per ton of clinker on a 1-hour rolling average, 0.40 lb per ton of clinker on a 30-day and 12 month rolling average.</p> <p><b>VOC:</b>            No add on controls. Good combustion practices.            24 ppmv at 7% O<sub>2</sub> for THC on a 1-hour average, 30-day rolling average, and 12 month rolling average. Note that VOC levels are related to composition and concentration of organic materials in the quarry and</p>



Source Name	EPN	Best Available Control Technology Description
		<p>BACT determinations are driven by this.</p> <p><b>O-HAP</b>          No add on controls.          12 ppmvd total organic HAP on a 30-day rolling average and 12 month rolling average. Note that this rate is based on preliminary organic information from the quarry.</p> <p><b>Dioxins and Furans</b>          No add on controls.          0.20 nanograms per dry standard cubic meter (TEQ), corrected to 7 % O<sub>2</sub> on a 30-day rolling average and 12 month rolling average.</p> <p><b>H<sub>2</sub>SO<sub>4</sub>:</b>          Add on and other control: scrubber.          The control efficiency of the scrubber will be specified in an as-built modification.          1.10 lbs. per ton of clinker on an hourly basis when the in-line raw mill and scrubber are not operating. 0.11 lbs. per ton of clinker on a 12-month rolling average basis.</p> <p><b>HCl:</b>          No add on controls.          3 ppmvd corrected to 7% O<sub>2</sub> on a 30-day rolling average and 12 month rolling average.</p> <p><b>Hg</b>          No add on controls.          0.000021 lb/ton of clinker on a 30-day rolling average and 12 month rolling average.</p>

		<p><b>Pb</b>          7.50E-05 lb/ton of clinker on a 30-day rolling average and 12 month rolling average.</p> <p><b>GHG:</b>          No add on controls. Proper design and operation.          0.92 lbs. per ton of clinker on a 30-day rolling average.</p> <p><b>NH<sub>3</sub> (SCR):</b>          No add on controls. Operation in a manner to minimize ammonia slip.          35 ppmv at 7% O<sub>2</sub> on a 30-day rolling average. This rate is consistent with or better than other cement kilns which were reviewed.</p> <p><b>MSS:</b> The Applicant has represented the following in relation to kiln startup and shutdown:</p> <p>The SCR will be operating at all times when fuel is being fired in the kiln/pre-heater except during kiln heat-ups at the beginning of startup. During these times, no raw materials will be fed into the kiln. During a cold startup after major refractory work, it will take about 36 hours to heat up the kiln. This operation is expected to only occur once per year. During the kiln heat-up process, NO<sub>x</sub> emissions are estimated to range from 3 to 12 lb/hr based the AP-42 Table 1.4-1 NO<sub>x</sub> emission factor for a large (&gt;100 MMBtu/hr) boiler equipped with a low NO<sub>x</sub> burner*.</p> <p>This NO<sub>x</sub> emission rate range is well below the proposed MAERT NO<sub>x</sub> limit for normal kiln operations of 75.34 lb/hr, which is less than the kiln emission rate of 143.7 lb/hr evaluated in the AQA submitted along with the initial application</p>
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Source Name	EPN	Best Available Control Technology Description
		<p>materials. During these kiln heat-up periods, supplemental air will be added to ensure that any combustion emissions are being exhausted. Although stack flow and temperature during these kiln heat-up periods have not been quantified, any reduction in dispersion due to stack flow and/or temperature is not expected to offset the ~13X lower NO<sub>x</sub> emissions expected during planned kiln MSS periods shown in the example below.</p> <p>In addition, the total planned kiln MSS operating hours per year are expected to be not more than 72 hr/yr, which would qualify as an intermittent source under TCEQ and EPA modeling guidance. The expected planned MSS hours are listed below:</p> <p>Case 1 - Kiln heat-up from cold after major refractory work - estimated to occur once per year at main maintenance stoppage (36 hrs per event)</p> <p>Case 2 - Kiln heat-up from cold after maintenance work w/o refractory work - estimated to occur once per year at secondary maintenance stoppage (12 hrs per event)</p> <p>Case 3 - Kiln heat-up from short stoppage for secondary maintenance work not requiring a full cool-down - estimated to occur about four times per year (6 hrs per event)</p> <p>Example Calculation - Maximum heat input during any warm-up case is not expected to exceed 81 MMBtu/hr. Therefore, the maximum</p>

Source Name	EPN	Best Available Control Technology Description
		<p>NO<sub>x</sub> emissions during warm-up periods are estimated as follows:</p> $81 \text{ MMBtu/hr} * 140 \text{ lb NO}_x/10^6 \text{ scf} / 1020 \text{ Btu/scf} = 11.15 \text{ lb/hr NO}_x$ <p>* It should be noted that the factor used for the qualitative comparison above is conservative in that it reflects a low NO<sub>x</sub> burner for a large (&gt;100 MMBtu/hr) combustion unit; however, given that the kiln burner is a low NO<sub>x</sub> burner rated at less than 100 MMBtu/hr (peak heat input during a start-up is expected to be approximately 81 MMBtu/hr), the NO<sub>x</sub> emissions from the kiln burner during start-up could be as much as 36X lower than the emissions modeled in the AQA.</p>
Finish Mill and Air Heater	51-SK-250	<p>15.9 MMBtu/hr heater:  NO<sub>x</sub>:  0.01 lb/MMBtu based on the higher heating value of the fuel and the use of a low NO<sub>x</sub> burner.  PM, PM<sub>10</sub>, PM<sub>2.5</sub>:  Add on control: Baghouse at 0.005 gr/dscf. 5% opacity. This exceeds published TCEQ BACT of 0.01 gr/dscf.</p>
Crusher, Milling, Raw Material Handling, and Product Handling	BF-Series EPNs (Numerous)	<p>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:  Add on control: Baghouse at 0.0025 gr/dscf. 5% opacity.</p>
Limestone, Gypsum, High Grade Limestone, and Sand Stockpiles	LS STKPL, ADD STKPL	<p>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:  90% reduction. Stockpiles will be required to be stored within a fully enclosed building.</p>
Ammonia handling	NH3FUG	<p>NH<sub>3</sub>:  AVO checks once per shift (28AVO).  A control efficiency of 93-97% - dependent on the piping component type.</p>

Source Name	EPN	Best Available Control Technology Description
Emergency Generator Engine	EG-1	<b>Products of combustion:</b> Limited to pipeline quality natural gas. Subject to 40 CFR Part 60 JJJJ and Part 63 ZZZZ. Operation is limited to 100 hours per year. A non-resettable hour meter is required in the Special Conditions.
Raw Material Loading	RR_MH, TRK_MH	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> 85% reduction. Partial enclosure defined as consisting of two sided (rail loading) or three-sided walls (truck loading) with fogging nozzles. Dustless telescopic spouts are required be used for loading trucks or rail from bins or silos. 85% is conservative given the additional controls and aspiration on this system.
Raw Material Handling (Crusher Building)	LSCRSHBD_MH	<b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b> 85% reduction. The actual crusher is controlled by a baghouse (see BF series BACT discussion), and this EPN is the dump into the crushing system. Partial enclosure is defined as three-sided walls with fogging nozzles. The operation is represented as taking place within the crusher's building, and the crusher loading hopper will be located below-grade to accommodate trucks dumping mined limestone. Therefore, 85% is expected to be a conservative control efficiency.
Silo Loading	N/A	Dustless telescoping spouts are required for these. This removes the units as potential fugitive dust sources, and emissions would be associated with the baghouses/dust collectors which control these units.

Source Name	EPN	Best Available Control Technology Description
ILE MSS Activities	MSS FUG	<p><b>Refractory Removal:</b>  <b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b>            Refractory (a bricklike material) is removed as needed for repairs or replacement. Operations taking place inside the kiln or cooler will be enclosed by nature, resulting in a 90% reduction in emissions. Drop into trucks was accounted for with no controls.</p> <p><b>Vacuum Truck Loading and Unloading:</b>  <b>PM, PM<sub>10</sub>, PM<sub>2.5</sub>:</b>            Partial enclosure will be utilized for an 85% reduction on loadouts. The trucks have a filter with an outlet grain loading of 0.01 gr/dscf for loading operations.</p> <p><b>CEMS Calibration</b>  <b>NO<sub>x</sub>, CO, THC, SO<sub>2</sub></b>            Emissions are due to the release of calibration gas from the feed analyzers and CEMS unit. No add on controls.</p>
Housekeeping	(non-regulated facilities - nuisance dust prevention)	<p>Plant roads are required to be paved and cleaned, as necessary, to control the emission of dust to the minimum level possible under existing conditions. Haul roads are required to be sprinkled with water and/or chemicals, as necessary, to maintain compliance with all applicable TCEQ rules and regulations. Blasting is forbidden from being utilized on site to acquire raw materials for cement production. A street sweeper and other mobile equipment is required to pick up debris from the plant roads. The street sweeper will be a full-sized truck which can be driven to the</p>



Source Name	EPN	Best Available Control Technology Description
		mined-out quarry to dispose of the debris collected.

The permit reviewer evaluated the proposed BACT and confirmed that all sources meet or exceed state and PSD BACT.

The permit reviewer evaluated this information, including the emission reduction options available for the process/industry. While technical practicability is established through the demonstrated success of an emission reduction option based on previous use and/or an engineering evaluation of a new technology, economic reasonableness is determined by the cost-effectiveness of controlling emissions (expressed as dollars per ton of pollutant reduced) and does not consider the effect of emission reduction costs on corporate economics. Based on this analysis, no additional controls are required for any of the proposed facilities. In many cases the Applicant exceeded BACT.

Nonattainment permits must include Lowest Achievable Emission Rate (LAER), as opposed to BACT. The proposed plant is located in Grayson County, which is currently designated as being in attainment or unclassifiable for all pollutants; therefore, nonattainment review and LAER requirements are not applicable to the proposed project.

#### Kiln System BACT Analysis for Carbon Monoxide:

CO emission rates are in part driven by the composition and concentration of organic materials in the kiln feed and vary regionally dependent on the nature of the quarried limestone. The proposed rate is consistent with other Texas kilns using limestone from this general region, though this can vary by the geologic makeup of individual quarries. TCEQ was unable to locate any cement kilns using add on controls specifically for CO control. Because of regional variability with cement kiln raw materials, good combustion practices with proper design and operation were determined as BACT.

#### Kiln System BACT Analysis for Ammonia:

TCEQ reviewed ammonia slip concentrations for all cement kilns permitted in Texas, as well as the RBLC database and found none with a lower ammonia slip concentration. Accordingly, 35ppm was accepted as BACT.

### Kiln System BACT Analysis for Particulate Matter:

PSD and state BACT for cement kilns focuses on the filterable PM limit, due to the fact that federal standards in 40 CFR Part 60 (NSPS) Subpart F and 40 CFR 63 (NESHAPS) Subpart LLL solely limit filterable PM to 0.02 lbs of PM per ton of clinker. Condensables can be affected by aspects such as fuel sources and organics in the raw materials, and many of the individual condensable pollutants are regulated by their own state permit and federal limitations (for instance, sulfur compounds). Similar to CO emissions, organics in the raw materials can affect this rate on a per-site basis. Calculations and limits were based on another cement kiln located in Texas rather than EPA AP-42 factors for this reason. The Applicant proposed a condensable limit of 0.28 lbs of PM per ton of clinker on a 1-hour average, 30-day rolling average, and a rolling 12-month average. This was accepted as BACT.

### COMMENT 16: Questions Regarding the Draft Permit

Duncan C. Norton expressed concern that the draft permit does not reflect restrictions that were represented in the application. David Smith asks if a truck wash would be required for outbound cement tanker trucks to keep fugitive cement dust off of local roads, buildings, and vehicles. David Smith commented that he rejects the special condition that allows visible fugitive emissions across property lines, stating that this will be a nuisance and a continual violation. Atul Dave commented that an initial permit should be limited to two years only, and then assessments by state agencies need to be done before issuance of a renewal of the permit.

### Special Condition No. 18

David Smith expressed concern that haul roads and all other unpaved roads do not have a standard for dust control other than "compliance with rules and regulations," stating that a 95% control efficiency should be mandated for all unpaved roads as it is a standard widely used in the mining industry and should be used for the proposed plant.

### Special Condition No. 27, Subpart B

David Smith expressed concern that the permit conditions allow continued operation while trying to contain or repair a leak and asks why the plant isn't required to shut down until it is fixed.

### Special Condition No. 35

David Smith expressed general confusion regarding the proposed condition requiring additional testing if 2% or more production is achieved from the previous emissions compliance test, asking what the basis is, how the 10% rule can apply, asks why the maximum production rate is not set based on what is demonstrated and achieved during testing, and asks what the maximum hourly production rate is under the permit for testing purposes if testing is done in less than 24-hour intervals.

Special Condition Nos. 40, 45, 46 and 47

David Smith asks why the Finish Mill stack does not have a Continuous Emissions Monitoring System (CEMS) or Continuous Parameter Monitoring System (CPMS) for PM, NO<sub>x</sub>, and CO emissions. Mr. Smith commented that that a six-minute visible emissions check is inadequate and asks why the permit does not contain enforceable NO<sub>x</sub> and CO limits when it has a natural gas fired hot gas generator. Mr. Smith commented that the Finish Mill should have enforceable limits for ammonia and mercury emissions and if not limits, then the permit should include a prohibition on the use of synthetic gypsum.

(Duncan C. Norton, David Smith, Atul Dave)

**RESPONSE 16:** TCEQ regulates nuisance dust, and has implemented requirements relating to this, specifically the roads are required to be paved and cleaned. Haul roads are required to be sprinkled with water and/or chemicals as necessary. A street sweeper will be required to pick up debris from plant roads. As explained in Response 25, TCEQ does not have jurisdiction over blasting or quarry operations, therefore, the TCEQ rules do not require an applicant to analyze emissions resulting from quarry operations, blasting, roads, or the use of trucks in an individual permit application. The draft permit forbids the use of blasting as a nuisance dust prevention measure, and the Applicant has represented that it will not be necessary for quarrying activities.

The property line visible emission limitation and monitoring requirements found in the draft permit are based on EPA monitoring methods for fugitive emissions. In addition, an applicant is bound by its representations in the application and those representations become an enforceable part of the permit, including production rates, authorized emission rates, and equipment. If the Applicant deviates from the representations made in the application, on which the permit was developed, the Applicant may be subject to enforcement action. The permit term is 10-years, after which the applicant will have to renew the permit to continue operation. If the applicant decides to change or amend their operations during that time, the applicant would have to submit a permit amendment application which TCEQ would have to approve.

Special Condition No. 18

TCEQ cannot regulate haul roads or other unpaved roads as a facility per THSC § 382.003(6). TCEQ rules forbid nuisance dust under 30 TAC § 101.4, and therefore often implements nuisance prevention measures in permits. As previously described, the draft permit requires housekeeping measures intended to prevent nuisance dust.

Special Condition No. 27, Subpart B

Special Condition No. 27, Subpart B provides control measures and repair requirements for when an ammonia leak in the ammonia handling system associated with the NO<sub>x</sub> reduction system occurs. A leak from the ammonia handling system could occur whether or not the system was actively supplying ammonia and would not be associated with operation of the rest of the plant. If the system was shut down completely, the leak would still occur, therefore shutting down operations would

provide no benefit for leak prevention. This Special Condition requires beginning repairs on a leak within 1 hour of detection. It prescribes best management practices for isolating, repairing, and containing the leak. Specifically, it requires isolating the leak, commencing repair or replacement of the leaking component and utilizing a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.

#### Special Condition No. 35

Early versions of this draft condition originally had a transcription error where the 10% increase second figure should have matched the previous 2% increase testing threshold in the paragraph. It was subsequently revised after new stacking test boilerplate language became available. The new language requires testing following any increase in production, though it allows for increases in production without testing if certain thresholds relating to allowable emissions are not exceeded.

#### Special Condition Nos. 40, 45, 46, and 47

The Finish Mill utilizes a small air heater to achieve desired temperatures for milling of the clinker into a powder. The proposed heater is 15.9 million British thermal units per hour (MMBtu/hr). This is well below the 100 MMBtu/hr rate which is the threshold for which TCEQ requires the use of a CEMS. Similarly, the small baghouse filter on the mill is below the size and use case for which TCEQ requires CPMS. Instead, pressure drop monitoring will be used to determine proper function and integrity of the filter unit. Opacity check demonstration requirements are based on methods prescribed by the EPA. The Finish Mill does not require the use of a SNCR and its ammonia injection to achieve its emission rates given its small size. Therefore, it is not a source of ammonia emissions. Additionally, unlike in a kiln, the temperatures in the mill are not sufficient to volatilize any residual mercury in the clinker. Accordingly, EPA does not have standards for pollutants such as mercury from Finish Mills. Ammonia is a gas in normal conditions and gypsum and synthetic gypsum are calcium sulfate dihydrate. These minerals can contain impurities of various other minerals or metals, but concentrations are extremely low. Gypsum is a common mineral in soil and rock formations. It is used for household use, in food, water treatment, agriculture, and home construction. Accordingly, TCEQ does not require a protectiveness demonstration beyond the NAAQS, as explained in Response 1.

