

State Office of Administrative Hearings



Cathleen Parsley
Chief Administrative Law Judge

January 13, 2011

Les Trobman, General Counsel
Texas Commission on Environmental Quality
P.O. Box 13087
Austin Texas 78711-3087

Re: SOAH Docket No. 582-10-2489; TCEQ Docket No. 2009-1842-AIR; Application of Aggregate Industries-WCR, Inc., for Air Quality Permit Number 83755 in Comal County, Texas

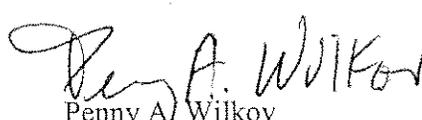
Dear Mr. Trobman:

The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Enclosed are copies of the Proposal for Decision and Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than February 2, 2011. Any replies to exceptions or briefs must be filed in the same manner no later than February 14, 2011.

This matter has been designated **TCEQ Docket No. 2009-1842-AIR; SOAH Docket No. 582-10-2489**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ electronically at <http://www10.tceq.state.tx.us/epic/efilings/> or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

Sincerely,


Penny A. Wilkov
Administrative Law Judge

PAW/ap
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SOAH DOCKET NUMBER: 582-10-2489

REFERRING AGENCY CASE: 2009-1842-AIR

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AGGREGATE INDUSTRIES

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SOAH DOCKET NO. 582-10-2489
TCEQ DOCKET NO. 2009-1842-AIR

APPLICATION OF AGGREGATE	§	BEFORE THE STATE OFFICE
	§	
INDUSTRIES–WCR, INC., FOR	§	
	§	OF
AIR QUALITY PERMIT NUMBER 83755	§	
	§	
IN COMAL COUNTY, TEXAS	§	ADMINISTRATIVE HEARINGS

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SOAH DOCKET NO. 582-10-2489
TCEQ DOCKET NO. 2009-1842-AIR

APPLICATION OF AGGREGATE	§	BEFORE THE STATE OFFICE
	§	
INDUSTRIES-WCR, INC., FOR	§	
	§	OF
AIR QUALITY PERMIT NUMBER 83755	§	
	§	
IN COMAL COUNTY, TEXAS	§	ADMINISTRATIVE HEARINGS

PROPOSAL FOR DECISION

I. INTRODUCTION

On December 28, 2007, the Texas Commission on Environmental Quality (TCEQ or Commission) received an application for an air permit from Aggregate Industries-WCR, Inc (Aggregate or Applicant). The permit requested authorization to construct and operate a rock crushing plant located three miles south of New Braunfels at 5900 FM 482 in Comal County, Texas, on approximately 1,000 acres of land. In response to several requests for hearing, the Commission referred the matter to the State Office of Administrative Hearings (SOAH) for a contested hearing on Aggregate's application.

In referring this matter to SOAH, the Commission identified the following issues to be addressed in the hearing:

- 1) Whether the proposed facility will have adverse effects on air quality or cause violations of the Texas Clean Air Act, or other applicable state or federal requirements;
- 2) Whether the draft permit conditions fully comply with applicable air quality regulations, including BACT, enforceability, and consideration of emission sources and emission rates;
- 3) Whether the draft permit conditions contain adequate monitoring, reporting, and recordkeeping requirements to ensure permit compliance including whether a continuous onsite operator should be required;
- 4) Whether the air dispersion modeling of proposed particulate matter emissions was accurate and appropriate including whether the classification of surrounding land uses, consideration of cumulative effects, the NAAQS for PM_{2.5}, and use of emission factors were accurate;

- 5) Whether the proposed facility's emissions will adversely impact the requestors' health, welfare, or physical property including whether the health effects review for the permit was properly conducted;
- 6) Whether emissions from the proposed facility will adversely affect livestock; wildlife, including endangered species; or vegetation, including the agricultural activities of the requestors;
- 7) Whether the emissions from the facility will contribute to nuisance conditions;
- 8) Whether the emissions from the facility will adversely affect the health of requestors' children or grandchildren when they are attending Comal Elementary School;
- 9) Whether the public notice for the application was sufficient to meet the requirements of the Texas Clean Air Act and TCEQ rules;
- 10) Whether the proposed operating schedule, throughput, and equipment were adequately and fully addressed in the impact evaluation;
- 11) Whether the Applicant has an acceptable compliance history in Texas;
- 12) Whether the stockpile heights specified in the permit are sufficiently protective;
- 13) Whether emissions from the proposed facility will adversely affect road safety and traffic conditions; and
- 14) Whether the permit properly controls for fugitive dust emissions.

II. RECOMMENDATION

The ED concluded that Applicant had satisfied all the statutory criteria and recommended that that the permit be granted. After considering the evidence and arguments, the Administrative Law Judge (ALJ) is persuaded that the operation of the facility will not create a nuisance, does not present a risk of adverse health effects, and will not have an adverse effect on air quality. Therefore, the ALJ recommends that the application be granted. The ALJ also recommends that Aggregate be apportioned 100% of the transcription costs.

III. PROCEDURAL HISTORY, NOTICE, AND JURISDICTION

A. Whether the Public Notice for the Application was Sufficient to Meet the Requirements of the Texas Clean Air Act and TCEQ Rules?

An owner or operator who applies for a new construction authorization must comply with public notice requirements, as provided by TCEQ rules.¹ In particular, an applicant is required to

¹ TEX. HEALTH & SAFETY CODE (THSC) § 382.056; 30 TEX. ADMIN. CODE (TAC) § 39.601 *et seq.*

publish notice of its pending air quality authorization in a newspaper of general circulation and post signs near its property lines.²

On December 28, 2007, Aggregate submitted its application to TCEQ. The application was declared administratively complete on January 28, 2008. Larry Buller, the TCEQ permit reviewer who conducted the technical review, testified that the Applicant complied with TCEQ requirements regarding newspaper notice.³ Applicant's witness, Tommy Matthews, explained that the Notice of Receipt and Intent to Obtain an Air Quality Permit was published on February 26, 2008 in the *New Braunfels Herald-Zeitung* and on February 25, 2008, in Spanish language in *El Norte*.⁴ The affidavits certifying publication of both notices were received by TCEQ on March 6, 2008.⁵ Because a request for a contested case hearing was timely received, Aggregate was required to publish a second notice.⁶

A second notice combined with a notice of public meeting, a Notice of Application and Preliminary Decision, was published Spanish in *El Norte, the Community's Newspaper*, and in English in the *New Braunfels Herald-Zeitung*, on February 25, 2009.⁷ TCEQ received an affidavit certifying publication of both notices on March 11, 2009.⁸

In addition to the publication of notices in a newspaper of general circulation, the Applicant was required to post signs at the site of its proposed facility, generally declaring the filing of the permit application.⁹ Mr. Matthews recounted that Applicant followed the public notice sign posting requirements set forth in 30 TAC § 39.604, which required each sign to be located within ten feet of every property line paralleling a public road and to be visible from the

² 30 TAC § 39.603.

³ ED Ex. 13.

⁴ ED Ex. 11; App. Ex. G, p. 3.

⁵ ED Ex. 11, pp.163-164.

⁶ 30 TAC § 39.603(e).

⁷ ED Ex. 11, p.163; App. Ex. 59, p. 33.

⁸ App. Ex. I, App. Ex. M, App. Ex. R.