#### COMMENT 17: Compliance History

Commenters expressed concern that the Applicant does not have experience in operating a cement plant, and questions how the Applicant will comply with the permit. Anthony Dimarco asks how many plants the Applicant has operated, what the record has been for emissions within and outside of the standard operating limits, asks if these emissions have been favorable or not, and asks where to find the historical data.

(Ashley Beck, Emily Brooks, Lee Collins, Anthony Dimarco, Don Horn, Robin A. Horner, Scott Horner, Liberty Johnson, Julie Lanicek, James Stringfield, David G. Sileven, Gary Schnitker, Jennita Wingate)

**RESPONSE 17:** During the technical review of the permit application, a compliance history review of both the company and the site is conducted based on the criteria in 30 TAC Chapter 60. These rules may be found at the following website:  
<https://www.tceq.texas.gov/rules/index.html>.

The compliance history is reviewed for the five-year period prior to the date the permit application was received and includes multimedia compliance-related components about the site under review. These components include: enforcement orders, consent decrees, court judgments, criminal convictions, chronic excessive emissions events, investigations, notices of violations, audits and violations disclosed under the Audit Act, environmental management systems, voluntary on-site compliance assessments, voluntary pollution reduction programs, and early compliance. However, the TCEQ does not have jurisdiction to consider violations outside of the State of Texas.

A company and site may have one of the following classifications and ratings:

- High: rating below 0.10 – complies with environmental regulations extremely well;
- Satisfactory: rating 0.10 – 55.00 – generally complies with environmental regulations;
- Unsatisfactory: rating greater than 55.00 – fails to comply with a significant portion of the relevant environmental regulations.

The company rating reflects the average of the ratings for all sites the company owns in Texas. The site and company ratings are not applicable to the proposed project, as both the company and proposed facility are new. Additionally, TCEQ cannot deny a permit because a company is new, or does not have a compliance history record. *See* Response 18 regarding Compliance and Enforcement.

#### **COMMENT 18: Compliance and Enforcement**

Commenters expressed concern about how the Applicant will demonstrate compliance with the conditions of their permit. Commenters ask who will ensure compliance with the permit. Commenters ask about the consequences of violating the terms of the permit. Commenters are concerned that the Applicant can just pay a fine if they are found to be out of compliance and then be allowed to continue to operate. Carl Kalbfleisch asks if there would be a public record of the monitoring conducted at the proposed plant. Jim Schermbeck commented that the rules of the TCEQ mean nothing these days because they are not enforced.

(Faith Barrett, Ashley Beck, Francis Beck, Emily Brooks, Tiffany Broyles, Linda Carol Crain, Bruce Dawsey, Deirdre Diamond, Kathleen Dophied, Rachel Grooms, Scott Horner, Billie Charels Ingram, Liberty Johnson, Carl Kalbfleisch, Terri Langford, Crystal Lawson, Julie Lenicek, Sarah Newtown, Duncan C. Norton, Jeff Overstreet, Jim Schermbeck, Lari Alexis Taylor-Baker)

**RESPONSE 19:** Special conditions have been included as part of the proposed permit to ensure the Applicant can demonstrate compliance with the emission limitations set forth in the permit. Emissions will be monitored by the following methods:

All baghouses/dust collectors: Each is subject to daily pressure drop readings. All baghouse capture systems will be subject to monthly inspections to ensure that they are free of holes, cracks, or other conditions which could reduce their capture efficiency. Monthly opacity/visible emission checks are required for all baghouses. The Finish Mill Baghouse Stack (EPN 51-SK-250) will be required to have a daily visible emissions/opacity observation.

Kiln: A Continuous Parametric Monitoring System (CPMS) is required for monitoring of PM. Continuous Emissions Monitoring Systems (CEMS) are required for O<sub>2</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, THC (as a surrogate for VOC), NH<sub>3</sub>, and Hg.

Kiln Dry Scrubbing System: Monitoring for this system will be required to be established with an as-built amendment prior to start of operations.

Ammonia fugitives: Audio Visual and Olfactory checks are required once every 24 hours (28AVO) and monthly property line visual emission observations are required. Stack testing will be utilized to validate kiln emission rates and monitoring.

The permit holder is also required to maintain records to demonstrate compliance. Records must be made available upon request to representatives of the TCEQ, EPA, or any local air pollution control program having jurisdiction.

As required for any major source, the Regional Office is required to perform periodic investigations of the plant. The investigation may include an inspection of the site including all equipment, control devices, monitors, and a review of all calculations and required recordkeeping. The TCEQ evaluates all complaints received. If a facility is found to be out of compliance with the terms and conditions of its permit, it will be subject to investigation and possible enforcement action. Individuals are encouraged to report any concerns about nuisance issues or suspected noncompliance with terms of any permit or other environmental regulation by contacting the TCEQ Dallas/Fort Worth Regional Office at 817-588-5800 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186.

Citizen-collected evidence may be used in such an action. See 30 TAC § 70.4, Enforcement Action Using Information Provided by Private Individual, for details on gathering and reporting such evidence. Under the citizen-collected evidence program, individuals can provide information on possible violations of environmental law. The information, if gathered according to agency procedures and guidelines, can be used by the TCEQ to pursue enforcement. In this program, citizens can become involved and may eventually testify at a hearing or trial concerning the violation. For additional information, see the TCEQ publication, "Do You Want to Report an Environmental Problem? Do You Have Information or Evidence?" This booklet is available in English and Spanish from the TCEQ Publications office at 512-239-0028 and may be downloaded from the agency website at <http://www.tceq.texas.gov> (under Publications, search for document number 278).



Violations are usually addressed through a notice of violation letter that allows the operator a specified period of time within which to correct the problem. The violation is considered resolved upon timely corrective action. A formal enforcement referral will be made if the cited problem is not timely corrected, if the violation is repeated, or if a violation is causing substantial impact to the environment or neighbors. In most cases, formal enforcement results in an agreed enforcement order including penalties and technical requirements for corrective action. Penalties are based upon the severity and duration of the violation(s). Violations are maintained on file and are included in the calculation of a facility and a person's compliance history. Compliance history ratings are considered during permit application reviews.

Records of monitoring are maintained by the permit holder and can be included in TCEQ investigations. There is no requirement that permit holders make their records available to the public.

**COMMENT 19: Emergency / Evacuation / Disaster Review / Upset Event**

Commenters expressed concern about the safety of the facility. Commenters ask how neighbors would be notified in the case of an accident and whether there is an evacuation plan. Commenters expressed general concern with regard to potential upset events. Commenters expressed concern that the facility would store and handle ammonia, questioning why a disaster review was not required to be submitted as part of the application. Commenters expressed concern that local firefighters and emergency response would not be able to accommodate the proposed plant in the event of an emergency. Karla McDonald commented that the City of Howe services Dorchester for fire and EMS needs, stating that they do not have the equipment or manpower to ensure proper safety of the proposed plant. Crystal Lawson expressed concern about remediation when control technologies fail.

(Janice Akins, Paula A. Cavender, Shane Cavender, Jeremy Q. Devore, Judith S. Dryden, Chloe Grooms, Joshua Grooms, Billie Ingram, Suzanna Dryden Jensen, William Landrum, Terri Langford, Karla McDonald, Steve Miller, Emily Powell, Kathy Raner, Justin Neal Raner, Russell Rutherford, Jim Schermbeck, Marci Schnitker, David Smith, Wendy Smith, Chandler Strawn, Mark Vodry, Kimberly Vodry)

**RESPONSE 19:** The TCEQ takes your health and environmental concerns seriously. The proposed permit meets all federal and state regulatory requirements and is protective of human health and the environment. If you have been adversely impacted by emissions from the facility, you may file a complaint with the TCEQ Dallas/Fort Worth Regional Office at 817-588-5800 or by calling the 24-hour toll free Environmental Complaints Hotline at 1-888-777-3186).

In the event of an emergency, the Local Emergency Planning Committee and the regulated entity have the primary responsibility of notifying potentially impacted parties regarding the situation. In addition, as set forth in 30 TAC § 101.201(a), regulated entities are required to notify the TCEQ regional office within 24 hours of the discovery of releases into the air and in advance of maintenance activities that could or have resulted in excess emissions.

Proposed projects which involve toxic chemicals that are known or suspected to have potential for life threatening effects upon off-facility property in the event of a disaster and involve manufacturing processes that may contribute to the potential for disastrous events, may require a disaster review for the application. A Risk Management Plan (or Disaster Review) is required for all chemicals meeting the requirements of 40 CFR Chapter 68. While the application did represent that the proposed facility will store and handle quantities of ammonia, the represented quantities were below the respective thresholds identified in 40 CFR Chapter 68.130(b); therefore, this application did not require a disaster review. See Disaster Review Fact Sheet (texas.gov) and <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-68/subpart-F>.

Accordingly, the draft permit's MAERT lists the only emissions authorized to be emitted from the proposed project. The TCEQ defines an upset event as an unplanned or unanticipated occurrence or excursion of a process or operation that results in an unauthorized emissions of air contaminants. An upset event that results in unauthorized emissions from an emission point is an emissions event. If an upset occurs, the permit holder must comply with the requirements in 30 TAC § 101.201 regarding the recording and reporting of emission events. If the permit holder fails to report in accordance with 30 TAC § 101.201, the commission may initiate enforcement action for failing to report the underlying emissions event itself. Emissions from historical unplanned emission events or upsets are not included in the impact analysis as the NSR permit does not authorize upset events.

#### **COMMENT 20: Expedited Permitting**

Commenters expressed concern regarding expedite review. Commenters expressed concern that the permit application was expedited, stating that the project requires closer scrutiny. Crystal Lawson asks what allows the permit to be processed in an expedite manner.

(Crystal Lawson, Marci Schnitker)

**RESPONSE 20:** Any applicant may request to have their application expedited. TCEQ will expedite the review of the application if the applicant can demonstrate eligibility under 30 TAC § 101.600 and remits the appropriate fee. Expedited applications undergo the same level of scrutiny and review as non-expedited applications and follow all air permitting process requirements. Further, the public notice requirements and the duration of the public notice comment period is the same for both expedited and non-expedited projects. The economic benefit analysis is not part of the administrative or technical review and does not impact the issuance of a permit.

### **COMMENT 21: Location / Zoning**

Commenters expressed concern regarding the location of the facility as it relates to current zoning ordinances and the proximity to residential and public areas, including but not limited to schools, churches, daycares, homeschools, public areas, residences, ranches, farms, tribal lands, an airport, food industries, as well as nearby tech, semiconductor, and chip manufacturing facilities in the area. Commenters expressed specific concerns regarding the potential impact on the nearby airport, including hazards to air navigation, takeoff and landing procedures, pilot safety, obstructions due to structure heights, and ask that Federal Aviation Administration (FAA) regulations be taken into consideration. Commenters are concerned that there are already other concrete plants in the area, stating that they don't want another. Commenters also questioned whether the area was properly zoned for the operation of such a plant or if it should be located in an industrial zoned area, not near homes. Commenters expressed that the proposed plant should be located somewhere else. Multiple commenters state that they are too old to relocate. Judy Searcy Dryden commented that a bordering landowner should not have an effect on the land use of the neighboring property. Jeremy Q. Devore questioned the proposed location as it relates to the 440-yard distance requirements.

(Representative Reggie Smith, Group A, Randy Adams, Janice Akins, Samantha Allison, Luz Arce, Amber Armendariz, Ralph Armstrong, Art Arthur, Charles Ashley, Amy Ashlock, Andrea Paulette Aslam, Sesily Babekuhl, David Baca, Keith Baehmann, Cynthia Baker, Willies Carl Ballou, Debra Banks, Douglas Glenn Banner, Kelly Denise Barnes, Darla Barr, Kathy Bartlett, Robert Bauer, Heather Beaver, Nelson Beaver, Ashley Beck, Francis Beck, Jennifer Beecroft, Blake C. Beeson, Patti Beggs, Gary Bennett, Darald Berger, Lander Bethel, Tonya Bingham, Liz Birchall, Cliff Blackstock, Tammy Bohannon-Yule, James C. Boles, Nolan E. Bond, Linda Bowers, Paul David Bowers, Madilyn Bramer, Ashlin Bridwell, Cheryl Brociek, Ron Brockner, Ron R. Brockner, Bryan Brooks, Emily Brooks, Jan Broomall, Nancy Brown, Jeffrey Brown, Jeremiah Broyles, Tiffany Broyles, Jeremiah D. Broyles, Erika Bryan, Jamie Buckalew, Homer Bullard, Jennifer Bullard, Brenna Butler, Christa Call, Veronica Calzada, Sarah Campbell, Tommy Joe Carney, Holly Castleberry, Clint Catching, Paula A. Cavender, Shane Cavender, Andrew Cellars, Adam Cernero, Corey Chambers, Nicole Chambers, Kristin Chandler, Bobby Luke Chandler, Megan C. Chandler, Laura Childress, Art Clayton, Margaret Coleman, Lee Collins, Meghan Cone, Anthony Alan Cook, James Matt Cooper, Charli Cotten, Katie Courange, R. D. Cozad, Skyler Cozad, Traber Cozad, Cassady A. Craddock, Matthew Crain, Linda Carol Crain, Amanda Crawford, Andrew Crawford, James Crews, Donald Ray Cummings, Karen L. Cummings, Karen Cummings, Lindsay Cummings, Tracy R. Curry, Stephanie Davidson, Wes Davidson, Chanel Ann Davis, Cynthia L. Davis, Alicia Davis, Jordan Taylor Davis, Julie Davis, Karla Graham Davis, Preston Davis, Bruce Dawsey, Bruce W. Dawsey, Shawna Dawson, Heidi Debner, Thomas G. Debner, Bethany Devore, Jeremy Devore, Mary Gail Devore, Jeremy W. Devore, Jeremy Q. Devore, Deirdre Diamond, Melissa Doan, Kimberly Stewart Dodson, Kathleen Dophied, Judy Searcy Dryden, Robert E. Dryden, Judith S. Dryden, Searcy Dryden, Leslie M. Dulack, Michael Dulack, Christina N. Dunlap, Sherry Duran, Cindy Durrant, Michael Joseph Elliott, William Engle, Cendy Y. Escalera, Nayeli Escalera-Solis, Rachel Evans, Michael Fannin, Barrett Fannin, Jesse Farrer, Laura Fincher, James N. Flanery, Adam Fleming, Bobby Fletcher, Lindsey Flores, Harold Foster, William Foster, Frank Edward Gadek, Andrea

Ganow, Lori Gardner, Chris Gardner, Renny Gehman, Tracy Gilbert, Rex Glendenning, Donald E. Godwin, Roberto Gonzalez, Patricia C. Gonzalez, Lora Gordon, Margie Graf, Anabelle Graham, Amber Gravley, Laura Green, Linda J. Greenfield, Kit Grice, Brandon Grooms, Chloe Grooms, Rachel Grooms, Austin Grooms, Joshua Grooms, Richard Oran Gross, Jennifer Haeg, Damon L. Moore Hall, Teresa M. Hall, Ginger Ham, Dave Hammond, Matt Hardenburg, Emily Ann Hardwick, Letitia Harris, Jim L. Harvey, Rod Hawkins, Stephanie Hawkins, Christine Heck, Patricia Hedrick, Lisa Hejny, Moses Hejny, Bryan Hemman, Sarah Henry, Joann Hensley, Donna Hepner, Alyssa Hernanadez, Jerry Dean Hestand, Debbie Hester, Dwayne Hicks, Michael S. Hignight, Carol Hill, Melissa Hill, Melinda Hill, Amy Hoffman-Shehan, Suzanne Hooks, Don Horn, Charity Horne, Robin A. Horner, Scott Horner, Helen Horton, Gabe Howell, Joyce A. Huff, Jen Huff, Alice Hughes, Meghan Hughes, Mandy Hummel, Laura T. Hunt, Colin Drew Hunter, Linda K. Hunter, Lori Huntsman, Debbie Hurd, Heather Jacques, Mike Jacques, Phyllis D. James, Michael Jefferson, Rachel Jenkins, Chris Jennings, Trish Jennings, Suzanna Dryden Jensen, Linda Kay Johnson, Nathan K. Johnson, Carrie Jones, Elizabeth Jones, Lori Jones, Debbie Elaine Judkins, Carl Kalbfleisch, Cynthia J. Kaleri, Kenyon Kemp, Dina Kenemore, Brittany Kennedy, James Kimbrel, Geri V. King, Ken King, Laura L. King, Laura Kirilloff, Debbie Kirkpatrick, Keith Kisselle, Peggy Klas, Detra Klas, Vanetta Klok, Anthony J. Kordosky, Rick Kvaal, Cindy Kvaal, Irms Kyle, Greg L. Laird, Amanda Lambert, Lauren Lambert, Austin Lambert, Benjamin T. Landgraf, Chris Landino, William Landrum, Terri Langford, Julie Lanicek, Jason R. Lankford, Jason Lankford, Crystal Lawson, Rhonda Lawson, Wayne Lee, Patsy Lemaster, James Lewellen, Kylee Likarish, Victor Lissiak, Mary Little, Jim Lucas, Trudy Lucas, Eric Lunde, Ronald Clay Lynch, Dakotah Mahan, Brian Mai, Sarah Mallory, Rickey J. Malta, Casey Mandi, Josh Marr, Rose M. Marr, Monica Martin, Mickie Martin, Brittany Martin, Steve Marum, Catherine Matuella, Patsy Mauldin, Dusty Wayne Mayer, Traci McCarthy, Claudia L. McClure, Les McConnell, Garrett McCown, Janna C. McCown, Vivian Robin McCoy, Karla McDonald, Larry McDonald, Alan Lee McKelva, Diana McMahan, Patrick Neal McNutt, Kevin Meissner, Dusty Melton, Amy Meyer, Steve Miller, Caitlyn Miller, Davida Miorin, Lynn M. Mitchusson, Michael J. Mitchusson, Lynn M Mitchusson, Mehrdad Moayed, Joyce L. Moore, Grover Franklin Moore, Angela Moreau, Brad Morgan, Mary Morgan, Jason Morin, Shandi Morris, Amarise Morris, Andronica Morris, Matthew Morris, Zadrian Morris, Terry Morrison, Marthann Morrow, Ashley Morrow, Sierra Mueller, Karen Murphy, Rick Myer, Lucy Myer, Ramesh Nadella, Jason Lee Naramor, Mitaj Nathwani, Sharon Nelson, Jacob Nelson, Sarah Newtown, Andeelea Anderson Nichols, Danny Thomas Nichols, Chris Nicoloff, Marie Nixon, Paul Nixon, Margie Noel, Marye Jean Norman, Brandon Norris, Jennifer Norris, Brian E. Norris, Tera Norris, Erica Northrup, Duncan C. Norton, Duncan C Norton, Andrew Wallace Olmstead, Brent Omdahl, Brent E. Omdahl, Angie Onley, Melinda Ortle, Bonita L. Overbey, Bobby N. Overbey, Jeff Overstreet, Paula Overstreet, Tyler Overstreet, Nikolaus Owen, Brian Parks, James Parrish, Trent Patterson, Holland Paula, Debra Payne, Emily Powell, Taylor P. Powell, Shelly Prewitt, Josh Price, Lindsay Price, Ricky Price, Joshua D. Price, Delfina Prisock, Chelsey Pulcheon, Ray H. Purdom, Craig Rabe, Kathy Raner, Justin Neal Raner, Alan Redd, Patsy A. Reeves, Laura Reeves, Richard Reeves, J. Renfro, Kevin Diaz Reyes, Tara Rice, Charity Riley, Cindy Risk, Naif Risk, Joy Roberts, Mary Roberts, Judy Carol Robison, Luanne Robison, Mark Douglas Robison, Douglas Ray Robison, Brad Robnett, Mona Robnett, Liz Rocamontes, Elizabeth Rodriguez, Jennifer Rollins, Mel Ronduen, Sharla Ross, Kerri Rowe, Kara Royston, Brad Rucker, Kayli Rushing, Bettye Russell, Brian Russell, Linda Sue Russell, Linda Russell, Russell Rutherford, Shannon Ryan,

Christina R. Rykens, Anoo Sathappun, Jim Schermbeck, Jarod Schmitt, Joann Schnitker, Bradley J. Schnitker, Marci Schnitker, Racheal Sedmack, Doreen Shacklee, Kent Sharp, True Shaw, Rosa Shelton, David Shepard, Kenda Sinclair, Sharon Slaughter, David Smith, Reggie Smith, Wendy Smith, Derek Smith, Kyle Smith, Dustin Smith, Leann Smith, Jeff Randall Spencer, Cynthia Annk Spencer, Julia Spencer, Frances Sprabary, Drew Springer, Sara Sprinkle, Bobby Overbey Sr., Penny Stahl, Roxanne Standerfer, Alice Stewart, James Stewart, Robert Stewart, Shirley Stewart, Patricia Ann Stewart, Alice Faye Stewart, Shana Stonebarger, Chandler Ryan Strawn, Chandler Strawn, Dana Strong, Crystal Stueve, Sathappun Subbiah, James Sutherland, Kenneth Svehlak, Sue Svehlak, Meghan Swindle, Griffin Tammy, Margaret Taylor, Betty Jean Taylor, Thomas Taylor, Thomas L. Taylor, Thomas Leland Taylor, Shawn C. Teamann, Cristi Tenant, Alyssa Thomas, Dana Thornhill, Lisa Tibbets, Julie Travis, Yolanda Trevino, Tonya Troxtell, Griffin Underwood, Kristi Utley, Gail W. Utter, Diana Vanbuskirk, Ronald Vanbuskirk, Mickinze Vanherpen, Denise Vawter, Brittany Verhoek, Marilyn Sue Vest, Larry Vincent, Becky Vincent, Larry W. Vincent, Mark Vodry, Kimberly Vodry, Jenny Vonbehren, Jaymison Bella Voto, Campbell Voto, Jay Dee Voto, Jay Voto, Darren W., Leonard G. Waldrum, Monte Walker, Phillip Walker, Paula Walker, Brian Wang, Bihfang Want, John Ward, Mingyan Ward, Cameryn P. Warren, Kevin Wasp, Jacqueline Wassom, Wyatt Watson, Shelbie Watts, Lanisha Weaver, Cynthia Weems, Rudy Weems, Cynthia L. Weems, Amy Wheeler, Ronnie Whiteley, Edward Whitfield, Monica L. Whitfield, Jeff Whitmire, Jim Whitten, Teresa Wildman, Ruth E. N. Cox Williamson, Jennifer Williamson, Jeffrey Wilmoth, Kevin Wilson, Dustin Ray Wilson, Krista Lucas Wynn, Jace Yarbrough, Caroline Yuan, Angela Zarallo, Savanna Zinn, Tracie Zweifel-Gibson, Angela Wilson, April Williams, Cynthia Zinn, David G. Sileven, Dorothy Schmoker, Gary Schnitker, Kaaren J. Teuber, Paula Neely, Robert Sanchez, Robin Sears, Shayla Wheeler, Terry Rainbow, Angela Onley, Sara Salinas)

**RESPONSE 21:** The TCEQ does not have jurisdiction to consider plant location choices made by an applicant when determining whether to approve or deny a permit application, unless a statute or rule imposes specific distance limitations that are enforceable by the TCEQ. Zoning and land use are beyond the authority of the TCEQ for consideration when reviewing air quality permit applications and such issues should be directed to local officials. Citizens concerned about land use and zoning ordinances should contact city, county, or local zoning officials. The issuance of an air quality authorization does not override any local zoning requirements that may be in effect and does not authorize an applicant to operate outside of local zoning requirements.

The TCEQ Dallas/Fort Worth Regional Office conducted a site review of the area on December 3, 2021. According to that site review, nuisance/odor potentials were high. The review also described the surrounding land use as agricultural, stating that “a church, a business, and approximately five rural residential properties are located along the Site’s property line. The rural town of Dorchester is located south of the Site.” The site review documented the nearest off-property receptor is a business (Texas Aero Sport) approximately 500 feet away. The distance from the facility to the nearest property line, according to the site review, is approximately 200 feet. The site review documented the following: “The Site is a new site; therefore, there were no actual emission points to measure from. Distances obtained for this site assessment were based on the representations included on the proposed site and plot maps.

According to these maps, the Site's operations will be located near a church, a business, and rural residential properties. The impact of potential nuisance conditions affecting these sensitive receptors should be considered." The recommendation of the Regional Office was to proceed with the permit review and the site review indicated no reasons to deny the permit application. Please see Response 1 for information about the air quality and health effects.

Although TCEQ cannot consider zoning or land use, the TCEQ does conduct a health effects review to ensure that there will be no adverse impacts to human health and welfare. As described in Response 1, a protectiveness review was conducted for all contaminants emitted. The maximum concentrations were evaluated at the property line, at the nearest off-property receptor, and at any schools located within 3,000 feet of the proposed facilities and found to be protective of human health and the environment.

The TCAA prohibits a concrete crusher from being located within 440 yards of a residence, school, or place of worship. The proposed permit is to obtain authorization for a cement kiln, not a concrete crusher; therefore, the 440-yard distance requirements are not applicable. There is no proposed concrete crusher as part of this application and the TCEQ cannot deny this air permit based on plant location.

#### **COMMENT 22: Noise and Light Pollution / Operating Hours**

Commenters expressed concern about noise and light pollution from the proposed project and cited noise ordinances in the area. Commenters are concerned about noise from the plant, stating that it will disrupt church services. Several commenters stated that they moved to the area for peace and quiet and to get away from the city noise. Commenters asked about the operating hours of the plant and expressed concern that operations would occur 24 hours a day, 7 days a week. Commenters expressed concern that overnight operations are not suitable for the nearby residential areas, state that noise levels would interrupt their everyday lives, and are concerned that noise and light pollution will keep them up at night. Manual Watson asks about the sound level from the operating equipment. Jeremy Devore questioned whether the plant would be able to operate 8,760 hours per year.

(Group A, Novin Abdi, Art Arthur, Andrea Paulette Aslam, Sesily Babekuhl, Keith Baehmann, Cynthia Baker, Willies Ballou, Willies Carl Ballou, Heather Beaver, Ashley Beck, Francis Beck, Blake C. Beeson, Cliff Blackstock, Nancy Bond, Nolan E. Bond, Laffel Brown, Nancy Brown, Tiffany Broyles, Jamie Buckalew, Veronica Calzada, Clint Catching, Adam Cernero, Kristin Chandler, Lee Collins, Meghan Cone, R. D. Cozad, Skyler Cozad, Camryn Craddock, Brian Culp, Kristen Cunningham, Bruce W Dawsey, Thomas G. Debner, Jeremy Devore, Jeremy Q. Devore, Jeremy W. Devore, Kathleen Dophied, Leslie M. Dulack, Michael Joseph Elliott, William Engle, Adam Fleming, William Foster, Chris Gardner, Rex Glendenning, Lora Gordon, Richard Oran Gross, Teresa M. Hall, Ginger Ham, Matt Hardenburg, Moses Hejny, Moses Henjy, Sarah Henry, Donna Hepner, Amy Hertel, Melissa Hill, Robin A Horner, Alice Hughes, Debbie Hurd, Phyllis D. James, Michael Jefferson, Debbie Elaine Judkins, Cynthia J. Kaleri, James Kimbrel, Laura L. King, Geri V. King, Ken King, Peggy Klas, Detra Klas, Vanetta Klok, Anthony J. Kordosky, Cindy Kvaal, Julie Lanicek, Victor Lissiak, Eric Lunde, Brian Mai,



Rickey J. Malta, George Mason, Catherine Matuella, Dusty Wayne Mayer, Traci McCarthy, Les McConnell, Amy Meyer, Davida Miorin, Mehrdad Moayedi, Grover Franklin Moore, Brad Morgan, Mary Morgan, Jason Morin, Karen Murphy, Rick Myer, Mitaj Nathwani, Sharon Nelson, Danny Thomas Nichols, Chris Nicoloff, Marie Nixon, Margie Noel, Duncan C. Norton, Bonita L. Overbey, Bobby N. Overbey, Jeff Overstreet, James Parrish, Lindsay Price, Delfina Prisock, Patsy A. Reeves, Kevin Diaz Reyes, Cindy Risk, Naif Risk, Joy Roberts, Jennifer Rollins, Brian Russell, Linda Sue Russell, Carrie Saindon, Bradley J. Schnitker, Mary J. Scott, Rosa Shelton, David Smith, Sara Sprinkle, Penny Stahl, Robert Stewart, Shirley Stewart, Stephanie Strawn, James Sutherland, Kenneth Svehlak, Sue Svehlak, Griffin Tammy, Thomas L. Taylor, Thomas Leland Taylor, Cristi Tenant, Julie Travis, Diana Vanbuskirk, Betty Jean Taylor, Bihfang Wang, Brian Wang, Bihfang Wang, Manual Watson, Shelbie Watts, Rudy Weems, Jeff Whitmire, Kevin Wilson, Rebecca Zey, Tracie Zweifel-Gibson)

**RESPONSE 22:** The TCEQ does not have authority under the TCAA to consider noise or light pollution when determining whether to approve or deny a permit application. The TCEQ also does not have authority under the TCAA to require or enforce any noise abatement measures. Noise ordinances are normally enacted by cities or counties and enforced by local law enforcement authorities. Commenters should contact their local authorities with questions or complaints about noise.

The TCEQ does not have the authority to regulate the hours of operations of a facility or site if the permit review demonstrates all applicable federal and state regulations are met. Accordingly, TCEQ cannot limit the hours of operation unless an emission rate is dependent on a limit on operational hours or there are issues associated with the air quality analysis that require the limitation. As described in Response 1, the protectiveness review conducted conservatively assumes a 24 hour per day operating schedule and determined that emissions are protective. The Applicant represented operations up to 8,760 hours per year. Applicants are bound by the representations in their applications including work hours.

#### **COMMENT 23: Traffic / Trucks / Roads / Vehicular Safety / Infrastructure**

Commenters expressed concern about increased traffic of cars and trucks as a result of the proposed project. Commenters expressed concern that the plant would increase truck traffic, traffic congestion, and road hazards. Commenters expressed concern concerned about truck emissions, spillage of debris from trucks, impacts to road safety, the increased potential for vehicular accidents, negative impacts to public infrastructure, and damage to roads. Several commenters are concerned that the roads are not designed for the large trucks, specifically the weight and volume of the heavy equipment that will service the plant.

(Group A, Luz Arce, Ralph H. Armstrong, Art Arthur, Amy Ashlock, Keith Baehmann, Cynthia Baker, Willies Carl Ballou, Douglas Glenn Banner, Kelly Denise Barnes, Ashley Beck, Francis Beck, Nancy Bond, Nolan E. Bond, Linda Bowers, Ashlin Bridwell, Laffel Brown, Nancy Brown, Tiffany Broyles, Jamie Buckalew, Brenna Butler, Veronica Calzada, Clint Catching, Kristin Chandler, Laura Childress, James Matt Cooper, R. D. Cozad, Skyler Cozad, Traber Cozad, Melissa Gail Croney, Brian Culp, Chanel Ann Davis, Bruce W. Dawsey, Bethany Devore, Jeremy W. Devore, Jeremy Q. Devore, Deirdre Diamond, Joanne Dickey, Judith S. Dryden, Michael Joseph Elliott, William Engle, Cendy

Y. Escalera, Blanca Nayeli Escalera-Solis, Rachel Evans, William Foster, Chris Gardner, Renny Gehman, Lora Gordon, Brandon Grooms, Matt Gudgel, Teresa M. Hall, Teresa M. Hall, Ginger Ham, Matt Hardenburg, Amy Hartel, Patricia Hedrick, Lisa Hejny, Moses Hejny, Joann Hensley, Donna Hepner, Jerry Dean Hestand, Dwayne Hicks, Michael S. Hignight, Suzanne Hooks, Alice Hughes, Lori Huntsman, Debbie Hurd, Phyllis D. James, Carrie Jones, Debbie Elaine Judkins, Cynthia J. Kaleri, Dina Kenemore, Laura L. King, Geri V. King, Ken King, Detra Klas, Cindy Kvaal, Rick Kvaal, William Landrum, Julie Lanicek, James Lewellen, Brian Mai, Rickey J. Malta, Michael Gene Marsh, George Mason, Patsy Mauldin, William Mayer, Les McConnell, Matthew Morris, Ashley Morrow, Karen Murphy, Lucy Myer, Rick Myer, Chris Nicoloff, Marie Nixon, Rose Marie Nixon, Paul Nixon, Margie Noel, Bonita L. Overbey, Bobby N. Overbey, Jeff Overstreet, James Parrish, David Plyler, Alan Redd, Patsy A. Reeves, Tara Rice, Joy Roberts, Mark Douglas Robison, Elizabeth Rodriguez, Jennifer Rollins, Brian Russell, Linda Russell, Linda Sue Russell, Carrie Saindon, Betty Scott, Rosa Shelton, Gary Shields, Sharon Slaughter, David Smith, Darlene L. Smith, Wendy Smith, Jeff Randall Spencer, Frances Sprabary, Drew Springer, Penny Stahl, Roxanne Standerfer, Alice Stewart, James Stewart, Robert Stewart, Shirley Stewart, Alice Faye Stewart, Chandler Strawn, Dana Strong, Sathappun Subbiah, James Sutherland, Kenneth Svehlak, Sue Svehlak, Thomas Leland Taylor, Thomas L. Taylor, Betty Jean Taylor, Cristi Tenant, Yolanda Trevino, Tonya Troxtell, Kristi Utley, Ronald Vanbuskirk, Diana Vanbuskirk, Becky Vincent, Kimberly Vodry, Leonard G. Waldrum, Bihfang Wang, Brian Wang, Lanisha Weaver, Cynthia Weems, Rudy Weems, Ronnie Whiteley, Jeff Whitmire, Teresa Wildman, Kevin Wilson, Angela Zarallo, Rebecca Zey, Margaret Norris, Robin Sears, Borming Wang)

**RESPONSE 23:** The Applicant is prohibited by TCEQ rule (30 TAC § 101.5) from discharging air contaminants, uncombined water, or other materials from any source which could cause a traffic hazard or interference with normal road use. If the sources are operated in compliance with the terms and conditions of the permit, nuisance conditions should not occur. Individuals are encouraged to report any concerns about nuisance issues or suspected noncompliance with terms of any permit or other environmental regulation by contacting the TCEQ Dallas/Fort Worth Regional Office at 817-588-5800 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. If the facility is found to be out of compliance with the terms and conditions of the permit, it may be subject to possible enforcement action.