⁹ 30 TAC § 39.604, ED Ex. 11, p. 164.

road and spaced at not more than 1,500 foot intervals.¹⁰ He testified that signs were visible from, and placed within, ten feet of the property line parallel to a road.¹¹ Further, Mr. Matthews testified that public outreach efforts made with state elected officials, local elected officials and members of the protestant groups, including small group and individual meetings.¹²

A public meeting was held on March 10, 2009 in New Braunfels, with notice of the meeting published on February 25, 2009, in the *New Braunfels Herald-Zeitung* and in Spanish language in *El Norte*. The public comment period ended on March 27, 2009. On July 1, 2009, the ED filed its decision and Response to Comments, which the Chief Clerk's office mailed on July 10, 2009. The deadline to request reconsideration of the ED's decision or a contested case hearing was August 10, 2009. TCEQ received numerous timely comments from surrounding landowners and one timely request for reconsideration.

On January 13, 2010, the Commission considered the hearing requests and request for reconsideration. On January 26, 2010, the Commission issued an interim order granting certain hearing requests from various individuals: Curtis Fey, Jr., Tim and Sharlene Fey, Daryl and Jeri Hoffman, Kathleen Hoffman, Todd Hoffman, Dennis Parma, Maggie Parma, Dwight and Sandra Reeh, Vandeline Sahm, Carol Warwick Smith, Heather Hoffman Stewart and Jason Stewart, Magnolia Springs Associates, Tressie Mae Russell, and Craig and Teresa McKee (Protestants Group I).

On April 20, 2010, ALJs Penny A. Wilkov and Sharon Cloninger held a preliminary hearing. The following appeared and were admitted as the only parties in this case:

- the Applicant, represented by Attorneys Aldean E. Kainz and Chris B. Pepper;
- the Executive Director (ED), represented by TCEQ Attorneys Amy Lynn Browning and Alexis Lorick;
- OPIC, represented by Assistant Public Interest Counsel James B. Murphy;

¹⁰ App. Ex. 59, p. 33.

¹¹ *Id.*

¹² App. Ex. 59, pp. 35-36.

- Protestants Group I, represented by Attorneys James B. Blackburn and Adam Friedman;
- Numerous individuals: Robert Aguirre, William V. Blount, P.E., Clifford Curtis, Dennis Felix, Rita Foust, Mark Freisenhahn, Raja Saad, Carolyn Schulle, Walter Schulle, Karen "Katie" Stout (Protestants Group II), represented by Attorneys James B. Blackburn and Adam Friedman;
- Securing a Future Environment or SAFE, represented by William B. Jackson;
- Citizens Alliance for Smart Expansion or CASE, represented by Sharon Levett; and
- Comal Independent School District (CISD), represented by Roy Linnatz.

Prior to the hearing on the merits, CASE and CISD withdrew as parties. SAFE withdrew as a party at the hearing. Protestants I and II merged at the hearing, as they were represented by the same counsel and are collectively referred to as Protestants.

The hearing on the merits convened on October 11-13, 2010, before ALJ Penny A. Wilkov. With the filing of the transcript, closing arguments and responses on November 19, 2010, the record closed.

The following witnesses testified at the hearing:

For Applicant:

- Mike Refer, the Vice-President of Aggregate Industries-WCR, Inc.
- Gary Nicholls, a Professional Engineer and Vice-President of Westward Environmental, Inc., who drafted and submitted the air permit application;
- Dave Knollhoff, a Certified Consulting Meteorologist, with Westward Environmental, Inc.;
- Michael Hunt, a Registered Professional Engineer;¹³
- Lucy Fraiser, Ph.D., a Toxicologist; and
- Tommy Mathews, a Professional Geoscientist and President and Owner of Westward Environmental, Inc.

¹³ Mr. Hunt was also adopted as a witness by Protestant.

For Protestants:

- Richard C. Bost, a Professional Engineer and a Senior Partner at Environmental Resources Management.

For the ED:

- Larry Buller, a Professional Engineer and an Engineer V with the TCEQ Air Permits Division;
- Matthew Kovar, an Engineering Specialist III with the TCEQ Air Dispersion Modeling Team; and
- Daniel Menendez, a Natural Resource Special Team Leader, with the TCEQ Air Dispersion Modeling Team.

B. ALJ's Analysis

Applicant and the ED contend that Applicant satisfactorily complied with public notice requirements, and the Opposing Parties¹⁴ did not present contrary evidence or argument. The ALJ, therefore, concludes that the Applicant has complied with all applicable public notification requirements, and that TCEQ has jurisdiction to consider Aggregate's application.¹⁵

IV. PROJECT DESCRIPTION

A. Rock Crushing Plant

The background facts are essentially undisputed.¹⁶ The proposed facility will consist of a primary plant, a secondary plant, a truck loadout area and a rail loadout area. The primary plant would be located below the current ground level and contain feed hoppers, primary crushers, screens, conveyors and a surge pile. The secondary plant would be located to the southeast of the primary plant and consist of the remaining feed hoppers, secondary crushers, screens, conveyors, classifiers and a surge pile. Three different types of rock crushers are proposed: jaw,

¹⁴ Because Protestants and OPIC oppose the application and generally agree in their arguments and cross-examination, they are collectively referred to as the "Opposing Parties."

¹⁵ THSC § 382.056; TEX. GOV'T CODE §§ 2001.051 and 2001.052; 30 TAC § 39.601 *et seq.*, and THSC §§ 382.011, 382.051, and 382.0518.

¹⁶ App. Ex. 2, p. 7-9, App. Ex. 19, p. 12.

Vertical Shaft Impactor (VSI), and cone crushers. The truck loadout area would be located east of the secondary plant and would house wash screens, conveyors, truck loading bins and stockpiles. The rail loadout area would also be located east of the secondary plant with wash screens, conveyors, and railcar loading bins. A settling pond is also proposed that would hold recycled water from the classifiers, wash screens and sand screws.

Generally, rock will be collected from the site north of the primary crushing plant and transported to the primary plant in large haul trucks. The haul trucks will deliver the rock into the hoppers which will feed the jaw crushers. The jaw crushers reduce the rock size by squeezing it between two steel plates, one of which is moving back and forth relative to the other plate. The crushed rock falls through the crusher on to a conveyor and is screened to separate the various sizes. These different sizes can be sent to stockpiles for sale or be placed in the primary surge pile to be sent to the secondary plant, where the rock will be crushed, screened and eventually placed in the secondary surge pile or washed sand pile. From the secondary surge pile the material will be conveyed to additional rinse screens, to truck and rail load out bins, or to stockpiles. After each product truck is loaded with aggregate product, it will proceed to the truck scales to be weighed where the amount and type of aggregate in the truckload is recorded electronically. The records will be kept at the plant office.

B. Proposed Project Operation

The permit seeks authorization to construct a rock crushing plant consisting of three feed hoppers, seven crushers, 16 screens, associated conveyor belts, 30 acres of stockpiles, and two 10,000 gallon tanks of diesel fuel for onsite vehicle use. The plant is proposed to operate 24 hours per day, seven days per week, 52 weeks per year, with a process limit of 2,000 tons per hour and 5,000,000 tons per year. Limestone aggregate will be quarried at the site. The proposed plant would process the limestone for aggregate materials to be used in the construction industry. Material will be offloaded from the site by truck and train.

As envisioned, according to Professional Engineer Gary Nichols, the primary plant would likely run for 10-12 hours a day with a maximum production rate of 2000 tons per hour.¹⁷ Once the primary surge pile reaches a sufficient height, the primary plant is shut down and the secondary plant will operate overnight using the material from the primary plant surge pile. The location of the primary plant below grade eliminates the potential of windblown dust leaving the site, reduces offsite noise and reduces haul truck emissions. The use of a primary surge pile allows the primary plant to be shut down at night while the secondary plant continues operations, thus further reducing emissions and noise from the primary plant during nighttime hours. This is because the surge pile acts as a storage device for the material that is used to feed the secondary plant.