Although TCEQ rules prohibit creation of a nuisance, the TCEQ does not have jurisdiction to consider traffic, road safety, or road repair costs when determining whether to approve or deny a permit application. In addition, trucks are considered mobile sources, which are not regulated by the TCEQ. The TCEQ is also prohibited from regulating roads per the TCAA § 382.003(6) which excludes roads from the definition of "facility."

Similarly, TCEQ does not have the authority to regulate traffic on public roads, load-bearing restrictions, and public safety, including access, speed limits, and public roadway issues. These concerns are typically the responsibility of local, county, or other state agencies, such as the Texas Department of Transportation (TxDot) and the Texas Department of Public Safety (DPS).

**COMMENT 24: Quality of Life / Aesthetics / Property Values**

Commenters expressed concern about the effect of the proposed project on their quality of life, on the aesthetics of the area, and on their property and land values, and taxes. Commenters stated they moved to the area for a better quality of life, clear and cleaner air, peace and quiet, and country living. Commenters expressed concern that their quality of life would be impacted and that they would no longer be able to enjoy outdoor activities. Commenters expressed concern that the proposed plant would negatively impact their property values and the marketability of their homes.

(Group A, Silvia Adams, Randy Adams, Janice Akins, Ralph H. Armstrong, Ralph Armstrong, Art Arthur, Andrea Paulette Aslam, David Baca, Willies Ballou, Willies Carl Ballou, Debra Banks, Douglas Glenn Banner, Heather Beaver, Nelson Beaver, Liz Birchall, Nancy Bond, Nolan E. Bond, Linda Bowers, Paul David Bowers, Cheryl Brociek, Lorie Brockner, Ron Brockner, Jan Broomall, Laffel Brown, Nancy Brown, Tiffany Broyles, Homer Bullard, Brenna Butler, Sarah Campbell, Stephen Campeau, Clint Catching, Adam Cernero, Kristin Chandler, Margaret Coleman, Meghan Cone, James Matt Cooper, Charli Cotten, Katie Courange, Camryn Craddock, Cassady A. Craddock, Kristen Cunningham, Tracy R. Curry, Chanel Ann Davis, Bruce W. Dawsey, Shawna Dawson, Heidi Debner, Rebecca Demel, Mary Gail Devore, Deirdre Diamond, Joanne Dickey, Kimberly Stewart Dodson, Judy Searcy Dryden, Judith S. Dryden, Christina N. Dunlap, Sherry Duran, Michael Joseph Elliott, William Engle, Angelica Escalera, Laura Fincher, Lisa Marie Flaggert, Bobby Fletcher, Lindsey Flores, William Foster, Chris Gardner, Rex Glendenning, Roberto Gonzalez, Patricia C. Gonzalez, Amber Gravley, Linda J. Greenfield, Richard Oran Gross, Jennifer Haeg, Matt Hardenburg, Stephanie Hawkins, Patricia Hedrick, Moses Hejny, Lisa Hejny, Sarah Henry, Joann Hensley, Donna Hepner, Amy Hertel, Debbie Hester, Amy Hoffman-Shehan, Suzanne Hooks, Don Horn, Charity Horne, Robin A. Horner, Scott Horner, Alice Hughes, Debbie Hurd, Heather Jacques, Mike Jacques, Phyllis D. James, Suzanna Dryden Jensen, Liberty Johnson, Elizabeth Jones, Debbie Elaine Judkins, Carl Kalbfleisch, Kenyon Kemp, James Kimbrel, Laura L. King, Laura Kirilloff, Peggy Klas, Cindy Kvaal, Greg L. Laird, Austin Lambert, Chris Landino, Julie Lanicek, Patrick Latona, Val Lauerhahs, Rhonda Lawson, Trudy Lucas, Eric Lunde, Brian Mai, Traci McCarthy, Kathleen McClure, Les McConnell, Garrett McCown, Janna C. McCown, Diana McMahan, Michael J. Mitchusson, Joyce L. Moore, Angela Moreau, Brad Morgan, Jason Morin, Matthew Morris, Terry Morrison, Ashley Morrow, Rick Myer, Danny Thomas Nichols, Andeelea Anderson Nichols, Chris Nicoloff, Marie Nixon, Margie Noel, Jennifer Norris, Erica Northrup, Duncan C. Norton, Melinda Ortle, Bonita L. Overbey, Jeff Overstreet, Martha Paben, James Parrish, Shelly Prewitt, Josh Price, Joshua D. Price, Lindsay Price, Craig Rabe, Alan Redd, Cindy Risk, Naif Risk, Joy Roberts, Kayli Rushing, Bettye Russell, Brian Russell, Russell Rutherford, Shannon Ryan, Carrie Saindon, Jim Schermbeck, Jarod Schmitt, Bradley J. Schnitker, Marci Schnitker, Betty Scott, True Shaw, Rosa Shelton, Gary Shields, Sharon Slaughter, David Smith, Reggie Smith, Kyle Smith, Frances Sprabary, Drew Springer, Penny Stahl, Robert Stewart, Shirley Stewart, James Sutherland, Kenneth Svehlak, Sue Svehlak, Griffin Tammy, Cristi Tenant, Dana Thornhill, Yolanda Trevino, Tonya Troxtell, Kristi Utley, Diana Vanbuskirk, Mickinze Vanherpen, Denise Vawter, Larry Vincent, Kimberly Vodry, Jay Dee Voto, Lynsey Voto, Bihfang Wang, Brian Wang, Mingyan Ward, Manual Watson, Lanisha Weaver, Cynthia Weems, Rudy Weems, Joseph White, Monica L. Whitfield, Jeff

Whitmire, Jim Whitten, Carolyn Wildman, Teresa Wildman, Kevin Wilson, Krista Lucas Wynn, Angela Zarallo, Rebecca Zey, Gary Schnitker, Kaaren J. Teuber, Nancy Jan Shaw)

**RESPONSE 24:** The TCEQ does not have the jurisdiction to consider potential effects from plant location, aesthetics, zoning and land use issues, or effects on property values when determining whether to approve or deny this air permit.

**COMMENT 25: Quarry / Mining / Blasting / Construction Emissions**

Commenters expressed concern about the emissions and impacts from associated quarry, mining and blasting operations and request that these operations be included as part of the permit application. Commenters expressed concern that the proposed operations would cause sinkholes, leave craters in the ground, or make the land collapse. Commenters expressed concern that a mine or quarry is not considered in the application or modeling submittal. Commenters are concerned about potential seismic waves and blasting from the proposed project, as well as the potential to damage surrounding schools, buildings, oil leases, production and manufacturing facilities, and landowners nearby. Commenters expressed specific concern that blasting operations would have a detrimental impact on nearby tech, semiconductor, and chip manufacturing facilities that have already invested in the area. Judy Searcy Dryden commented that not including the mining/quarry pollution effects should be an infraction of the State and Federal Clean Air and Clean Water Laws.

(Group A, Silvia Adams, Art Arthur, Sesily Babekuhl, Willies Carl Ballou, Ashley Beck, Francis Beck, Gary Bennett, Lander Bethel, Nancy Brown, Tiffany Broyles, Clint Catching, Andrew Cellars, Adam Cernero, Kristin Chandler, Karla K. Colwell, Meghan Cone, Camryn Craddock, Amanda Crawford, Tracy R. Curry, Wes Davidson, Cynthia L. Davis, Bruce W. Dawsey, Thomas G. Debner, Jeremy Q. Devore, Jeremy W. Devore, Judy Searcy Dryden, Judith S. Dryden, Mark L. England, Adam Fleming, Harold C. Foster, Rex Glendenning, Donald E. Godwin, Austin Grooms, Matt Hardenburg, Patricia Hedrick, Lisa Hejny, Melissa Hill, Amy Hoffman-Shehan, Gabe Howell, Phyllis D. James, Suzanna Dryden Jensen, Debbie Elaine Judkins, James Kimbrel, Ken King, Geri V. King, Vanetta Klok, Anthony J. Kordosky, Rick Kvaal, Cindy Kvaal, Chris Landino, William Landrum, Julie Lanicek, Wayne Lee, Christopher A. Lopez, Eric Lunde, Ronald Clay Lynch, Steve Marum, Dusty Wayne Mayer, Traci McCarthy, Larry McDonald, Karla McDonald, Davida Miorin, Mehrdad Moayed, Brad Morgan, Mary Morgan, Jason Morin, Mitaj Nathwani, Paul Nixon, Brent E. Omdahl, Bobby N. Overbey, Sherry Perrin, David Plyler, Delfina Prisock, Kathy Raner, Justin Neal Raner, Kevin Diaz Reyes, Mona Robnett, Linda Russell, Carrie Saindon, Betty Scott, Doreen Shacklee, Kent Sharp, Sharon Slaughter, David Smith, Wendy Smith, Reggie Smith, Darlene L. Smith, Cynthia Annk Spencer, Drew Springer, Robert Stewart, Shirley Stewart, Alice Faye Stewart, Chandler Strawn, Sathappun Subbiah, Kenneth Svehlak, Sue Svehlak, Thomas L. Taylor, Thomas Leland Taylor, Shawn C. Teamann, Cristi Tenant, Tonya Troxtell, Jay Dee Voto, Leonard G. Waldrum, Leonard G. Waldrum, Manual Watson, Wyatt Watson, Jeff Whitmire, Kevin Wilson, Rebecca Zey, Tracie Zweifel-Gibson, April Williams, Kaaren J. Teuber, Renata Richardson, Robin Sears)

**RESPONSE 25:** The TCEQ does not have jurisdiction to regulate mines, quarries, or associated blasting. Mines and quarries are specifically excluded from the definition of

facility in the TCAA § 382.003(6). Concerns regarding noise and vibrations should be directed to local officials.

Emissions of PM from the quarry, however, cannot create a nuisance condition. The Applicant must comply with the TCAA and all TCEQ rules and regulations, including 30 TAC § 101.4, which prohibits a person from creating or maintaining a nuisance. The TCEQ also does not have authority under the TCAA to regulate emissions from mobile sources. Construction equipment such as bulldozers and portable generators are considered mobile or non-road sources. However, TCEQ does require owners and operators to comply with 30 TAC § 101.4 which prohibits a person from creating or maintaining a condition of nuisance such as interference with the normal use and enjoyment of property. Individuals are encouraged to report any concerns about nuisance issues by contacting the TCEQ Dallas/Fort Worth Regional Office at 817-588-5800 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186.

#### **COMMENT 26: Effect on Local Economy and Other Industries**

Commenters expressed concern about the effects this project could have on the local economy and business in the area. Commenters expressed concern that the proposed plant would hinder residential and commercial growth in the area. Commenters expressed concern that the nearby tech, semiconductor, and chip manufacturing facilities have already invested money in the area, and that the proposed project would be detrimental to these existing businesses.

(Janice Akins, Art Arthur, Keith Baehmann, Willies Carl Ballou, Robert Bauer, Blake C. Beeson, Emily Brooks, Jeffrey Brown, Sarah Campbell, Tommy Joe Carney, Clint Catching, Adam Cernero, Meghan Cone, Stephanie Davidson, Wes Davidson, Julie Davis, Bruce W. Dawsey, Bruce Dawsey, Jeremy Devore, Mary Gail Devore, Mark L. England, Barrett Fannin, Tracy Gilbert, Donald E. Godwin, Austin Grooms, Chloe Grooms, Joshua Grooms, Dave Hammond, Matt Hardenburg, Jim L. Harvey, Lisa Hejny, Sarah Henry, Gabe Howell, Meghan Hughes, Mandy Hummel, Phyllis D. James, Suzanna Dryden Jensen, Liberty Johnson, Geri V. King, Ken King, Debbie Kirkpatrick, Vanetta Klok, Amanda Lambert, Julie Lanicek, Mary Little, Trudy Lucas, Eric Lunde, Brian Mai, Casey Mandi, Steve Marum, Catherine Matuella, Traci McCarthy, Kathleen McClure, Garrett McCown, Vivian Robin McCoy, Karla McDonald, Larry McDonald, Michael J. Mitchusson, Joyce L. Moore, Angela Moreau, Brad Morgan, Marthann Morrow, Paul Nixon, Rose Marie Nixon, Andrew Wallace Olmstead, Brent Omdahl, Brent E. Omdahl, Jeff Overstreet, Tyler Overstreet, Nikolaus Owen, David Plyler, Joshua D. Price, Lindsay Price, Kathy Raner, Justin Neal Raner, Mona Robnett, Linda Russell, Russell Rutherford, Shannon Ryan, Kent Sharp, True Shaw, David Shepard, David Smith, Reggie Smith, Derek Smith, Michael Wayne Speed, Julia Spencer, Drew Springer, Kristy Stachmus, Shawn C. Teamann, Tonya Troxtell, Gail W. Utter, Diana Vanbuskirk, Marilyn Sue Vest, Mark Vodry, Kimberly Vodry, Jaymison Bella Voto, Paula Walker, Jacqueline Wassom, Wyatt Watson, Jeff Whitmire, Ruth E. N. Cox Williamson, Kevin Wilson, Krista Lucas Wynn, Angela Zarallo, April Williams, Nancy Jan Shaw, Robin Sears, Sara Salinas)

**RESPONSE 26:** Issues related to the local economy are outside the scope of review of an air quality permit. The Executive Director has reviewed the permit application in accordance with the applicable law, policy, and procedures, in accordance with the

agency's mission to protect our state's human and natural resources consistent with sustainable economic development. If an applicant meets the requirements for an air quality permit, the TCEQ must grant the permit.

**COMMENT 27: Mental Health and Financial Well-being**

Joyce L. Moore expressed concern about the mental and financial well-being of the people in the area due to the proposed plant. Jeremy W. Devore expressed concern regarding the negative impact on mental health, emotions, and possible PTSD triggers due to the proposed plant. Ja Dee Voto commented that the proposed plant would cause emotional distress. Gabriel Williams commented that the proposed plant would cause mass psychogenic illnesses and negatively impact mental health. Amber Bratt commented that the proposed plant would take an emotional toll on nearby residents.

(Amber Bratt, Jeremy W. Devore, Joyce L. Moore, Jay Dee Voto, Gabriel Williams, Robin Sears)

**RESPONSE 27:** The TCAA does not give the TCEQ authority to regulate air emissions beyond the direct impacts (inhalation) that the air emissions have on human health or welfare. In addition, the TCAA specifically address air-related issues. This permit, if issued, would regulate the control and abatement of air emissions only.

**COMMENT 28: Corporate Profits**

Commenters expressed concern regarding the company profits made from the proposed project at the expense to the surrounding community.

(Debra Banks, Tonya Bingham, Tiffany Broyles, Brenna Butler, Andrew Cellars, Linda Carol Crain, Lindsay Cummings, Karen Cummings, Karen L. Cummings, Sherry Duran, Michael Joseph Elliott, Adam Fleming, Connor Gillispie, Brandon Grooms, Rachel Grooms, Melissa Hill, Suzanna Dryden Jensen, Kylee Likarish, Patrick Neal McNutt, Bonita L. Overbey, Betty Scott, Leann Smith, Penny Stahl, Meghan Swindle, Mickinze Vanherpen, Jeff Whitmire, Teresa Wildman)

**RESPONSE 28:** The TCEQ is not authorized to consider a company's financial status nor its profits in determining whether a permit should be issued. TCEQ's review of this company's application included analysis of health impacts and application of best available control technology (BACT), and based on this review, the facility should comply with all applicable health effects guidelines and emission control requirements. Continued compliance with health effects guidelines and BACT requirements is expected if the company operates in compliance with the permit terms and conditions. Individuals are encouraged to report any environmental concerns at the facility by contacting the TCEQ Dallas/Fort Worth Regional Office at 817-588-5800 or by calling the 24-hour toll-free Environmental Complaints Hotline at 1-888-777-3186. The TCEQ evaluates all complaints received. If the facility is found to be out of compliance with the terms and conditions of the permit, it will be subject to possible enforcement action.