C. Project Site and Surrounding Area

The Holcim Corporation (Holcim), a cement and aggregates company, has owned the site since the early 1980s, but the site has been used as farmland. In 2007, Aggregate was offered the opportunity to mine the land in 2007 as the operator for the site. The site is located directly between two existing quarry sites with a lime manufacturing plant and cement manufacturing plant operating within a few miles of the proposed site.

V. OVERVIEW

A. Protection of Air

Applicant has applied for a Preconstruction Permit, under the auspices of the Texas Clean Air Act (TCCA),¹⁸ to construct a new facility that may emit air contaminants.¹⁹ The purpose of the TCAA is to “safeguard the state’s air resources from pollution by controlling or abating air pollution and emissions of air contaminants, consistent with the protection of public health, general welfare, and physical property, including the esthetic enjoyment of air resources by the

¹⁷ App. Ex. 8, p. 9.

¹⁸ THSC § 382.001 *et seq.*

¹⁹ *Id.* at § 382.0518(a).

public and the maintenance of adequate visibility.”²⁰ As defined, air contaminants include particulate matter, dust, fumes, smoke, vapor, or odor.²¹ Further, as relevant, air pollution is defined as the discharge of air contaminants in such concentration and such duration as may be injurious or adversely affect human health or welfare, animal life, vegetation, or property.²² Each state is responsible for implementation plans that must “provide for the establishment and operation of appropriate devices, methods, systems and procedures necessary to ... monitor, compile, and analyze data on ambient air quality.”²³

B. NAAQS

The National Primary and Secondary Ambient Air Quality Standards (NAAQS) of the TCAA are enforced by TCEQ throughout all parts of Texas.²⁴ Presently, the United States Environmental Protection Agency (EPA) has established NAAQS for the following pollutants: (1) particulate matter less than or equal to 10 microns in diameter (PM₁₀); (2) particulate matter less than or equal to 2.5 microns in diameter (PM_{2.5}); (3) ozone; (4) sulfur dioxide; (5) carbon monoxide; (6) nitrogen dioxide; and (7) lead.²⁵ In order to obtain the requisite permit, an applicant must demonstrate to the Commission by a preponderance of evidence²⁶ that there is “no indication that the emissions from the facility will contravene the intent of [the TCAA], including protection of the public’s health and physical property.”²⁷ As Applicant’s witness Dr. Frasier notes, “NAAQS are established based on health effects data. Air quality is assumed not to be adversely affected when the NAAQS have been met.”²⁸

²⁰ *Id.* at § 382.002(a).

²¹ *Id.* at § 382.003(2).

²² *Id.* at § 382.003(3).

²³ 42 UNITED STATES CODE (U.S.C.) § 7409(a)(2)(B)(i).

²⁴ 30 TAC § 101.21.

²⁵ 42 U.S.C. § 7409(a); 40 CODE OF FEDERAL REGULATIONS (C.F.R.) § 50; ED Ex. 13, p. 10.

²⁶ 30 TAC § 80.17(a).

²⁷ THSC § 382.0518(b)(2).

²⁸ App. Ex. 52, p. 8.

Demonstrating Aggregate’s proposed rock crushing facility complies with this pertinent provision of the TCAA requires a showing that projected emissions for pollutants will meet the NAAQS.²⁹ To do so, an applicant must utilize an air dispersion model to calculate projected concentrations of a pollutant in the atmosphere that will exist as a direct result from operating the proposed facility. The applicant then adds this projection to the background concentration of the same pollutant already existing in the county where the project is to be located.

The Primary NAAQS standards define levels of air quality that the EPA Administrator has determined are requisite to protect the public health.³⁰ The primary NAAQS are set to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly.³¹ The Secondary NAAQS standards define levels of air quality that the EPA Administrator has determined are requisite to protect the public welfare from any known or anticipated adverse effects. The secondary NAAQS are designed to protect the public welfare against non-health-related effects such as decreased visibility; effects to animals, crops, and vegetation; and damage to and deterioration of property.³²

No party contends that Aggregate would emit any NAAQS contaminant in significant quantities other than PM₁₀ and PM_{2.5}. The NAAQS for PM₁₀ and PM_{2.5} are listed below:

Pollutant	Averaging Time	Primary and Secondary Standard (per cubic meter [$\mu\text{g}/\text{m}^3$])
PM ₁₀	Annual (Arithmetic Mean)	50 $\mu\text{g}/\text{m}^3$
	24-hour	150 $\mu\text{g}/\text{m}^3$
PM _{2.5}	Annual (Arithmetic Mean)	15 $\mu\text{g}/\text{m}^3$
	24-hour	65 $\mu\text{g}/\text{m}^3$

²⁹ 30 TAC § 101.21; 40 CFR § 50.6(a).

³⁰ 40 C.F.R. § 50.2(b); 42 U.S.C. § 7409(b)(1).

³¹ App. Ex. 52, p. 7; see *Lead Industries Ass’n, Inc. v. EPA*, 647 F.2d 1130, 1153 (D.C. Cir. 1980).

³² App. Ex. 52, p. 7; 42 U.S.C. § 7409(b)(2).

C. Air Dispersion Modeling

1. Modeling Overview

Computerized air dispersion modeling may be required by the Executive Director to determine air quality impacts from a proposed new facility or source modification.³³ On April 3, 2008, the ED requested that Aggregate prepare and submit an air dispersion modeling analysis to show compliance with all applicable state and federal regulations.³⁴

In general, air dispersion modeling is used to predict the distribution of air emission concentrations in close proximity to the proposed facility.³⁵ An air dispersion model is a simplification of the physical laws governing the dispersion and transport of pollutants in the atmosphere.³⁶ There are two types of computerized models acceptable to the EPA and TCEQ: Industrial Source Complex Model, Version 3 (ISC3) and AERMOD. TCEQ allows use of ISC3 model over AERMOD if, among other reasons, the modeled source is a minor source of pollutants, such as a rock crushing facility. Otherwise, AERMOD is the EPA's preferred methodology because it includes dispersion under low wind speed conditions.³⁷

The ISC3 air dispersion model used by Applicant in this case requires information, also known as "inputs," such as meteorological data, surface characteristics (elevated or flat) of the modeling domain, sources for emissions, and receptor locations.³⁸ Emission rates are an additional and integral input variable necessary to accurately model the projected concentrations of pollutants in the atmosphere resulting from the proposed facility. An emission rate is the amount of air emissions that are expected to be released from a particular piece of equipment or other source during the period evaluated (hourly or annual).³⁹ It is determined by multiplying the

³³ 30 TAC § 116.111(J).

³⁴ App. Ex. 19C, p. 00310.

³⁵ App. Ex. 32, p. 4.

³⁶ ED. Ex. 16, p. 10.

³⁷ App. Ex. 32, p. 6; App. Ex. 39, p. 4.

³⁸ *Id.*

³⁹ App. Ex. 8, p. 28.

throughput of materials (tons per hour) by the projected emission factor (pounds of PM₁₀ per ton of throughput) for a piece of equipment.⁴⁰ Once the emission rate is calculated, it is plugged into the ISC3 model along with all other inputs, and the model calculates a total projected concentration in the atmosphere of each specific pollutant at each identified receptor.⁴¹ The Applicant's modeling encompassed receptors extending out to a range of 1500 meters in all directions from the Aggregate property line, known as a "receptor grid."⁴²

2. AP-42, Compilation of Air Pollutant Emission Factors

According to the EPA website,⁴³ the AP-42, Compilation of Air Pollutant Emission Factors (AP-42), is the primary compilation of EPA's emission factor information, containing emission factors and process information for more than 200 air pollution industry sectors.⁴⁴ The emission factors attempt to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of the pollutant, based on averages of all available data. For example, by measuring operations at equivalent specific facilities, such as a rock crushing facility, a default value for emission factors for various rock quarry and rock crushing components can be applied to air dispersion modeling for proposed facilities.⁴⁵

Here, the Applicant applied the emission factors to its modeling as calculated in the AP-42 publication, *Background Information for Revised AP-42 Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing*, found in the May 12, 2003 Air Control Techniques, P.C. memorandum to the EPA.⁴⁶ Use of the AP-42 emissions factors is recommended by TCEQ.⁴⁷

⁴⁰ TR. at 208-209.