**COMMENT 29: TCEQs Responsibility to the Community / General Opposition / Support**

Commenters asked that the TCEQ consider residents and their wishes and choose not to approve the permit registration for the proposed plant. Commenters express general opposition to the proposed plant. Commenters ask that the TCEQ uphold their mission statement. Judy Searcy Dryden expressed concern that the TCEQ would approve the permit just to allow the Applicant 'the ability to stay competitive,' further stating that the Agency should be protecting the safety of Texans and assuring plants are using best management practices. Tyler and Shelby Overstreet submitted a petition of signatures expressing general opposition. Willies Carl Ballou commented that the State of Texas needs to protect its citizens and not get paid off by questionable groups. Donald Ray Cummings commented that TCEQ will be the ones to blame for turning the area into an environmentally unhealthy industrial blight. Peter Christensen and Donald Bailey expressed general support for the proposed project.

(Group A, Group B, Novin Abdi, Silvia Adams, Randy Adams, Janice Akins, Samantha Allison, Amber Armendariz, Ralph Armstrong, Katrina Lynn Arsenault, Art Arthur, Charles Ashley, Sesily Babekuhl, Keith Baehmann, Donald Bailey, Willies Carl Ballou, Douglas Glenn Banner, Kelly Denise Barnes, Laura Barnett, Thomas Clay Barnett, Darla Barr, Faith Barrett, Kathy Bartlett, Mark Baumgardner, Heather Beaver, Jennifer Beecroft, Blake C. Beeson, Patti Beggs, Deanna Bell, Tonya Bingham, Cliff Blackstock, Tammy Bohannon-Yule, Nolan E. Bond, Nancy Bond, Linda Bowers, Virginia Brawley, Ron R. Brockner, Jan Broomall, Erika Bryan, Jamie Buckalew, Homer Bullard, Donna Burk, Marie Burns, Brenna Butler, Stephen Campeau, Eric Cantu, Clint Catching, Cary Catching, Adam Cernero, Corey Chambers, Megan C. Chandler, Laura Childress, Regina Chisum, Peter Christensen, Art Clayton, Steve Thomas Cohea, Lee Collins, Karla K. Colwell, Meghan Cone, James Matt Cooper, Katie Courange, Eric Covder, Skyler Cozad, Camryn Craddock, Cassady A. Craddock, Amanda Crawford, Brian Culp, Donald Ray Cummings, Karen Cummings, Karen L. Cummings, Lindsay Cummings, Kristen Cunningham, Ethan Cunningham, Tracy R. Curry, Jeff Dailey, Angela Davidson, Dee F. Davis, Karla Graham Davis, H. C. Davis, Mark Davis, Alicia Davis, Julie Davis, Bruce Dawsey, Shawna Dawson, Heidi Debner, Thomas G. Debner, Rebecca Demel, Mary Gail Devore, Jeremy W. Devore, Jeremy Devore, Deirdre Diamond, Joanne Dickey, Melissa Doan, Kathleen Dophied, Judy Searcy Dryden, Judy Dryden, Robert E. Dryden, Judith S. Dryden, Cindy Durrant, Mark L. England, Angelica Escalera, Cendy Y. Escalera, Blanca Nayeli Escalera-Solis, Rachel Evans, Barrett Fannin, Jesse Farrer, Phillip Wayne Farris, Stanley Feld, Courtney Fierro, Laura Fincher, James N. Flanery, Adam Fleming, Bobby Fletcher, Lindsey Flores, Harold C. Foster, Robert Franze, Andrea Ganow, Lori Gardner, Chris Gardner, Renny Gehman, Tracy Gilbert, Rex Glendenning, Paula Glenn, Donald E. Godwin, Margie Graf, Mayan Grantland, Jeffrey Neal Gray, Laura Green, Linda J. Greenfield, Austin Grooms, Brandon Grooms, Chloe Grooms, Rachel Grooms, Joshua Grooms, Matt Gudgel, Hillary Gurnea, Teresa M. Hall, Ginger Ham, Dave Hammond, Carol Ann Hardy, Jim L. Harvey, Patricia Hedrick, Sarah Henry, Joann Hensley, Melinda Hill, Suzanne Hooks, Charity Horne, Scott Horner, Helen Horton, Sherry Howard, Joyce A. Huff, Jen Huff, Mandy Hummel, Laura T. Hunt, Debbie Hurd, Brody Hust, Billie Charels Ingram, Phyllis D. James, Rachel Jenkins, Trish Jennings, Suzanna Dryden Jensen, Nathan K. Johnson, Jake Jones, Carl Kalbfleisch, Ken King, Laura Kirilloff, Debbie Kirkpatrick, Detra Klas, Anthony J. Kordosky, Greg L. Laird, Amanda Lambert, Lauren Lambert, Austin Lambert, Benjamin T. Landgraf, Chris Landino, Terri Langford,

Jason Lankford, Crystal Lawson, Wayne Lee, Sean Lefton, Mary Little, Trudy Lucas, Lisa Maberry, Josh Marr, Catherine Matuella, Patsy Mauldin, Dusty Wayne Mayer, William Mayer, Traci McCarthy, Kathleen McClure, Kathleen McClure, Karla McDonald, Larry McDonald, Toya McEwen, Alan Lee McKelva, Patrick Neal McNutt, Lauren McNutt, Amy Meyer, Josh Miller, Caitlyn Miller, Davida Miorin, Michael J. Mitchusson, Makayla Moore, Angela Moreau, Brad Morgan, Mary Morgan, Jason Morin, Amarise Morris, Andronica Morris, Cindy R. Munson, Amin Musani, Shirley Musani, Lucy Myer, Jason Lee Naramor, Mitaj Nathwani, Shanon Neal, Danny Thomas Nichols, Chris Nicoloff, Marie Nixon, Paul Nixon, Rose Marie Nixon, Tera Norris, Erica Northrup, Brent Omdahl, Angie Onley, Melinda Ortley, Bonita L. Overbey, Tyler Overstreet, Jeff Overstreet, Shelby Overstreet, Paula Overstreet, Martha Paben, Angela Patton, Melisa Patzer, Holland Paula, Jody Perry, Shelly Prewitt, Joshua D. Price, Lindsay Price, Ray H. Purdom, Kathy Raner, Justin Neal Raner, Alan Redd, Richard Reeves, Patsy A. Reeves, Kevin Diaz Reyes, Kylynn Robinson, Brad Robnett, Brad Rucker, Brian Russell, Anoo Sathappun, Jim Schermbeck, Bradley J. Schnitker, Marci Schnitker, Mary J. Scott, Kent Sharp, David Smith, Angela Smith, Derek Smith, Kyle Smith, Darlene L. Smith, Jeff Randall Spencer, Cynthia Annk Spencer, Drew Springer, Sara Sprinkle, Bobby Overbey Sr., Kristy Stachmus, Penny Stahl, Roxanne Standerfer, James Stewart, Leah Stewart, Patricia Ann Stewart, Alice Faye Stewart, Alice Stewart, Shana Stonebarger, Stephanie Strawn, Chandler Strawn, Sathappun Subbiah, James Sutherland, Thomas Leland Taylor, Shawn C. Teamann, Alyssa Thomas, Dana Thornhill, Julie Travis, Kristi Utley, Brittany Verhoeck, Marilyn Sue Vest, Becky Vincent, Mark Vodry, Kimberly Vodry, Leonard G. Waldrum, John Ward, Cameryn P. Warren, Jared Weaver, William Webster, Rudy Weems, Cynthia Weems, Cynthia L. Weems, Casey Weinmann, Monique Whaley, Steve Whaley, Joseph White, Edward Whitfield, Monica L. Whitfield, Jennifer Williamson, Jeffrey Wilmoth, Kevin Wilson, Matt R. Yamarino, Angela Zarallo, Tracie Zweifel-Gibson, Austin Sumrall, Cynthia Zinn, Erica Ross, Jennita Wingate, John Harrison, Lainie Ramsay, Renata Richardson, Robert Sanchez, Robin Sears, Terry Rainbow, Susan Powell, Angela Onley, Borming Wang, Kenneth J. King, Sara Salinas, Elizabeth Rocamontes)

**RESPONSE 29:** The TCEQ appreciates the comments and interest from the public in environmental matters before the agency and acknowledges the comments in opposition and support of the project. The TCAA establishes the TCEQ's jurisdiction to regulate air emission in the state of Texas. Accordingly, the Executive Director's staff has reviewed the permit application in accordance with the applicable state and federal law, policy and procedures, and the agency's mission to protect the state's human and natural resources consistent with sustainable economic development. The TCEQ cannot deny authorization of a facility if a permit application contains a demonstration that all applicable statutes, rules, and regulations will be met.

**COMMENT 30: Miscellaneous / Comments to the Applicant**

Commenters expressed general concern that the proposed plant would impact national security. Multiple commenters referenced a letter to the TCEQ from Lieutenant Governor Dan Patick. Commenters commented about an issue involving the High Roller Group. Jerry Dean Hestand asks what the legacy of this facility will be. Lisa Flaggert expressed concern that the company will cause natural disasters. Steve Miller expressed concern about other companies and plants that have had explosions in the past. Several commenters asked about the impact to the electrical grid. Katerina Hess

states they don't need any more environmental favors from the government. Several commenters provided comments that were religious in nature. Several commenters raised concerns about criminal activity. Robert Bauer commented that plants should not be allowed to sneak in the back door because existing laws are insufficient to stop it. Several commenters asked about involvement from other state and federal agencies. J. Renfro expressed concern regarding various superfund sites in Texas. Linda Carol Crain asks how much money has changed hands to get officials to push the permit through. Delfina Prisock expressed concern about tremors caused by fracking activities. Several commenters raised concerns about monetary compensation to the surrounding community.

David Smith and Sathappun Subbiah expressed concern that the TCEQ does not have a medical professional approving the permit beyond a federal guideline. David Smith asks for access to state funding so that they can 'investigate this power grab in our small community.' Mr. Smith asks that Texas Legislatures work with TCEQ to review requirements for both air and water permits for oversights and other environmental protections. Mr. Smith expressed concern that the proposed plant would block internet and broadband signal. Mr. Smith submitted a copy of a protection of Federal Funds and National Security letter, as well as a letter from the City of Dorchester which opposes all permits requested from the TCEQ, FAA, EPA, and other local, state, and federal government agencies. Mr. Smith requests that the TCEQ require the Applicant to post a bond due to what he states is a potential for interference with administration of the CHIPS Act.

Group A commenters state that the company represented themselves to the community as a small business. Robin Sears asks if Oklahoma residents have been involved in the process. Matthew Petz asks if anybody has been compensated for their vote. David G. Sileven asks how impacted citizens could seek legal action

(Group A, Robert Bauer, James Matt Cooper, Linda Carol Crain, Atul Dave, Wes Davidson, Bethany Devore, Deirdre Diamond, Judy Searcy Dryden, Judith S. Dryden, Michael Fannin, Lisa Flaggert, Kit Grice, Austin Grooms, Ginger Ham, Katerina Hess, Jerry Dean Hestand, Laura T. Hunt, Suzanna Dryden Jensen, Ken King, Geri V. King, Julie Lanicek, Les McConnell, Vivian Robin McCoy, Steve Miller, Sarah Myrick, Brent E. Omdahl, Jeffrey Tyler Overstreet, Jeff Overstreet, Zach Poling, Lindsay Price, Ray H. Purdom, J. Renfro, Marci Schnitker, David Smith, Sathappun Subbiah, Becky Vincent, Mark Vodry, Manual Watson, Angela Zarallo)

### Comments to the Applicant

Judy Searcy stated that any experienced or responsible applicant should know accuracy matters for an application, and that being careless raises red flags that misinformation could be intentional to draw less attention to the permit request and avoid close scrutiny by the TCEQ. Michael Fannin asks the Applicant to withdraw their application. Don Horn asks the Applicant why they bought over 600 acres of land. Jim Schermbeck asks about future ownership plans of the company and future operations.

Lari Alexis Taylor-Barker expressed concern regarding representations on the Applicant's website, asking how they will reduce their carbon footprint, commenting that the website lacks a detailed plan beyond praising Texas and vague promises to minimize pollution, and asks how the Applicant will fulfill their website claims. Ms.

Taylor-Barker asks the Applicant has a dedicated research and development team to explore innovative technologies to differentiate themselves from other cement plants.

David Smith expressed concern that the Applicant may have the intention to sell their construction permit. Mr. Smith asks the Applicant what they will do if they are unable to comply with the total hydrocarbon and organic hazardous air pollutant limits found in the draft permit. Mr. Smith asks the Applicant if they will commit to never pursue a permit for burning waste. Mr. Smith asks the Applicant where else in the application the Applicant made 'generous assumptions' in estimating their emissions.

Manual Watson commented that a public announcement from the company detailing the operating plans has not been made. Cynthia Reyes commented that if the project was a good idea, the town would have been notified by the company themselves.

(Michael Fannin, Don Horn, Liberty Johnson, Jim Schermbeck, Judy Searcy, David Smith, Lari Alexis Taylor-Baker, Manual Watson, Cynthia Reyes, Robin Sears, Matthew Petz, Kaaren J. Teuber, David G. Sileven)

**RESPONSE 30:** These comments are either outside the scope of the air permit review or addressed to the Applicant and are therefore included for completeness but not addressed by the Executive Director as they are not within the scope of this air permit review.

### CHANGES MADE IN RESPONSE TO COMMENT

No changes to the draft permit have been made in response to public comment.

Respectfully submitted,

Texas Commission on Environmental Quality

Kelly Keel, Executive Director

Phillip Ledbetter, Director  
Office of Legal Services

Charmaine Backens, Deputy Director  
Environmental Law Division



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Amanda Kraynok, Staff Attorney  
Environmental Law Division  
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PO Box 13087, MC 173  
Austin, Texas 78711-3087



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Amy L. Browning, Staff Attorney  
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Austin, Texas 78711-3087

REPRESENTING THE  
EXECUTIVE DIRECTOR OF THE  
TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

BM Dorchester LLC

Registration Nos. 167047, GHGPSDTX212, and PSDTX1602

APPENDIX A

**COMMENT GROUP A:**

Bobby N. Overbey	Larry Vincent	Robert E. Dryden
Tim Overbey	Robert Welch	Cindy Risk
Jason Lankford	Elizabeth Jones	Naif J. Risk
Heather Portsche	Ray M. Joseph	Sunni Hayes
Zach Poling	Terry Wildman	Suzanna Dryden Jensen
Jimmy Vincent	Carolyn Wildman	

**COMMENT GROUP B:**

Ashley A.	Cecilia Agulto	George Ambatt
Kathy Aaron-Raner	Amarachi Aguwa	Jay Amer
Felicia Abbott	Rhiannon Ailand	Ethan Anderson
Matthew Ables	Jeanne Ailand	Kari Anderson
Jill Ables	Locke Aimee	Pamela Anderson
John Ables	Kathleen Alexander	Christy St Andre
Mati Abner	Natalie Alexander	Jill Angelichio
Carrie Abrahamsen	Madison Alexander	Kristina Angell
Deanna Acker	Kimberley Alford	Shama Ansari
Kassandra Acuna	Amen Ali	Christina Antonio
Mary Adams	Ishrat Ali	Victoria Archuleta
Debbie Adams	Michelle Allan	Chris Arden
Randy Adams	Erica Allen	Esmeralada Argueta
Sharon Adams	Andrea Allen	Liz Armenta
Elizabeth Adell	Frank Allen	Ken Armer
Kilee Adley	Andrew Allison	Billy Ray Armstrong
Rojan Agahi	Helen Alogaidy	Melissa Armstrong
Ryan Agee	Carter Altman-Kao	Shirley Arrington
Elizabeth Aguilera	Apryl Alycox	Katrina Arsenault



Austin Atherton	Sara Barrett	Tanya Bishop
Zeshan Atiq	James Barth	Susan Bivens
Kathryn Atkins	Brianna Bassett	David Black
Nicklas Aune	Meredith Bates	Michelle Blackmon
Sonja Aune	Krysta Bates	Spring Blagg
Saw Thiha Aung	Khaliun Batsaikhan	Mariene Blake
Pansy Aung	James Beard	Bill Blakeley
Sophia Ayala	Julie Bearden	Donna Blakley
Bailey Ayers	Mason Beaver	Sean Blayney
Jerry Ayers	James Beaver	Amanda Blue
Heather B.	Branson Beaver	Paula Bodie
Kasie Babb	Sharon Beaver	Crissy Bolt
Theresa Baca	Nelson Beaver	Nancy Bond
M. Badger	Ashley Beck	Chris Bonilla
Charles Bae	Carol Beck	Sara Boone
Krystal Baker	Marlena Beckner	David Boring
Tiffany Baker	Freddie Beckwith	Stacey Born
Brian Baker	Mirza Begg	Kristina Bosek
Natalie Baker	Ashley Bell	Jennifer Bossen
Carolyn Baldwin	Marchelle Bell	La Tisha Bostock
Laura Ballard	Cassandra Belt	Knox Bounds
Willies Ballou	Brittany Bennett	Nicole Bowden
Gerri Bandemir	Bret Bennett	Anna Bowen
Roger Banerjee	Beverly Bennett	Allison Bowen
Debra Banks	Stephanie Berger	Leah Bower
Geneva Banks	Chris Berger	Lauren Bowles
M.J. Barnard	Brindi Berger	Daniel Bowles
Bambi Barnes	Ben Berkebile	Teresa Bowles
Diane Barnes	Jennifer Berrier	Ruth Bowling
Anna Barnes	Jackie Besinger	Jack Boyd
Bob Barnes	Savanna Bibb	Elijah Boydstun
Carl Barnes	Tonya Bingham	Laura Brackett
Melissa Barr	Rene Birchall	Gemma Bradford
Faith Barrett	Ekjot Birdi	Gaylen Brannon