⁴¹ *Id.*

⁴² App. Ex. 32, p. 5.

⁴³ Environmental Protection Agency. Emission Factors & AP 42, Compilation of Air Pollutant Emission Factors, 3 September 2010. <<http://www.epa.gov/ttnchie1/ap42/>>. The ALJ hereby takes official notice of this fact. Any objection should be filed as an exception to the Proposal for Decision.

⁴⁴ The Fifth Edition of AP-42 was published in January 1995, with periodic supplements and updates.

⁴⁵ Prot. Ex. 1, p. 11.

⁴⁶ Prot. Ex. 1, p. 9; Prot. Ex. 3.

⁴⁷ App. Ex. 8, p. 29.

3. Screening Background Concentrations

An important part of model is the background concentration for the 24-hour PM_{10} standard in Comal County. This component of the assessment looks at all of the off-property emission sources already existing in the area, including nearby existing emission sources (other limestone processing facilities, for instance) and screening background concentrations.⁴⁸ For the nearby off-site source, Applicant used the TCEQ's Point Source Database, a report of existing off-property sources of emissions, as well as other sources such as the permit by rule emissions, new source review, and prevention of significant deterioration permits.⁴⁹

As for screening background concentrations, for counties that do not have an air monitor, like Comal County, TCEQ sets screening background concentration, which are based on the nearby monitor data located in Selma, Bexar County, Texas (Selma monitor).⁵⁰ The Selma monitor is eight miles from the project site and maintained by the San Antonio Metro Health District for TCEQ.

4. Aggregate's Air Modeling Results

Based on its application of AP-42 emission rates, Aggregate's air dispersion model calculated that the projected ground level maximum concentration for PM_{10} from the proposed rock crushing facility would be $64 \mu\text{g}/\text{m}^3$. Aggregate then selected $75 \mu\text{g}/\text{m}^3$ as a background concentration for the 24-hour PM_{10} standard in Comal County, predicated on its calculation of off-property emission sources and the TCEQ Point Source Database. Added together, Aggregate's $139 \mu\text{g}/\text{m}^3$ of projected PM_{10} concentration appears on its face to be compliant with the 24-hour average PM_{10} NAAQS of $150 \mu\text{g}/\text{m}^3$.⁵¹

⁴⁸ App. Ex. 32, p. 14.

⁴⁹ Reports are required by 30 TEX. ADMIN. CODE § 101.

⁵⁰ App. Ex. 32, p. 16.

⁵¹ 40 CFR § 50.6(a).

The NAAQS analysis as submitted is as follows:

NAAQS Analysis					
Air Pollutant	Averaging Time	Predicted GLC_{max}	Screening Background Concentration	Total Predicted Concentration	NAAQS
PM ₁₀	24-hr	64 $\mu\text{g}/\text{m}^3$	75 $\mu\text{g}/\text{m}^3$	139 $\mu\text{g}/\text{m}^3$	150 $\mu\text{g}/\text{m}^3$
	Annual	22 $\mu\text{g}/\text{m}^3$	25 $\mu\text{g}/\text{m}^3$	47 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$

VI. CONTESTED ISSUES

Applicant contends its modeling is accurate and shows no adverse effects to the environment, public health, or to the use and enjoyment of property around the proposed site. The Opposing Parties disagree, however, contending that Applicant's modeling does not correctly take into account actual emission factors or background concentrations, and that accurate modeling would show there is a potential for harm to the environment, the health of the public, and the use and enjoyment of property around the site.

Specifically, the Opposing Parties assert that neither the staff of the TCEQ nor Aggregate correctly analyzed the emissions from the proposed facility. They point out, for example, that neither Applicant nor TCEQ made any determination whether the AP-42 emission rates for the proposed emission sources were accurate for this rock crusher. In order to develop an air model that accurately depicts emissions impacting human health, Applicant should have investigated nearby, similarly situated rock crushing facilities for actual representative emission rates, according to the Opposing Parties.

The Opposing Parties also takes issue with Applicant's failure to correctly evaluate the PM₁₀ background concentration for Comal County in its modeling. The Opposing Parties contend that Aggregate likely grossly underestimated the background concentration based on outdated information that does not reflect the population growth in Comal County.

Further, the Opposing Parties argue that a nuisance condition is created by combining projected emissions from operation of the facility with the projected emissions from trucks and quarrying operations associated with the project, which would greatly exceed the NAAQS standard. More specifically, Applicant's expert Michael Hunt, who audited Applicant's ISC3 model with the AERMOD model, tested the short-term impact with roads included in the modeling which indicated a 24-hour PM₁₀ impact of 630 µg/m³, which far exceeds the NAAQS standard for PM₁₀ of 150 µg/m³.

The ALJ addresses each of the referred issues in detail below. Because Applicant's representation that its application complies with the TCAA and other applicable state or federal requirements is premised on its air dispersion model, these two issues are intertwined in testimony and exhibits and will be considered first. Next, a closely-related issue of whether the draft permit conditions fully comply with applicable air quality regulations, including Best Available Control Technology (BACT), enforceability, and consideration of emission sources and emission rates will be discussed. Then, the ALJ discusses the remaining issues.

VII. AIR DISPERSION MODELING AND RELATED ISSUES

- A. Whether the Air Dispersion Modeling of Proposed Particulate Matter Emissions Was Accurate and Appropriate Including Whether the Classification of Surrounding Land Uses, Consideration of Cumulative Effects, the NAAQS for Pm_{2.5}, and Use of Emission Factors Were Accurate?**
- B. Whether the Proposed Facility will have Adverse Effects on Air Quality or Cause Violations of the Texas Clean Air Act, or other Applicable State or Federal Requirements?**

Various parts of the air modeling were challenged by the Opposing Parties: the use of allegedly inappropriate AP-42 emission factors such as the type of facility and type of rock; the use of background concentration data that they contend was outdated; and the erroneous characterization of the terrain and surrounding land uses.

1. AP-42 Emission Factors

The Opposing Parties contend that all emission factors used in Aggregate's modeling were from a misleadingly non-representative source, AP-42, which is a compilation of anticipated emissions from each particular piece of equipment.⁵² Instead, the Opposing Parties argue that Applicant should have used actual data from comparable operations in the area for projecting PM₁₀ concentrations. The AP-42 emission factors are only to be used as a "last resort," according to the AP-42 introduction section which states that actual data from similar existing sources or measurements supplied from equipment vendors is the preferable method for estimating emission factors.⁵³ Mr. Bost explained that measured PM₁₀ concentrations from the emission inventory reports would have been more representative of actual operations and actual emissions specific to the type of limestone found in Texas in this region.⁵⁴ Opposing Parties ascertained that there are at least nine limestone crushing facilities within a 25-mile radius of Aggregate's proposed rock crusher. For example, the AP-42 extrapolated data from granite rock crushers rather than limestone and from a non-representative region.⁵⁵

Applicant responds that use of the AP-42 emissions factors is commonly accepted for this type of application and is recommended for use by the TCEQ.⁵⁶ Even Mr. Buller, who audited Applicant's model, confirmed that "AP-42 has been used 100% of the time" when he has reviewed applications for rock crushing permits.⁵⁷ Applicant points further to the use of AP-42 as the principal means by which the EPA documents its emission factors, including several thousand emission factors for many different industries and kinds of equipment based on EPA testing of specific industries.⁵⁸ Mr. Bost was cognizant that AP-42 factors are TCEQ-approved and even admitted that he has used AP-42, as appropriate.⁵⁹ Further, Applicant points out that

⁵² Prot. Ex. 13.

⁵³ Prot. Ex. 14, p. 3.

⁵⁴ Prot. Ex. 1, p.21.

⁵⁵ Tr. at 604.

⁵⁶ App. Ex. 8, p. 29.

⁵⁷ Tr. at 631.

⁵⁸ App. Ex. G.

⁵⁹ Tr. at 527-528.

the U.S. EPA's official policy statement on rock type, *i.e.* granite or limestone, states that research indicates that rock type is not a major variable when comparing fugitive dust emissions from crushed stone operations.⁶⁰

The ED maintained that the use of the AP-42 emission factors to determine emission rates for this type of facility is a common engineering practice. The ED also argued that the use of AP-42 emission factors is the accepted method for TCEQ engineers when evaluating a permit application of this type.⁶¹

Based on the evidence presented of the widespread use of AP-42 factors in air dispersion modeling, the ALJ is convinced that Applicant justifiably applied the AP-42 emission factors as a reliable and customary methodology for calculating rock crushing emissions. To compel Applicant to deviate from standard accepted air modeling practices and apply other untested methodologies to replace or supplement AP-42 emission factors would impose, without TCEQ guidance, more stringent and less reliable requirements. Because Applicant used all applicable guidance and current TCEQ practices, including the AP-42 guidance, in calculating emission rates, the ALJ is persuaded that Applicant used a valid calculation of standardized and acceptable emission factors from the proposed facility in its air modeling program.

2. Background Concentration and Cumulative Effects

The Opposing Parties also take exception to Applicant's selection of 75 $\mu\text{g}/\text{m}^3$ as its screening background concentration value for the 24-hour standard in Comal County. All parties acknowledge that this value was obtained from the September 4, 1998 memo from Dom Ruggeri (Ruggeri memo), who was the leader of the Air Dispersion Modeling Team for the Commission's predecessor at the time, the Texas Natural Resource Conservation Commission (TNRCC), with attached tables of screening background concentrations listed by county.⁶² The Ruggeri memo also states that screening background concentrations were determined based on

⁶⁰ Tr. at 617.

⁶¹ Tr. at 631 and 656.

⁶² ED Ex. 32, p. 16.

statewide review of, in part, “population, as a surrogate for non-point source emissions.”⁶³ Further, Mr. Knollhoff explained that the background concentrations were determined based upon a statewide review of monitored values during 1992 to 1997 for PM₁₀.⁶⁴ The Opposing Parties challenge this value as outdated and unrepresentative of current conditions in Comal County.

The Opposing Parties point out that Mr. Menendez’s testimony that the screening background concentration is established using a formula that encompasses two variables—Comal County population and Comal County Maximum Allowable Emission Rates. Because both variables have substantially increased since 1998, the background concentrations should have correspondingly increased; yet, the values have not been revised for Comal County since 1998. Protestant emphasizes that census data proves that population has greatly increased in Comal County since 1992. Based on the population change, Mr. Bost extrapolated that the screening background concentration predicted in Comal County should be 90 µg/m³. When this background concentrations is combined with the AP-42 emission factor analysis of 64 µg/m³ for a combined total of 154 µg/m³, the NAAQS 24-hour standard of 150 µg/m³ would be exceeded.

As to the background concentrations, Applicant counters that Mr. Knollhoff looked at the nearest air quality monitor for PM₁₀, which is the Selma monitor in Bexar County, approximately eight miles away from the project site.⁶⁵ At the time the Applicant submitted its application, the most recent data for the Selma monitor was for 2006.⁶⁶ The 2006 data from the Selma monitor produced a number lower than the conservative TCEQ guidance number of 75 µg/m³ for 24-hour PM₁₀.⁶⁷ Thus, even though the actual data from the monitor nearest to Comal County indicated a lower screening background concentration, the Applicant used the higher, more conservative value provided in the TCEQ guidance.⁶⁸ However, Mr. Knollhoff explained that the number

⁶³ *Id.*

⁶⁴ Tr. at 245.

⁶⁵ App. Ex. 32, p. 16.

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ Tr. at 297.

values at the Selma monitoring station fluctuate because it is a rural area influenced by field tilling.⁶⁹ The $75 \mu\text{g}/\text{m}^3$ screening value was identified, audited and approved by the TCEQ Air Dispersion Modeling Team in its August 15, 2008, audit document entitled, “Modeling Audit – Aggregate Industries West Central Region, Inc.” and therefore, Applicant argues that this background concentration value is appropriate.⁷⁰

Applicant also discounts the Opposing Parties’ theory that that PM emissions increase as human population increases. Applicant relies on an EPA document entitled *National Trends in Particulate Matter Levels* that show that nationally average PM concentrations have decreased over the years.⁷¹ Further, as to Mr. Bost’s testimony that the background level for Comal County is $90 \mu\text{g}/\text{m}^3$, Applicant emphasizes that Mr. Bost stated that it was not a definitive calculation, just a number used for illustrative purposes.⁷² Applicant also notes that Dr. Fraiser testified that if the air quality in a geographic area meets or is cleaner than the national standard, it is called an attainment area. Comal County is still an attainment area for particulate matter.⁷³

Lastly, Mr. Knollhoff included a cumulative effects analysis in his modeling, consisting of off-site emission sources and background concentrations, as well as the on-site emission sources.⁷⁴ Mr. Knollhoff used the TCEQ’s Source Database to identify nearby off-site sources: Holcim’s permit by rule (PBR) for its cement terminal, Dean Word’s rock crushing plant PBR, Dean Word’s asphalt plant, Wright’s surface coating PBR, Chemical Lime’s plant, and Martin Marietta’s rock crushing plant PBR. Where emission rates were not available, he used the maximum permitted plant throughput to conservatively estimate the concentrations. His conclusion was that the cumulative effects analysis was conservative and exceeded what was required by TCEQ.

⁶⁹ Tr. at 631 and 656.

⁷⁰ ED Ex., p. 18.

⁷¹ App. Ex. 66 and 67; Tr. at 580-582.

⁷² Tr. at 568.

⁷³ App. Ex. 52, p. 8.

⁷⁴ ED Ex. 21, p.1.

The ALJ concludes that the background concentration values used by Applicant are sanctioned by the September 4, 1998 Ruggeri memo, which lists the background concentration in Comal County as $75 \mu\text{g}/\text{m}^3$. Although the Ruggeri memo was written 12 years ago, it is still the standard guidance for estimating background concentration values for counties without an air monitor, as confirmed by the TCEQ Air Dispersion Modeling Team's approval of Aggregate's modeling. How Comal County's population growth has impacted the background concentration level was the source of speculation but not conclusively demonstrated. As a result, Applicant appropriately selected $75 \mu\text{g}/\text{m}^3$ as the Comal County screening background concentration value, based on the most current TCEQ guidance document.

3. Road Emissions

Applicant's witness, Mr. Hunt, modeled projected PM_{10} emissions from the proposed rock crushing operation for a 24-hour average, including projected emissions from paved and unpaved roads. Mr. Hunt testified that the results from his modeling indicated that emissions from the rock crushing operation would result in as much as $630 \mu\text{g}/\text{m}^3$ of PM_{10} in the atmosphere on a 24-hour average.⁷⁵ As noted, however, Mr. Hunt included the projected contribution of PM_{10} emissions from the proposed facility plus on-site road sources, which are not included in the definition of facility. The Opposing Parties argue that these levels represent a significant exposure level and far exceed the NAAQS standard, creating a potential nuisance.⁷⁶

Applicant responds that it followed TCEQ guidance in conducting its modeling. In particular, the TCEQ's *Air Quality Modeling Guidelines* state that "in general, do not include road emissions in permit modeling analyses for short-term averaging periods—periods less than annual."⁷⁷ Applicant explains that the reason behind this guidance, as stated in TCEQ documentation supporting the guidance, is that there are "no reliable calculation methods for shorter periods (24-hour, 3-hour, and 1-hour)." According to Applicant, if on-site roads are

⁷⁵ The nuisance potential is explored in another section of the PFD.