Kristopher Bravo	Diane Burdine	Dawn Camacho
Gay Brennan	Eric Burgess	Erin Camalari
Keysa Brest	Jerry Burk	Taylor Camarillo
Kim Brewer	Kathy Burk	Sandra Campbell
Ashlin Bridwell	Afton Burkard	Toni Campbell
Melissa Broadway	James Burke	Eric Cantu
Jerod Brockelm	Brenda Burke	Saya Car
Shirley Brodess	John Burkholder	Seth Caraway
Shelley Bronowitz	Lou Burkholder	Colleen Caraway
Courtlyn Brooks	Kiandra Burkley	Tricia Cardinal
Stephanie Brooks	Melody Burks	Denise Carey
Susan Brooks	Erica Burnett	Morgan Carey
Andrew Brown	Marie Burns	Lynn Carin
Trevor Brown	Rochelle Burris	Joe Carley
Chester Brown	Allison Burris	Myranda Carney
Megan Brown	Chessica Burton	Jo Carney
Audra Brown	Syretha Bush	John Carpenter
Jacki Brown	Teresa Bussey	Eddie Carpenter
Roger Brown	Brenna Butler	Courtney Carrera
Douglas Brown	Michael Button	Amber Carter
Terri Brown	Mildred Bynum	Jessica Carter
Tracy Browning	Royce Bynum	Sylvia Carter
Tiffany Broyles	Greg Bynum	Meagan Carver
Gwen Broyles-Smith	Syliva Byrd	Melissa Casco
Victoria Bryan	John Byrom	Mary Cassol
Darby Bryant	Candice C.	Elizabeth Castillo
Carrie Bryner	Grace Cacho	Alan Castillo
Susan Buchanan	Kristi Cady	Hector Castro
Jamie Buckalew	Barbara Cagle	Kevin Cavanaugh
Emma Buckalew	Laura Caldwell	Bob Cena
Lauren Buckner	Thomas Caligiuri	Luis Chacon
Bianca Bullard	Jennifer Caligiuri	Anupama Chalasan
Jennie Bullard	Jill Call	Nicole Chambers
Kelly Bumpass	Lecia Callahan	Camille Chan

Patrick Chance	Bethany Clifton	April Corder
Derek Chandler	James Clifton	Christin Cormier
Daniel Chandler	Collin Climie	Michael Corn
Gina Chandler	Kim Clopton	Stephanie Cotton
Kristin Chandler	Jim Cockrill	Ashleigh Coulter
Megan Chandler	Theresa Coffeey	Anna Counts
Manish Chandrakar	Tami Coffey	Kacie Counts
Destiny Chapman	Amanda Coffey	Dusty Coupwood
Peyton Chapman	Nathan Coffman	Shirley Covington
Rojellio Chavarria	Dane Coker	Abi C.P.
Kevin Cheairs	Angie Cole	Camryn Craddock
Renukumar Chebro	Beverly Cole	Tammy Cragg
Eddie Cheshier	Tim Cole	Danielle Crain
Diana Chiappetta	Debra Coleman	Amanda Crawford
Chinma Chikwe	Sarah Colgrove	Kelsey Crawley
Shauna Chilcoat	Gabrielle Collie	Heather Creek
Jeremy Chisum	Dana Collie	Carla Croft
Regina Chisum	Justin Collins	Melissa Croney
P. Christian	Maddie Collins	Jessica Crosson
Chris Christian	Kujtime Collins	Ray Croteau
Rita Christiansen	Robert Collins	Noel Crotty
Cara Christianson	Nicole Compton	Robert Crotty
Kisha Christman	Tammy Conaway	Cristy Crovella
Mary Ciani	Sheri Conn	Adina Crow
Vashti Clark	Hollie Conner	Cindy Crumpley
Paige Clark	John Connolly	Dia Cruz
Kevin Clark	Amy Contreras	Jenna Cryer
Donnese Clark	Kristie Conway	Laura Cuellar
Irina Clayton	Judith Conway	Elisebeth Cuevas
David Clegg	Angela Cook	Barbara Cumbess
Susan Clegg	Tony Cook	Don Cummings
Denise Clement	Julie Cook	Gary Cummings
Adrian Cleveland	Jim Coonrod	Karen Cummings
Ryan Clevenger	Eric Corder	Krystle Cunningham

Matt Cunningham	Kevin Deleu	Meagan Dodson
Tammy Cunningham	Laurie Deleu	Christopher Dolan
Tina Cupps	Zane Delgadillo	Penni Dolton
Tracy Curry	Araceli Delgado	Mike Donaldson
Laura Curtis	Matthew Delgado	Linda Donie
Holland Curtis	Jackeline Delgado	Karen Donohoe
Travis D.	Shelbi Delgado	Mary Dorcey
Kirshan Dadlani	Michael Delplato	Nick Dorrell
Richard Dahl	Marianne Demoss	Ashley Dorris
Bryan Daniel	Charity Denaker	Marcos Dos
Ben Daniel	Scott Denham	Tillman Doty
Kyle Daniel	Jordann Dent	Srikrishna Dowlapa
Gregg Daniel	Austyn Depaola	Keri Downs
Carla Dansby	Tonya Derichsweile	Sadie Dozier
Kambria Dansby	Deveshree Desai	Jana Draughn
Angela Davidson	Brian Desmot	Elizabeth Dromgool
Nancy Davies	Sheila Devdas	Michael Drynan
Alicia Davis	Ben Dever	Gloria Dubose
Phillip Davis	Bethany Devore	Pamela Duffy
Brandi Davis	Jeremy Devore	Taylor Dugan
Betty Davis	Mary Devore	Courtney Dunlap
Cyndy Davis	Sara Dick	Christina Dunlap
Jessica Davis	Rhonda Dick	Timothy Dunlap
Jordan Davis	Megan Dillard	Marlee Dunn
Karla Davis	Kevin Dimarco	Nancy Dunnahoe
Ryan Davis	Melissa Dimarco	Mary Dunning
Shawna Dawson	Amber Disessa	Peggy Durden
Amy Day	Bill Dixon	Joanna Duree
Laura Deaton	Taylor Doak	Laura Duree
Billye Decker	Melissa Doan	Brandi Durham
Erin Defreitas	Carter Doan	George Durham
Brian Delano	Eric Doan	Johnny Durrant
Alyssa Delashaw	Margaret Doan	Sarah Durrow
Jody Deleon	Russell Dobbs	Kinjan Dusara

Carmen Dutton	Paloma Everett	Lydia Flowers
Alex Duuring	Emily Everhart	Sheri Folkes
Lena Dziedzic	Amber Ewalt	Eric Folkes
Debbie E.	Dana Fady	Lynzee Ford
Deanna Earnhart	Bishoy Faheim	Tessa Foremaan
Erin Earwood	Patty Fair	Lisa Foster
Courtney Edgren	Garrett Faison	Sally Foster
Amanda Edwards	Sherrie Falls	Cynthia Fouts
Rebecca Edwards	Cody Fantaine	Katie Fouts
Peggy Efird	Dillon Farrell	Sarah Franchetti
Nicole Eidsvoog	Barbara Farrell	Stephen Franchetti
Steve Elkins	Jesse Farrer	Karie Franklin
Katelyn Elliott	Morgan Feickert	Robert Franze
Karen Ellis	Matthew Fejeran	Sheryl Frazee
Carolyn Ellison	Lori Felder	Christian Freeman
Hadden Elms	Valerie Fendley	Carrie Frith
Sally Emerick	Cassie Feo	Madeleine Fritz
Todd Empcke	Relda Feudo	Sandra Fronhofer
Karen Empcke	Megan Fillinich	Sara Fuchs
Ryan Emrick	Nancy Finch	Beth Fuller
Anne Engel	Laura Fincher	Tori Fuquay
Kelli Engle	Ryan Fincher	Stefano Fuschetto
Alisha Enox	Sylvia Finnegan	Cody Futch
Kathern Erickson	Brian Fischer	Leah Futrell
Do Ersch	James Flanery	C. G.
Stephanie Escando	Adam Fleming	Carissa Gabbert
Jose Espitia	Kiley Fleming	Sai Pavan Gadagan
Mckenzie Essman	Lynn Fletcher	Doris Gallagher
Trelly Estem	Melissa Fletcher	Shanna Gallinoto
Cynthia Estrada	Michael Flewallen	Ashley Gann
Kathy Ethridge	Cherilyn Flood	Reinag Garcia
Gene Evans	Ian Flood	Alysia Garcia
Tom Evans	J. Flood	Ruby Garcia
Shelby Evans	Joshua Flores	Beverly Garcia

Mary Garcia	Alexander Gonzalez	Jennifer Greer
Gabriel Gardner	Victoria Gonzalez	Tammy Griffin
Sofia Gardner	Laci Gonzalez	Rachel Griffin
Christi Gardner	Regina Gonzalez	Tricia Grigg
Tina Gardner	Maryna Good	Beverly Grogan
Suresh Garlapati	Rosa Goodenow	Terika Grogan
Stephanie Garner	Ashley Goodloe	Robert Grogan
Amanda Garner	Monique Goodwin	Rachel Grooms
Marco Garza	Thea Gordon	Torsten Groos
Buisisiwe Gcabashe	Cindy Gordon	William Gross
Michael Geddie	Ellen Gordon	Rod Gross
Mike Geldon	Amy Gorg	Andrea Grutchfield
Amy George	Kasey Gormley	Tyler Guest
Daniel Gerardo	Chris Gothard	Elizabeth Gunderse
Collin Gervais	Becky Goza	Yanissa Gutierrez
Vicki Ggudgel	Margaret Graf	Allison Gutschlag
Abdul Ghafoor	Anabelle Graham	Katja Gwin
Patrick Gibbs	Everett Graham	Chase H.
Sarah Gibbs	Bobby Graham	Sahana Hade
Channon Gibson	Boone Graham	Candace Haggard
Melissa Gibson	Pam Graham	Vince Haggard
Toya Gideon	Meg Graham	Lauri Hainsfurther
Carissa Gilbreath	Bryan Graham	Natalie Hair
Ashlee Giles	Maria Donna Graham	Krishna Halageri
Eric Giles	Ruthie Graham	Shelli Hales
Shelly Gillert	Molly Graham-Scott	Gayle Hall
Bobbie Gilreath	Greyson Grandstaff	Holly Hall
Holly Glendale	Tiffani Grantham	Joseph Hall
Randy Goble	Deb Gray	Teresa Hall
Donna Godbey	Mindy Grayson	Debbie Halliburton
Greg Godfrey	Brandy Green	Katherine Halliburton
Laurel Godlove	Charlee Green	Dale Hamilton
Jenn Gomez	D. J. Green	Carolyn Hamilton
Natalee Gomez	Linda Greenfield	Gary Hamilton



Grayson Hamilton	Liz Hartshorn	Katlynn Hill
Mary Hamilton	Heather Harvey	Derek Hines
David Hamm	Mary Sheffield Hast	Adam Hite
Sandra Hammond	Kathy Haxel	Jenni Hofherr
Mary Hammontree	Donna Hayden	Emily Hohenstein
Stacia Haney	Edna Hayes	Justin Holbert
Joshua Hansen	Aileen Hays	Mary K Holicky
Grace Hanson	Marius Hays	E. J. Holland
Rizwan Haque	Kate Hearn	Paula Holland
Larry Harbin	Chris Heaslip	Heather Holle
Hollie Harbin	Sarah Heaslip	Robin Holmes
Laurie Harden	Donna Heckelsberg	Zayn Honcu
Emily Hardwick	Jodi Heckman	Garfield Hooper
Alexandria Hardy	Lisa Hejny	Elizabeth Hooper
Ben Hardy	Moses Hejny	Kathi Hope
Barry Hare	Dustin Helm	Marcia Hopkins
Christine Hare	Julie Henderson	Kaylee Hopy
Gary Harker	Alyssa Hernandez	Kristy Horkman
Alannah Harkins	Martina Hernandez	Melanie Horn
James Harmon	Madalyn Hernandez	Charity Horne
Rick Harmon	Jacqueline Hernandez	Logan Houser
Alyssa Harper	Jennefer Hewitt	Robert Houston
Colin Harrell	Tara Hickerson	Mary Houston
Preslee Harrell	Brandon Hickerson	Michelle Hovey
Chanteria Harris	Angie Hickey	Deb Howard
Sephania Harris	Cindy Hicks	Jaida Howard
Tammy Harris	Marycarol Hicks	Jessica Howard
Leslie Harris	Janice Hicks	Aleta Howell
Amy Harris	Celeste Hidrogo	Cathy Hoyns
Cathy Harris	Eli Hilbert	Brittany Hudgens
Morgan Harris	Brandi Hill	Kayla Huey
Nancy Harris	Michelle Hill	Daniel Huff
Stephanie Hart	Michael Hill	Jennifer Huff
James Hartless	Debbie Hill	Misty Hughes

Sarah Hulshouser	Nathan Johnson	Landon Keizer
Samantha Humphrey	Paul Johnson	Heather Keizer
James Hunt	Coryann Johnson	Amy Keller
Peter Hunt	Kyle Johnson	William Keller
Maryam Hussain	Logan Johnson	Jessica Kelly
Brody Hust	Koryel Johnston	Tricia Kelton
Elise Hust	Vic Johnston	Brittany Kennedy
Carlie Hutchison	Karla Johnston	Jennifer Kennemer
Alyssa Hutson	Jennifer Jolly	Tyler Kerr
Thomas Hutson	Annamae Jones	Caleb Kershner
Malissia Hysmith	Matt Jones	Laneca Kesler
Lea I.	Lindsay Jones	Emily Key
Aminah Ibrahim	Ashely Jones	Amit Khanolkar
Billie Ingram	Beverly Jones	Lani Khing
Julie Ingram	Bobbie Jones	Jennifer Kiesendahl
Debbie Jackson	Hope Jones	Eunice Kim
Tammy Jackson	Jasey Jones	Annamarie King
Veranica Jackson	Jeremy Jones	Sandra King
Tyler Jacob	Megan Jones	Karen King
Jeanne Jacobs	Rachel Jones	Olivia King
Rasheed Jamal	Renatta Jones	Donald Kinsey
Denise James	Jorge Jorge	Jacqueline Kiok
Thomas Jamison	Austin Joss	Brent Kirby
Rachel Jenkins	Denbie Judkins	Richard Kirby
Terry Jenkins	Cheryl Julian	Jennifer Kitkowski
Trish Jennings	Tempie Juliano	Peggy Klas
Suzanna Jensen	Sheila Jurgens	Brittany Klausmann
Susan Jensen	Anni Kaeser	Kara Kleinert
Abigail Jewell	Hardik Kalathiya	Susie Klimaszewski
Asim Jilani	Mande Kalbfleisch	David Kline
Henry Jimenez	John Kanouse	Vanetta Klok
Vickie John	Sunil Kapur	Margaret Kloppers
Eric Johns	Don Keene	Elizabeth Knapp
Angela Johnson	Gloria Keimer	Tiata Knight

Sarah Knight	Tara Laroche	Cheri Lilly
Bonnie Koenig	Theresa Larsen	Dennis Lilly
Erick Kohler	Estee Larson	Elizabeth Lilly
Alwyn Koil	Denise Lassberg	Renee Lind
Srinivasa Komiriset	Dustin Latham	Heather Liner
Bhagyalakshmi Kon	Lanell Latona	Jill Lingmann
Spandana Kondeti	Alissa Lavin	Melissa Linnenburg
Marion Kopulos	Evan Lavin	Kelley Linton
Gwen Koskinen	Annaliese Lavin	Lori Linton
Eva Krause	Christine Lavin	Courtney Liston
Thomas Boland Kro	Scott Lavin	Blake Liston
Misty Kruger	Rhonda Lawrence	Chris Little
Danielle Krusing	Tonja Lawson	Robert Littlejohn
Leann Kuhn	Jessie Leach	Brooke Logan
Dhawal Kumar	Colleen Leahy	Brian Lohri
Andrea Kysor	Kaylee Leal	Buba Long
Jody Lafoy	Diane Leatherwood	Ryan Long
Terri Laird	Rachel Lee	Mary Beth Lopez
Greg Laird	Deborah Lee	Vanessa Lopez
Pui Lam	Matt Lees	Elizabeth Lopez
Lauren Lambert	Sean Lefton	Chris Lopez
Robert Lance	Kyndra Lemke	Chad Lorenz
Dakota Landers	Zackary Lemons	Rachel Lorenz
Arin Lane	Debye Leon	Cheryl Loucks
Rhonda Lane	Lorraine Leon	Chris Loughry
Shirley Lane	Carol Leverett	Beth Lowry
Dayanna Lang	James Lewellen	Jessica Lowry
Julie Lang	Jenni Lewis	Melinda Loyd
Stacy Langley	Billie Lewis	Cindy Lu
Eric Langmaack	Dawn Lichtenwalter	Carol Lucas
Jason Lankford	Mickey Liddeke	De Luce
Cameron Lankford	George Light	Janeen Ludecke
Tanya Lankford	Kylee Likarish	Jan Lully
Samantha Larcomb	Garry Lilly	Noel Luttmer