⁷⁶ App. Ex. 39.

⁷⁷ ED Ex. 15, pp.58-59.

included in calculating short-term emissions, then the modeling calculations become unreliable, overstating emissions significantly; particularly given the public's limited access to roads.

The ALJ agrees with Applicant that it was proper for Applicant's short-term modeling to not include road emissions because the TCEQ's guidelines are clear that roads should not ordinarily be included in modeling. These guidelines are further supported by a February 2000 memo from John Steib, TCEQ's Director of Air Permits Division at the time, regarding the ED's policy for road emissions evaluations. In that memo, Mr. Steib indicated that, in conducting air permit analysis road dust emissions should be calculated and impacts evaluated for long-term periods (annual) only because there is no reliable calculation methods for shorter time periods. Moreover, in many cases, the Commission has cited Mr. Steib's guidance and found that modeling of road dust should be specifically excluded for short-term average periods.⁷⁸

4. Surrounding Land Uses

Another area of contention in the air dispersion modeling is whether the land surrounding the facility should be classified as urban or rural. Land use and terrain selections for the ISC3 model are important because they affect the way in which dispersal of air particulate matter occurs within the modeling.

The Opposing Parties argue that rural is not an appropriate assumption based on the population and commercial growth of New Braunsfels. Mr. Bost drove through the area and examined photographs in his determination that this location is urban in nature and flat rather than elevated.

⁷⁸ See, e.g., *An Order Granting the Application of Oak Grove Management Company, LLC for Air Quality Permit No 76474*; *PSD Permit No. PSD-TX-1056 (Oak Grove)*; TCEQ Docket No. 2006-0195-AIR, SOAH Docket No. 582-06-1502 (Finding of Fact No. 29) (Jun. 20, 2007); *An Order Granting the Application of Sandy Creek Energy Associates, L.P., for Air Quality Flexible Permit No. 70861, PSD Permit No. PSD-TX-1039 (Sandy Creek)*, TCEQ Docket No. 2005-0781-AIR, SOAH Docket No. 582-05-5612 (Finding of Fact No. 30) (May 25, 2006); and *Order Regarding the Applications by NRG Texas Power LLC for State Air Quality Permit 79188, Prevention Of Significant Deterioration Air Quality Permit PSD TX 1072, and Hazardous Air Pollutant Major Source Permit No. HAP-14 (NRG)*, TCEQ Docket Nos. 2007-1820-AIR and 2008-1210-AIR, SOAH Docket Nos. 582-08-0861 and 582-08-4013 (Finding of Fact Nos. 54-56) (Dec. 11, 2009).

Applicant responds that the selection of rural by Mr. Knollhoff was appropriate. In running the model, Mr. Knollhoff selected rural based on his review of a topographic map for elevation data (digital elevation model), digitized aerial photography (2006), and visits to the proposed site and surrounding locations.⁷⁹ Further, Mr. Hunt completed an audit of Mr. Knollhoff's modeling report and concurred that the surrounding land uses were properly characterized as rural.⁸⁰ Mr. Hunt found that the facility met the TCEQ definition of rural, which is over 50% of the use within 3000 meters of the facility be classified as rural, by examining aerial photography, a site visit, and the AERSURFACE component of AERMOD which calculates certain parameters.⁸¹

Applicant points out that the characterization as rural resulted in a more conservative estimate of emissions. As Mr. Knollhoff testified at the hearing, if he had chosen "urban", the predicted concentrations produced by the model would actually have been lower, so the characterization as "rural" led to higher predicted concentrations and was more conservative.⁸²

In Staff's audit of Applicant's modeling, Mr. Menendez did his own analysis of the terrain and land use selected.⁸³ He concluded that the land use of "rural" was appropriate.⁸⁴ The TCEQ Air Dispersion Modeling Team also confirmed that the Applicant's land use selections were "consistent with the topographic map and aerial photography."⁸⁵ Further the TCEQ initial site review conducted by Layne Perelli, a TCEQ Region 13 investigator, concluded that the surrounding land use is "Rural; farm land."⁸⁶

Based on the evidence presented, the ALJ is persuaded that Applicant's characterization of the terrain as rural is accurate as confirmed by Commission Staff's site visit, photography, and

⁷⁹ App. Ex. 32, p. 7.

⁸⁰ App. Ex. 39, p. 5.

⁸¹ *Id.*

⁸² Tr. at 260.

⁸³ Tr. at 715.

⁸⁴ Tr. at 716.

⁸⁵ App. Ex. D, Section 3.0; App Ex. E, Section 3.0.

⁸⁶ App. Ex. G, p. 24; App. Ex. 32, p. 7.

investigation. The unrefuted testimony also showed that the characterization as rural was a more conservative approach to modeling, leading to higher predicted concentrations. As to the flatness or elevation of the terrain, the designation of elevated was approved by independent audits and site visits by TCEQ. Thus, the designation of rural elevated terrain appears proper for modeling purposes.

5. NAAQS for PM_{2.5}

Another issue included in this analysis is whether consideration of the NAAQS for PM_{2.5} was accurate in Applicant's model. PM_{2.5} is comprised of fine particles that are 2.5 micrometers in diameter and smaller. Particles in this size range are believed to pose the greatest health risk because, as a result of their small size, they can lodge deeply into the lungs.⁸⁷ In Aggregate's application, modeling of PM_{2.5} was not required. In particular, on the date the ED requested an air dispersion modeling analysis, April 3, 2008, TCEQ's surrogate policy was in force to demonstrate PM_{2.5} protectiveness.⁸⁸ Under the PM_{2.5} surrogate policy, if the modeling evaluation predicted compliance with the PM₁₀ NAAQS, compliance with the PM_{2.5} is presumed.⁸⁹

Mr. Bost testified that the EPA has publicly and in writing stated that it is inappropriate to use PM₁₀ as a surrogate for meeting PM_{2.5} regulatory requirements as Texas has done in the past.⁹⁰ Therefore, separate PM_{2.5} modeling should have been included.

Applicant responds that at the time it submitted its application, air permit applicants were not expected or required to conduct PM_{2.5} air dispersion modeling under TCEQ's surrogate policy.⁹¹ Mr. Buller provided the background on the controversy. On May 16, 2008, the EPA published rules that became effective July 15, 2008, stating that Texas, among other states, had up to three years to submit revised implementation plans for new source review programs for

⁸⁷ App. Ex. 52, p. 5.

⁸⁸ ED Ex. 1, p. 29.

⁸⁹ ED Ex.13, p. 10.

⁹⁰ Prot. Ex.1, p. 29.

⁹¹ ED Ex. I; App. Ex. G.