Jacquie Luttmer	Tonya Martinek	Terri Mccrary
Amy Lutton	Marisa Martinez	Lisa Mcdonald
David Lyday	Troy Mask	Paige McDonald
Billy Lynch	Tiffany Maske	Noelle Mcdonald
Keely Lynch	Leslie Mason	Jason Mcelroy
James Lynch	Sydney Mason	Lisa Mcelyea
Kassie Lynch	Theresa Massey	Toya Mcewen
Kirk Lynch	Glenda Mata	Chasity Mcfarland
Shaun Lynch	Marshall Mathews	Kaitlin Mcfatridge
Narayan Madabusi	Nancy Mathews	Steve Mcgee
Shashi Magadi	Robyn Mathews	Stephanie McGinnis
Barb Magaster	James Mathis	Gavin McGlynn
Siddhartha Mahara	Rexanne Mattei	Mikayla Mcguffin
Catherine Majors	Toria Matthews	Windsor Mcintosh
Julisa Maldonado	Charlotte Matthews	Emily McIntyre
Lauran Maloney	Tim Matthews	Rachel Mckee
Joseph Mangum	Tierra Matthews	Lauren McKillip
Michelle Maple	Dannell Matus	Caitlin Mckinney
Johnny Mapp	Lyssa Maxwell	Tim McKinney
Baker Marc	Dusty Mayer	Laurel Mckinney
Lydia Marcillonis	Julie Mayo	Chelsea Mcknight
Jamie Marcillonis	Cherice Mayo	David McMahan
Paul Markillie	Leslie Mayo	Diana McMahan
Crystal Marmaduke	Matthew Mayo	Jennifer McMahan
Wes Marmaduke	Kristen Mccanlies	Gayle Mcmanus
Charles Marshal	Michael Mccarthy	Cindy Mcnallen
Dior Marshall	Kim McClinton	Gary Mcnew
Christy Martin	Grant Mcclure	Neal Mcnutt
Jarod Martin	Kathleen Mcclure	Maryellen McNutty
Deborah Martin	Nat Mcclure	Anjanette McPeters
Justin Martin	Sean Mcclure	Lora McWhorter
Kelsey Martin	Riley Mccollum	Branden Measles
Lara Martin	Patricia McCormish	Ashle Measles
Sylvia Martin	Ashley McCracken	Rick Measles

Chris Medaris	Audra Mitchell	Marthann Morrow
Melinda Medders	Larry Mitchell	Candice Morrow
Valerie Meeks	Krisla Mitcheson	Cynthia Morse
Tanya Mehalko	Trisha Mitcheson	Mark Moss
Jennifer Meinen	Racheal Mobley	Angel Mowdy
Andrew Melonakos	Alan Moctezuma	Misty Mozingo
Kenneth Melton	Blane Moffett	Mindy Muellenborn
Brittany Melton	Connie Monk	Shayna Mueller
Terry Mendheim	Alan Monk	Richard Muncell
Mary Menke	Danny Monk	Jenni Muncell
Kasey Mercer	Teresa Monk	Brittney Mundorf
Jeremy Merlo	Whitney Monk	Susana Munoz
Mark Merrill	Kali Montague	Casey Murch
Amanda Mershon	Suzann Montgomery	Allison Murdock
Stephanie Messick	Tama Montgomery	Nicole Murphy
Carol Metz	Susan Moody	Shannon Murphy
Wendy Metzger	Eric Moon	Darren Murphy
Sheila Mexia	Lisa Moore	William Murphy
Isabelle Meyer	Ashlen Moore	Sarah Murrell
Marci Meyerhardt	Reggie Moore	Hamsa Murugesan
Mandy Michael	Emanuel Moran	Sarah Muscle
Oscar Mike	Tiffany Moreland	Ruth Mussaw
Kiranmayi Mikkiline	Angela Moreno	Candice Musser
Alex Milano	Jennifer Morgan	Raye Fletcher Myer
Jess Miles	Amanda Morgan	Lynda Myer
Shari Miles	Mary Morgan	Lyle Myers
Ina Miller	Donna Morrell	Allison Myers
Tom Miller	Kristy Morris	Jennifer Myers
Wendy Miller	Justin Morris	Michael Myers
Robin Miller	Karen Morris	Steven Mygrant
Madison Miller	Michelle Morris	Sarah Myrick
Kelly Mills	Shandi Morris	Michael Nagy
Kimberly Mills	Samantha Morrison	George Nail
Margaret Missler	Torrey Morrison	Donna Nalley

Seshagiri Namuduri	Angela Notter	Gabriel P.
Hanane Nassim	Lewis Novin	Joy Padgett
Leanne Nassoy	Leslie Nunley	Gary Pafford
Vicki Nave	Shelby O'Brien	Paris Palacios
Claire Neago	Gena Offill	Krishna Panchumar
Patricia Neal	Matdey Ogg	Shannah Parker
Mary Neal	Brandi Oldaker	Karen Parks
Ashley Ned	Beverly Oliver	Kristen Parks
Paula Neely	Stacey Olmstead	Zach Parrilla
Kiril Nekrich	Donna Olson	Jean Parsons
Kenneth Nelms	Kristian Omar	Sindhuja Pathipatti
Olivia Nelson	Kim Oneal	Jamie Patterson
Benjamin Ng	Antonio Orellana	Amy Patterson
Jamie Ngu	Jacob Orellana	Raven Patton
Andrew Nichols	Talia Orellana	Melisa Patzer
Cindy Nichols	Tammy Orellana	Grant Paulsen
Darrell Nichols	Kalob Orellana	Alison Paulson
David Nichols	April Orilla	Debra Payne
Danielle Nicholson	Gilbert Ortiz	Melinda Peacock
Jason Nieves	Sergio Ortiz	April Pearse
Alice Nigl	Kathiria Ortiz	Rhonda Pearson
Lisa Nix	Robert Ortiz	John Peer
Kim Noakes	Stephen Ortiz	Kelsie Pell
Kimberli Noel	Nate Outland	Nick Pellman
Wendy Noffsinger	Bobby N. Overbey	Mark Pelzel
Misty Nordhoff	Bonita Overbey	Maren Pelzel
Ahsley Norman	Christina Overbey	Jose Perez
Jessica Norman	Kimberly Overholt	Ellie Perkins
Karon Northington	Deaun Overstreet	Jennifer Perkins
Misty Nortman	Katelyn Overstreet	Julie Perkins
Elizabeth Norton	Tyler Overstreet	Sherry Perrin
Jason Norton	Donelle Owens	Salina Perry
Colton Norvell	Theresa Owens	Ganesh Perumalla
Julia Norvell	Lesa Owens	Anthony Peters



Donisha Peters	Alana Preziosi	Arliss Reilly
Susan Peters	Josh Price	Jennifer Reilly
Cheryl Petrosino	Bobbie Price	Allison Remy
Matthew Petz	Jessica Price	J. Renfro
Teresa Pfeiffer	Lindsay Price	Johanna Reyes
Bethany Phelps	Ricky Price	Jeryl Reynolds
Shannon Phillips	Jennifer Pritchett	Shanna Reynolds
Pat Piaschky	Chelsea Pruitt	Madison Reynolds
Teresa Pickerill	Diane Pruitt	Brandy Reynolds
Michelle Pierce	Liz Pucci	Judith Reynolds
Linda Pigg	Vibrance Pulla	Gayle Rhinehart
Brent Piller	Kimberly Pulliam	Joanna Rhoton
Harley Pinckney	Carolyn D. Quick	Aly Rice
Lisa Pinkett	Murminur Rahman	Khrystian Rice
Terri Pinkston	Ramesh Ramachan	James Rich
Amy Pixler	Holly Ramage	Nicole Rich
Rick Pledger	Jennifer Ramirez	Rhonda Rich
Lisa Plumlee	Emily Ramos	Diana Richards
Gene Plumlee	Ligia Ramos	Ricardo Richards
Sahithi Pola	Justin Raner	Katerina Richardson
Cristina Pollard	Paula Rangel	Amber Richardson
Ricardo Ponce	Rebecca Rathfon	Sonya Richardson
Stacie Pope	Cindy Reames	Renata Richardson
Patricia Porini	Lora Redden	David Richey
Heather Portsche	Nancy Reed	Alan Richins
Gordon Poston	Faith Reed	James Richmond
Stacy Poteet	Claudia Reed	Mika Richmond
Hari Priya Potham	Roy Reed	Regina Richroath
Trevor Powell	Tara Reed	Cody Riddle
Bri Praslicka	Ryan Reeves	Kandice Ridley
Bobbie Pratt	Patsy Reeves	James Rigdon
Ricky Pratt	Beck Regaldo	Erika Rikhiram
Serena Precht	John Regan	Laurie Rilling
Shannon Presley	Will Reid	Nancy Riseman

Sarah Risko	Mark Roundy	Nick Sarro
Cheyenne Roach	Wendi Roundy	Rachelle Satre
Christina Robbins	Jeanne Rourke	Margaret Scanten
Jenifer Roberts	Johonna Rowe	Amber Schalla
Shannon Roberts	Kara Royston	Danielle Schindler
Joy Roberts	Rachael Ruiz	Kiley Schleusz
Mary Roberts	Dennisse Ruiz-Adib	Joann Schnitker
Michael Roberts	Amanda Runnels	Erin Schnitker
Cindy Robertson	Laurie Rushie	Leonore Schoen
Kylynn Robinson	Jakie Rushing	Raegan Schofield
Brandi Robinson	Branda Rusk	Melissa Schrodtt
Melinda Robinson	Amber Russell	Linda Schrodtt
Jonda Robison	Jasara Russell	Jeannie Schroeter
Liz Rocamontes	Allyson Russell	Justin Schultz
Shannon Rodgers	Ingrid Russell	Whitney Schultz
Angela Macias Rodri	Kieraney Rutherford	Wendy Schumacher
Fatima Rodriguez	Valarie Rutherford	Giovanni Sciarrino
Damian Roesler	Michael Rutig	Lisa Scott
Carl Rogers	Terry Rutledge	Tracy Scott
Jadin Rogers	Alexis Ryan	Tina Scott
Nancy Rogers	Lynea Ryan	Lyndsi Scott
Cindy Rogers	Samuel Ryan	Mary Scott
Derrick Rogers	Amber Ryskamp	Diane Seabolt
Diane Rogers	Gretchen Van Der S	Ann Seago
Barbara Rohle	Raoul Sainvil	Robin Sears
Taylor Rohrer	Marisa Saltzgiver	Dianna Seaux
Jordan Romanchuk	Anna Sam	Adam Sedgass
Joe Roper	Lucy Sanders	Whitney Sedgass
Zayra Rosario	Kevin Sanders	Racheal Sedmack
Jennifer Ross	Kristin Sandlin	Jacki Self
Jacque Ross	Usha Sara	Stephanie Servin
Haley Ross	Brenda Sarapao	Andrew Serwood
Lynne Rossow	Barbaros Sarici	Retha Sexton
Shimen Rouhani	Karabi Sarmah	Cassy Shafer

Phillip Shafer	Elizabeth Smietana	Pollyanna Stanley
John Shaffer	Gloria Smiley	Natasha Stanley
Brandan Sharp	Richard Smiley	Harlee Stanley
Leslie Sharp	Julie Smith	Glenna Starkey
Brandi Shaver	Erin Smith	Mark Starnes
Amy Sheffield	Joseph Smith	Kathy Steele
Sarfraz Sheikh	Romina Smith	Susan Steele
Montgomery Shelbi	Abram Smith	Gabrielle Stenovitch
Brittany Shelton	Kathy Smith	Beau Stephens
Christopher Sheltor	Kacie Smith	Jeb Stephens
Steve Shepherd	Nita Smith	Craig Stephens
Jill Sheppard	Rodney Smith	Sindy Stephens
Kristi Shilling	Travis Smith	Tara Stevens
John Shilling	Vicki Smith	Angela Stevens
Jonna Shores	Willoughby Smith	Dennis Stewart
Raedene Shorethose	Kathy Smithson	Hannah Stockton
Saad Siddiqui	Julie Snapp	Lisa Stokes
David Sileven	Debbie Snyder	Jerry Stokes
Paula Silva	Savannah Somers	Shana Stonebarger
Rachel Simmons	Gerax Sotelo	Roger Storment
Angie Simpson	Karen Souther	Lei Ann Stovall
Kyle Sims	Wendi Spece	Kathy Stoyer
Tammie Sims	Glen Spellman	Trey Strange
Pamela Sims	Emma Spencer	Jessica Strawn
Kenda Sinclair	Julia Spencer	Stephanie Strawn
Elizabeth Sizemore	Mary Spencer	Rick Streetman
Cindy Skaggs	Amy Stacener	John Strickland
Christopher Skinne	Sheryl Stacks	Rebecca Stringfellow
Mychal Skipworth	Leigh Staggs	Donna Stubberud
Matthew Slate	Monique Staley	Anthony Sturdivant
Terence Slate	Roxanne Standerfer	Stephanie Sudiono
Tia Slawson	Laine Standifer	Alison Sullivan
Anthony Smalling	Donna Stanford	Jeffrey Sullivan
Terri Gero Smead	Whitney Stanglin	Shelby Sumpter

Amy Sumpter	Zach Taylor	Jeff Travis
Kameron Sumrall	Deb Teague	Gary Travis
Austin Sumrall	Dennis Teague	Baylee Travis
Christina Sutherland	Samantha Teague	Everley Trice
Clint Sutherland	Sara Teel	Kelly Trott
Vanessa Sutter	Sarah Thiers	Tonya Troxtell
Natasha Sutton	Tiffany Thomas	Myrna Trubey
Diliza Svendsen	Shaun Thomas	Courtney Truhitte
Connie Swamy	Whytney Thomas	Irena Tsoustas
Reba Swanner	Cindy Thompson	Michele Tucker
Siana Swift	Bryan Thompson	Taylor Tucker
Victoria Szemerédi	Carlie Thompson	Joanne Turner
Martin Tadlock	Teena Thompson	Linda Tuttle
Renea Talbert	Constance Thompson	Charles Underwood
Erin Talley	Tracy Thomson	Riley Underwood
Rachel Tandy	Lori Thornhill	Kim Upton
Steve Tarr	Virginia Tidwell	Kristi Utley
Debbie Tatkowski	Hannah Tiffany	Adela Valdez
Cassandra Taylor	Richard Tiffin	Elizabeth Van Valke
Wanda Taylor	Cynthia Tillett	Chad Van Valkenbu
Sabrina Taylor	Misti Todd	Shana Valmidiano
Laura Taylor	Drew Tolbert	Jamie Vandagriff
Lindee Taylor	Tan Tong	Kathleen Vanderbee
Harold Taylor	Christy De La Torre	Willie Vanderpool
Anthony Taylor	Benjamin Torres	Mickinze Vanherpen
Dewanna Taylor	Maria Torres	Bill Vannoy
Jeana Taylor	Robert Towers	Cynthia Vannoy
Kristi Taylor	Casey Towles	Ashley Vannucci
Linda Taylor	Bryan Townsend	Kim Vargas
Lydia Taylor	Amy Trahan	Paul Varghese
Mary Taylor	Robyn Trantham	Lauren Vasquez
Terry Taylor	Angela Trask	James Vaughan
Thomas Taylor	Heather Travis	Bri Vaughn
Tisha Taylor	Kim Travis	Anita Vaught

James Vaught	Earnest Waller	Holly Wells
Ian Vazquez	Nathan Waller	Brenda Wells
Octavio Vela	Rachel Waller	Stacy Wells
Miriam Vela	Lillie Walston	Dana Wessels
Michele Velasco	Zachary Walston	Jami West
Omar Velez	Beth Ward	Joanny West
Sarah Vellotti	Brian Ward	Kelly West
Hema Vengala	John Ward	Carolyn West
Erin Verdun	Kimberly Ward	Kati Wetzel
Jordan Verhoek	Mingyan Ward	Cathy Whiddon
Sara Vidrine	Robert Ward	Howard Whiddon
Shubha Vijayasarat	Karen Ward	April Whiddon
Christina Villyard	Kaitlin Ward	Kayla Whitacre
Destity Vincek	Kari Ward	Isaac Whitaker
Becky Vincent	Heather Warden	Alex White
Kelli Vincent	Robin Warfield	Ken White
Steve Vissering	Karyn Warr	Richard White
Tim Voertman	Misty Warren	Lisa Whitley
Allison Volpe	Colin Warren	Christine Whitmore
Jenny Vonbehren	Kevin Wasp	Thomas Whitmore
Jenn Vondersaar	Trisha Watkins	Kim Wilcox
Jalyn De Vore	Logan Watson	Kemp Willard
Bobbie Voyles	Leann Watson	Christopher Willhite
Laney W.	Stacy Watson	April Williams
Rhonda Wade	Dana Watts	Carma Williams
Avery Wageman	Shelbie Watts	Kerrington Williams
Erin Wageman	Thomas Watts	Ryan Williams
Claire Wageman	Jessica Watts	Terah Williams
Cathy Walger	Mark Wei	Tonia Williams
Victoria Walke	Casey Weinmann	Jennifer Williams
Matthew Walker	Lynn Lynn Welch	Dustin Williams
Kyle Walker	Melinda Welch	Jordyn Williams
Kendra Wall	Scott Welch	Grace Williams
Darby Wallace	Khenya Welch	Norm Wilmes

Bryan Wilson  
Elaine Wilson  
Taffney Wilson  
Wendy Wilson  
Abi Wilson  
Nikki Wilson  
Drew Wilson  
Angela Wilson  
Jennita Wingate  
Cathy Winkler  
Mike Winter  
Crystal Winters  
Brett Winton  
Michael Wise  
Karen Witcher

Blake Wofford  
Darla Wogan  
Collin Wolff  
Nina Wood  
Coline Wood  
Hannah Woodard  
Coni Wooster  
Joan Wooster  
Erica Worley  
Natalie Worth  
Ronell Wright  
Kenya Wright  
Kaitlyn Wyatt  
Krista Wynn  
Jake Wynn

Rainer Yakich  
Kaelan Yakich  
Matt Yamarino  
Shelly Yancey  
Linda Yankle  
Teresa Yeager  
Troy Yosten  
Kerry Young  
Nathan Young  
Katharine Young  
Vishal Z.  
Alejandra Zamora  
Matthew Zimmerman  
Macy Zinn  
Hayley Zinski



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BM Dorchester LLC

Registration Nos. 167047, GHGPSDTX212, and PSDTX1602

Appendix B

Novin Abdi	Darla Barr	Kristopher Daniel Bravo
Silvia Adams	Faith Barrett	Virginia Brawley
Randy Adams	Kathy Bartlett	Ashlin Bridwell
Janice Akins	Robert Bauer	Cheryl Brociek
Samantha Allison	Mark Baumgardner	Lorie Brockner
Luz Arce	Heather Beaver	Ron Brockner
Amber Armendariz	Ashley Beck	Ron R. Brockner
Ralph H. Armstrong	Francis Beck	Bryan Brooks
Ralph Armstrong	Jennifer Beecroft	Emily Brooks
Katrina Lynn Arsenault	Blake C. Beeson	Jan Broomall
Art Arthur	Patti Beggs	Laffel Brown
Charles Ashley	Deanna Bell	Nancy Brown
Amy Ashlock	Gary Bennett	Jeffrey Brown
Andrea Paulette Aslam	Darald Berger	Jeremiah Broyles
Sesily Babekuhl	Lander Bethel	Tiffany Broyles
David Baca	Tonya Bingham	Jeremiah D. Broyles
Keith Baehmann	Liz Birchall	Erika Bryan
Donald Bailey	Cliff Blackstock	Jamie Buckalew
Cynthia Baker	Ashley Blanton	Homer Bullard
Tye Baker	Tammy Bohannon-Yule	Jennifer Bullard
Willies Ballou	James C. Boles	Donna Burk
Willies Carl Ballou	Nancy Bond	Marie Burns
Debra Banks	Nolan E. Bond	Brenna Butler
Douglas Glenn Banner	Linda Bowers	Christa Call
Kelly Denise Barnes	Paul David Bowers	Veronica Calzada
Laura Barnett	Madilyn Bramer	Sarah Campbell
Thomas Clay Barnett	Amber Bratt	Stephen Campeau

Eric Cantu	Cassady A. Craddock	Thomas G. Debner
Tommy Joe Carney	Matthew Crain	Rebecca Demel
Holly Castleberry	Linda Carol Crain	Bethany Devore
Clint Catching	Amanda Crawford	Jeremy Q. Devore
Cary Catching	Andrew Crawford	Jeremy Devore
Paula A. Cavender	James Crews	Mary Gail Devore
Shane Cavender	Melissa Gail Croney	Jeremy W. Devore
Andrew Cellars	Brian Culp	Deirdre Diamond
Adam Cernero	Donald Ray Cummings	Joanne Dickey
Corey Chambers	Karen Cummings	Anthony Dimarco
Nicole Chambers	Lindsay Cummings	Melissa Doan
Bobby Luke Chandler	Karen L. Cummings	Kimberly Stewart Dodson
Kristin Chandler	Kristen Cunningham	Kathleen Dophied
Bobby Chandler	Ethan Cunningham	Tiffany Drake
Megan C. Chandler	Tracy R. Curry	Judy Searcy Dryden
Laura Childress	Jeff Dailey	Robert E. Dryden
Regina Chisum	Atul Dave	Judith S. Dryden
Peter Christensen	Stephanie Davidson	Searcy Dryden
Art Clayton	Wes Davidson	Judy Dryden
Robert Clough	Angela Davidson	Leslie M. Dulack
Steve Thomas Cohea	Chanel Ann Davis	Michael Dulack
Margaret Coleman	Cynthia L Davis	Christina N. Dunlap
Lee Collins	Dee F. Davis	Boyd Dunn
Karla K. Colwell	H. C. Davis	Sherry Duran
Meghan Cone	Mark Davis	Cindy Durrant
Anthony Alan Cook	Alicia Davis	Mark L. England
James Matt Cooper	Jordan Taylor Davis	William Engle
Charli Cotten	Julie Davis	Angelica Escalera
Katie Courange	Karla Graham Davis	Cendy Y. Escalera
Eric Covder	Preston Davis	Blanca Nayeli Escalera-Solis
R. D. Cozad	Bruce W. Dawsey	Rachel Evans
Skyler Cozad	Bruce Dawsey	Michael Fannin
Traber Cozad	Shawna Dawson	
Camryn Craddock	Heidi Debner	

Barrett Fannin	Jeffrey Neal Gray	Donna Hepner
Jesse Farrer	Misty Gray	Alyssa Hernanadez
Phillip Wayne Farris	Laura Green	Amy Hertel
Stanley Feld	Linda J. Greenfield	Katerina Hess
Courtney Fierro	Kit Grice	Jerry Dean Hestand
Laura Fincher	Kenneth Griffin	Debbie Hester
Lisa Flaggert	Austin Grooms	Dwayne Hicks
Lisa Marie Flaggert	Brandon Grooms	Michael S. Hignight
James N. Flanery	Chloe Grooms	Carol Hill
Adam Fleming	Rachel Grooms	Melissa Hill
Bobby Fletcher	Joshua Grooms	Melinda Hill
Lindsey Flores	Richard Oran Gross	Amy Hoffman-Shehan
William Foster	Matt Gudgel	Suzanne Hooks
Harold C. Foster	Hillary Gurnea	Don Horn
Harold Foster	Jennifer Haeg	Charity Horne
Robert Franze	Teresa M. Hall	Robin A. Horner
Frank Edward Gadek	Damon L. Moore Hall	Scott Horner
Andrea Ganow	Ginger Ham	Helen Horton
Chris Gardner	Dave Hammond	Sherry Howard
Lori Gardner	Matt Hardenburg	Gabe Howell
Renny Gehman	Emily Ann Hardwick	Joyce A. Huff
Tracy Gilbert	Carol Ann Hardy	Jen Huff
Connor Gillispie	Letitia Harris	Alice Hughes
Rex Glendenning	John Harrison	Meghan Hughes
Paula Glenn	Jim L. Harvey	Mandy Hummel
Donald E. Godwin	Rod Hawkins	Laura T. Hunt
Roberto Gonzalez	Stephanie Hawkins	Colin Drew Hunter
Patricia C. Gonzalez	Christine Heck	Linda K. Hunter
Rosa Goodenow	Patricia Hedrick	Lori Huntsman
Lora Gordon	Lisa Hejny	Debbie Hurd
Margie Graf	Moses Hejny	Brody Hust
Anabelle Graham	Bryan Hemman	Billie Ingram
Mayan Grantland	Sarah Henry	Billie Charels Ingram
Amber Gravley	Joann Hensley	Heather Jacques

Mike Jacques	Anthony J. Kordosky	Dakotah Mahan
Phyllis D. James	Cindy Kvaal	Brian Mai
Michael Jefferson	Rick Kvaal	Sarah Mallory
Rachel Jenkins	Irms Kyle	Rickey J. Malta
Chris Jennings	Greg L. Laird	Casey Mandi
Trish Jennings	Amanda Lambert	Jost Marr
Suzanna Dryden Jensen	Lauren Lambert	Josh Marr
Brandon Johnson	Austin Lambert	Rose M. Marr
Liberty Johnson	Benjamin T. Landgraf	Michael Gene Marsh
Linda Kay Johnson	Chris Landino	Monica Martin
Nathan K. Johnson	William Landrum	Mickie Martin
Carrie Jones	Terri Langford	Brittany Martin
Elizabeth Jones	Julie Lanicek	Steve Marum
Lori Jones	Jason R. Lankford	George Mason
Jake Jones	Jason Lankford	Catherine Matuella
Debbie Elaine Judkins	Patrick Latona	Patsy Mauldin
Carl Kalbfleisch	Val Lauerhahs	Dusty Wayne Mayer
Mary Karam	Crystal Lawson	William Mayer
Kenyon Kemp	Rhonda Lawson	Traci McCarthy
Dina Kenemore	Wayne Lee	Kathleen McClure
Brittany Kennedy	Sean Lefton	Claudia L. McClure
James Kimbrel	Patsy Lemaster	Kathleen McClure
Cody M. King	James Lewellen	Les McConnell
Geri V. King	Kylee Likarish	Garrett McCown
Ken King	Victor Lissiak	Janna C. McCown
Laura L. King	Mary Little	Vivian Robin McCoy
Geri V. King	Paul Daniel Lopez	Karla McDonald
Kenneth J. King	Christopher A. Lopez	Larry McDonald
Laura Kirilloff	Trudy Lucas	Toya McEwen
Debbie Kirkpatrick	Jim Lucas	Alan Lee McKelva
Keith Kisselle	Eric Lunde	Diana McMahan
Peggy Klas	Shelley Luther	Patrick Neal McNutt
Detra Klas	Ronald Clay Lynch	Lauren McNutt
Vanetta Klok	Lisa Maberry	Kevin Meissner

Dusty Melton	Sarah Myrick	Bobby N. Overbey
Amy Meyer	Ramesh Nadella	Tim Overbey
Steve Miller	Jason Lee Naramor	Bonita L. Overbey
Josh Miller	Mitaj Nathwani	Jeff Overstreet
Caitlyn Miller	Shanon Neal	Shelby Overstreet
Davida Miorin	Paula Neely	Tyler Overstreet
Cindy Mitchell	Sharon Nelson	Jeffrey Tyler Overstreet
Michael J. Mitchusson	Jacob Nelson	Paula Overstreet
Lynn M. Mitchusson	Sarah Newtown	Nikolaus Owen
Michael J Mitchusson	Chris Nicholoff	Martha Paben
Mehrdad Moayed	Andeelea Anderson	Brian Parks
Joyce L. Moore	Nichols	James Parrish
Makayla Moore	Danny Thomas Nichols	Trent Patterson
Grover Franklin Moore	Marie Nixon	Angela Patton
Angela Moreau	Paul Nixon	Melisa Patzer
Brad Morgan	Rose Marie Nixon	Holland Paula
Mary Morgan	Margie Noel	Debra Payne
Jason Morin	Marye Jean Norman	Jose Fernando Pena
Shandi Morris	Brandon Norris	Sherry Perrin
Amarise Morris	Brian E. Norris	Jody Perry
Andronica Morris	Tera Norris	Matthew Petz
Matthew Morris	Jennifer Norris	Pat Piaschky
Zadrian Morris	Brian Norris	David Plyler
Terry Morrison	Margaret Norris	Zach Poling
Marthann Morrow	Erica Northrup	Heather Portsche
Ashley Morrow	Duncan C. Norton	Emily Powell
Sierra Mueller	Duncan C Norton	Taylor P. Powell
Matthew Muniz	Andrew Wallace	Shelly Prewitt
Cindy R. Munson	Olmstead	Josh Price
Karen Murphy	Brent Omdahl	Lindsay Price
Amin Musani	Brent E Omdahl	Ricky Price
Shirley Musani	Angie Onley	Joshua D. Price
Lucy Myer	Angela Onley	Delfina Prisock
Rick Myer	Melinda Ortle	Chelsey Pulcheon

Ray H. Purdom	Kerri Rowe	Linda Sims
Craig Rabe	Kara Royston	David Sims
Terry Rainbow	Brad Rucker	Kenda Sinclair
Lainie Ramsay	Kayli Rushing	Sharon Slaughter
Kathy Raner	Bettye Russell	David Smith
Justin Neal Raner	Linda Russell	Reggie Smith
Alan Redd	Brian Russell	Angela Smith
Patsy A. Reeves	Linda Sue Russell	Wendy Smith
Laura Reeves	Russell Rutherford	Derek Smith
Richard Reeves	Shannon Ryan	Kyle Smith
J. Renfro	Christina R. Rykens	Leann Smith
Cynthia Reyes	Carrie Saindon	Darlene L. Smith
Kevin Diaz Reyes	Sara Salinas	Dustin Smith
Tara Rice	Robert Sanchez	Michael Wayne Speed
Renata Richardson	Anoo Sathappun	Jeff Randall Spencer
Charity Riley	Jarod Schmitt	Cynthia Annk Spencer
Cindy Risk	Dorothy Schmoker	Julia Spencer
Naif Risk	Joann Schnitker	Frances Sprabary
Joy Roberts	Bradley J. Schnitker	Drew Springer
Mary Roberts	Marci Schnitker	Sara Sprinkle
Kylynn Robinson	Gary Schnitker	Bobby Overbey Sr.
Douglas Ray Robison	Peter Schulze	Kristy Stachmus
Judy Carol Robison	Mary J. Scott	Penny Stahl
Luanne Robison	Betty Scott	Roxanne Standerfer
Mark Douglas Robison	Robin Sears	Alice Stewart
Brad Robnett	Racheal Sedmack	James Stewart
Mona Robnett	Doreen Shacklee	Robert Stewart
Liz Rocamontes	Kent Sharp	Shirley Stewart
Elizabeth Rocamontes	True Shaw	Leah Stewart
Elizabeth Rodriguez	Nancy Jan Shaw	Patricia Ann Stewart
Jennifer Rollins	Rosa Shelton	Alice Faye Stewart
Mel Ronduen	David Shepard	Shana Stonebarger
Sharla Ross	Gary Shields	Stephanie Strawn
Erica Ross	David G. Sileven	Chandler Ryan Strawn



Chandler Strawn	Marilyn Sue Vest	Cynthia L. Weems
James Stringfield	Becky Vincent	Casey Weinmann
Dana Strong	Jimmy Vincent	Robert Welch
Crystal Stueve	Larry Vincent	Monique Whaley
Sathappun Subbiah	Larry W. Vincent	Steve Whaley
Austin Sumrall	Mark Vodry	Amy Wheeler
James Sutherland	Kimberly Vodry	Shayla Wheeler
Kenneth Svehlak	Jenny Vonbehren	Joseph White
Sue Svehlak	Jaymison Bella Voto	Jennifer White
Meghan Swindle	Campbell Voto	Ronnie Whiteley
Griffin Tammy	Jay Dee Voto	Edward Whitfield
Thomas Taylor	Lynsey Voto	Monica L. Whitfield
Betty Jean Taylor	Jay Voto	Jeff Whitmire
Thomas Leland Taylor	Darren W.	Jim Whitten
Thomas L. Taylor	Leonard G. Waldrum	Teresa Wildman
Margaret Taylor	Monte Walker	Gabriel Williams
Lari Alexis Taylor-Baker	Paula Walker	April Williams
Shawn C. Teamann	Phillip Walker	Ruth E. N. Cox
Cristi Tenant	Bihfang Wang	Williamson
Kaaren J. Teuber	Brian Wang	Jennifer Williamson
Alyssa Thomas	Borming Wang	Jeffrey Wilmoth
Dana Thornhill	John Ward	Kevin Wilson
Lisa Tibbets	Mingyan Ward	Dustin Ray Wilson
Julie Travis	Cameryn P. Warren	Angela Wilson
Yolanda Trevino	Kevin Wasp	Jennita Wingate
Tonya Troxtell	Jacqueline Wassom	Krista Lucas Wynn
Griffin Underwood	Wyatt Watson	Matt R. Yamarino
Kristi Utley	Manual Watson	Jace Yarbrough
Gail W. Utter	Shelbie Watts	Caroline Yuan
Diana Vanbuskirk	Jared Weaver	Angela Zarallo
Ronald Vanbuskirk	Lanisha Weaver	Rebecca Zey
Mickinze Vanherpen	William Webster	Savanna Zinn
Denise Vawter	Cynthia Weems	Cynthia Zinn
Brittany Verhoek	Rudy Weems	Tracie Zweifel-Gibson