PM_{2.5}.⁹² Mr. Kovar testified that TCEQ has not yet established procedures for modeling secondary, indirectly formed PM_{2.5} and has not set significant impact levels.⁹³

Nonetheless, using other guidance, Applicant performed other modeling to demonstrate that its rock crusher could be operated to meet the PM_{2.5} emissions standards.⁹⁴ Mr. Hunt testified that he executed air dispersion modeling runs to predict the maximum 24-hour and annual impacts of PM_{2.5}.⁹⁵ Compliance with the PM_{2.5} NAAQS is based on 3-year averages.⁹⁶ For attainment of the 24-hour PM_{2.5} standard, the 3-year average of the 98th percentile 24-hour values must not exceed 35 µg/m³.⁹⁷ The annual PM_{2.5} standard is set such that the average of three years of annual concentrations must not exceed 15 µg/m³.⁹⁸ Mr. Hunt's modeling results for PM_{2.5} are summarized in the following table:

Averaging Period	Modeling Results	Background Concentration	Total Concentration	Standard
24-Hour	9.13	22.1	31.2	35
Annual	1.91	9.59	11.5	15

Mr. Hunt's modeling analysis predicted a maximum annual off-property PM_{2.5} impact of 1.91 µg/m³. The background PM_{2.5} concentration was determined to be 9.59 µg/m³. Therefore, the cumulative annual impact is 11.5 µg/m³, which is less than the annual standard of 15 µg/m³.⁹⁹ The maximum predicted 24-hour PM_{2.5} impact is 9.13 µg/m³. The 24-hour background concentration was determined to be 22.1 µg/m³. Therefore, the cumulative 24-hour impact is predicted to be 31.2 µg/m³. This is less than the 24-hour standard of 35 µg/m³.¹⁰⁰ Mr. Hunt's

⁹² ED Ex.1, p. 29.

⁹³ ED. Ex.13, p. 10.

⁹⁴ App. Ex. 39, p. 14.

⁹⁵ App. Ex. 39, p. 9.

⁹⁶ App. Ex. 39, p. 14.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.*

results confirmed that the predicted concentrations of PM_{2.5} are well below the 24-hour and annual NAAQS for PM_{2.5}.¹⁰¹

The ALJ is persuaded that modeling for PM_{2.5} was not required in this case because the EPA has allowed Texas and other states a three-year period to devise implementation plans for new source review programs for PM_{2.5}. The testimony established that TCEQ has not yet promulgated procedures for modeling secondary, indirectly formed PM_{2.5} and has not set significant impact levels. Nonetheless, modeling was performed using existing measures to show that Applicant's rock crusher could be operated to meet the PM_{2.5} standards. Therefore, Applicant has established that the modeling correctly considered PM_{2.5} NAAQS.

6. Conclusion

The ALJ concludes that the Applicant has demonstrated by a preponderance of the evidence that Applicant's air dispersion modeling of proposed particulate matter emissions was accurate and appropriate. Specifically, Applicant properly applied approved AP-42 emission factors, applicable background concentrations, and proper surrounding land use categories. Applicant also accurately considered road emissions and PM_{2.5} concentrations in its calculations. Accordingly, the ALJ finds that the potential air emissions from the proposed facility will not adversely affect air quality, and the draft permit complies with the Texas Clean Air Act and other applicable state and federal requirements.

C. **Whether the Draft Permit Conditions Fully Comply with Applicable Air Quality Regulations, Including BACT, Enforceability, and Consideration of Emission Sources and Emission Rates?**

The Opposing Parties did not present any evidence or closing argument that Applicant will not use BACT to fully comply with applicable air quality regulations at the facility. Similarly, the Opposing Parties did not dispute that applicable air quality regulations would be enforceable or that Applicant did not accurately identify potential emission sources at the

¹⁰¹ *Id.*

facility. Because the issue concerning the applicability of AP-42 emission sources and factors has been previously discussed, the remaining issues will be examined in this section.

1. Best Available Control Technology (BACT)

As defined, BACT refers to the best technology available, within technical practicability and economic reasonableness, to reduce or eliminate emissions from the facility.¹⁰² In relevant part, the TCEQ's *Technical Guidance for Rock Crushing Plants* states that to meet BACT expected performance levels, there must be a minimum 70% reduction of fugitive dust emissions from the crushing, conveying, and stockpiling of aggregate material and from all vibrating screens; and that the implementation of best management practices (BMP) to reduce fugitive dust emission from road and traffic areas are required.

The Draft Permit Special Conditions specifically require BACT controls and best management practices as follows:¹⁰³

- (1) Special Condition 4 requires no visible fugitive emissions may leave the property that exceed a cumulative 30 seconds in duration in any 6 minute period;
- (2) Special Condition 5 places an opacity limit of 7% on any screen or transfer point and 12% on any crusher, which means that a maximum of 7% or 12% of background may be obscured by dust;
- (3) Special Condition 6B requires permanently mounted water sprays at the inlet and outlet of all crushers, all shaker screens, and all material transfer points;
- (4) Special Conditions 6C, 6D and 6F require no visible emissions from wash screens, conveyor transfers after saturated processes and submerged processes;
- (5) Special Condition 6E requires partial enclosures on some screens and crushers;
- (6) Special Condition 6G requires roads to be paved, washed and watered;
- (7) Special Condition 6H requires that unpaved roads and all other traffic areas and active work areas be watered;

¹⁰² 30 TAC § 116.10(3).

¹⁰³ App. Ex. B; App. Ex.; App. Ex. 8, p. 25.

- (8) Special Condition 6J requires that stockpiles be watered; and
- (9) Special Conditions 6L requires the wheel wash for trucks leaving Applicant's property.

Mr. Nicholls testified that these practices achieve greater than 70% control with some achieving virtually 100% control.¹⁰⁴ His conclusions are summarized as follows:

BMP	CONTROL REQUIRED	CONTROL ROPOSED
Water Sprays	70%	70%
Partial Enclosures	70%	85%
Wheel Wash combined with Washing of Paved Roads On-site	Implement BMPs	90%
Washing of Paved Roads On-site	Implement BMPs	70%
Wash Screens or Saturated and Submerged Equipment and Materials	70%	99%

Mr. Buller testified that he developed the draft permit conditions. His goal was to ensure that the permit would comply with all applicable air quality regulations, including BACT and enforceability, and that the emission rates of facilities were properly developed according to applicable TCEQ guidance. He evaluated the BACT using a TCEQ-approved three-tiered process for BACT Analysis.¹⁰⁵

Specifically, Mr. Buller conducted a Tier I BACT analysis for this application.¹⁰⁶ All emissions from applicable facilities as defined by 30 TAC §116.10(6) were established for this draft permit using the established BACT limits for rock crushing facilities of this type.¹⁰⁷ Mr. Buller's review indicated that BACT for Aggregate's facility is a 70% reduction in uncontrolled emissions.¹⁰⁸ Mr. Buller also testified that, in addition to BACT, the draft permit

¹⁰⁴ App. Ex. 8, p. 23.

¹⁰⁵ ED Ex. 1, pp. 11-12 (000011-000014).

¹⁰⁶ ED Ex. 1, pp. 15-17 (000015-000017).

¹⁰⁷ ED Ex. 1, p. 17 (000017).

¹⁰⁸ ED Ex. 1, pp.16-18 (000016-000018).

requires the applicant to implement BMP. As indicated above, BMP requires that all in-plant roads designated as being paved in the application shall be paved with a cohesive hard surface which can be cleaned. All unpaved roads, work areas, and stockpiles shall be sprayed with water and/or an environmentally sensitive chemical upon detection of visible particulate emissions.¹⁰⁹

Based on the evidence and testimony, the ALJ is convinced that Applicant intends to properly apply BACT to fully comply with applicable air quality regulations at the facility.

2. Enforceability

Although this issue was not contested by the Opposing Parties; the evidence supports the conclusion that the permit would be enforceable. In particular, TCEQ is expressly authorized to initiate an action to enforce provisions of the Texas Health and Safety Code within the TCEQ's jurisdiction, including the responsibilities assigned to the TCEQ by Texas Health and Safety Code, Chapter 382 (the Texas Clean Air Act).¹¹⁰ TCEQ is also authorized to institute legal proceedings to compel compliance with the Texas Health and Safety Code and rules, orders, permits, or other decisions of the TCEQ.¹¹¹ TCEQ may also issue an administrative order, including an administrative order that assesses penalties or orders corrective measures, to ensure compliance with the Texas Health and Safety Code.¹¹² Non-compliance with the permit, therefore, may result in enforcement action by TCEQ, which could involve a number of consequences including fines, designation as a "poor performer" in compliance history (which affects renewal time periods and use of streamlined permitting procedures), and the requirement to perform ambient air sampling at the facility.¹¹³ Moreover, the TCEQ Air Permits Division and the TCEQ Region 13 Office performed a thorough technical review of the draft permit limits

¹⁰⁹ *Id.*

¹¹⁰ TEX. WATER CODE §§ 5.013(a)(11) and 7.002.

¹¹¹ TEX. WATER CODE § 7.002.

¹¹² *Id.*

¹¹³ App. Ex. 8, p. 26.

and concluded that they are enforceable and demonstrate compliance with state and federal air quality standards.¹¹⁴

The ALJ, therefore, concludes that applicable air quality statutes and regulations would be enforced by TCEQ against Applicant should a violation occur.

3. Emission Sources and Rates

The representation of emission sources that were evaluated to determine compliance with the NAAQS are contained in the permit application and are reflected in the Maximum Allowable Emissions Rate Table (MAERT).¹¹⁵ The MAERT would authorize the emission of PM and PM₁₀ from 32 specific emission points: multiple crushers, screens, a wash plant, assorted material handling conveyors, stockpiles, two fuel tanks and truck and rail loading facilities.¹¹⁶ The permit would also authorize fugitive emissions of the same contaminants from other sources: loading and unloading areas, points where material would be handled; two diesel tanks, and stockpiles A-Q totaling 30.0 acres in area.¹¹⁷

Mr. Buller testified that the sources and rate were accounted for in Applicant's emissions calculations and air dispersion modeling report.¹¹⁸ The emissions tabulated in the MAERT utilize the latest emission factors published in the guidelines developed by the Emission Factor and Inventory Group (EFIG) with EPA's Office of Air Quality Planning and Standards.¹¹⁹ Certain emissions, although potential sources, are not included in the analysis for the facility because they are outside TCEQ's authority to regulate through the permitting process. In particular, a mine, quarry, or road is not a facility and therefore not subject to a permit.¹²⁰ Based

¹¹⁴ App. Ex. 8, p. 27.

¹¹⁵ App. Ex. G, p.10.

¹¹⁶ ED Ex. 12, pp. 173-175; App. Ex. 8, pg. 27.

¹¹⁷ ED Ex. 12, pp. 173-175.

¹¹⁸ ED Ex. 1.

¹¹⁹ App. Ex 8, p 27.

¹²⁰ *Id.*

on Mr. Buller's analysis, he concluded that the draft permit accurately considered all emission sources.¹²¹

Based on the evidence, and as delineated in a previous discussion, the ALJ is convinced that the permit accurately reflects emission sources and rates.

D. Whether the Stockpile Heights Specified in the Permit are Sufficiently Protective?

Applicants have requested additional surge pile height above the 45-foot level, to enable it to operate at night without blasting.¹²² Mr. Refer, Aggregate Vice-President, described that during daylight hours, the proposed facility would drill, shoot, and haul product to the primary crusher. At night, according to Mr. Refer, deliveries to the paving and ready-mix industry or road construction projects would occur without the necessity of blasting.¹²³ Although neither Opposing Party presented evidence or discussed this issue at length in closing arguments; generally, the Opposing Parties argue that the surge piles are higher than the 45-foot height limitation TCEQ traditionally permits. If the permit is granted, however, the Opposing Parties request that Special Condition No. 6 be revised to prohibit blasting during night hours.

Applicant has proposed two material stockpiles to exceed 45 feet in height, designated as Surge Piles E and G, and proposed to reach possible maximum heights of 90 and 60 feet, respectively. Surge piles are comprised of processed material while stockpiles are composed of either raw pre-processed material or finished material awaiting shipment.¹²⁴ As proposed, Surge Pile E would contain course material ranging from one-to eight inches with the finer material removed, while Surge Pile G would have washed aggregates with fine particles removed by the washing process.¹²⁵ Historically, TCEQ has used a 45-foot height limitation on stockpiles as a standard condition for rock crushers absent a site-specific demonstration, such as modeling that showed that the proposed stockpiles are protective. Without this demonstration, rock crushers

¹²¹ ED Ex. 1.

¹²² Tr. at 76-77.

¹²³ *Id.*

¹²⁴ App. Ex. L, p. 1.

¹²⁵ App. Ex. L, p. 1.

have the option to meet other standard conditions such as TCEQ's Air Quality Standard Permit for rock crushers which is a more streamlined authorization.¹²⁶

Applicant argues that the stockpile heights are protective of human health and the environment. Mr. Mathews explained that the highest piles would be surge piles, which will have minimal active areas due to the movement of material by a tunnel conveyor underneath the pile rather than through front-end loaders.¹²⁷ Mr. Mathews testified that the emissions from the stockpiles were calculated to represent a worst-case scenario in which they were assumed to be active at all times.¹²⁸ Applicant points out that stockpile emissions will be controlled by the application of BACT, as set forth in Special Conditions 6B (permanently mounted spray bars), 6J (watering of stockpiles), and 6K (height and setback restrictions) of the draft permit.¹²⁹ Mr. Knollhoff testified that in modeling the stockpiles, he relied on TCEQ Guidance Document, Air Quality Modeling Guidelines, Number RG-25 and Trinity Consultants' guidance for Modeling Fugitive Dust Sources with AERMOD.¹³⁰

The ED points out that TCEQ Staff utilizes guidance documents in its permitting of rock crushing facilities, such as Aggregate's application, to control otherwise significant sources of uncontrolled dust emissions.¹³¹ Aggregate has proposed to control fugitive dust emissions escaping through its material stockpiles by increasing the height of the stockpiles and watering the material with a water truck.¹³² Mr. Buller testified that Aggregate was asked to submit a protectiveness review of the stockpile height.¹³³ An audit of air dispersion modeling submitted by the Applicant was performed by TCEQ's Air Dispersion Modeling team, who found the proposed heights protective of the NAAQS.¹³⁴ The audit, performed by Mr. Menendez and

¹²⁶ App. Ex. O, p. 00355.

¹²⁷ App. Ex. 59, p. 20.

¹²⁸ App. Ex. 59, p. 23.

¹²⁹ App. Ex. B, pp. 2-3; App. Ex 59, p. 24.

¹³⁰ App. Ex 32, pp. 11-12.

¹³¹ ED Ex.5, p. 2 (000082).

¹³² ED Ex.11, p 5. (000167).

¹³³ ED Ex.1, pp. 24-25 (000024-000025).

¹³⁴ *Id.*

Mr. Kovar, concluded that the increased height of the stock piles would not lead to an exceedance of the PM₁₀ NAAQS, and therefore the increased heights would be acceptable limits in the draft permit.¹³⁵

Mr. Buller further testified that a meeting occurred between TCEQ staff, Regional staff members, and the Applicant's representatives where they all concluded that the amended stockpile heights and fence line distance restrictions were sufficiently protective of NAAQS.¹³⁶ Specifically, the permit conditions provide that Stockpile E shall not exceed 90 feet in height and shall be no closer than 700 feet from the nearest property line, while Stockpile G shall not exceed 60 feet in height and shall be no closer than 500 feet from the nearest property line.¹³⁷ The draft permit also contains several other conditions limiting the escape of fugitive emissions from Aggregate's proposed facility. Specifically, Special Condition 4 prohibits any visible fugitive emissions from stockpiles from leaving the site,¹³⁸ while Special Conditions 6B and J require the Applicant to use water (area-type sprays) or an environmentally sensitive chemical as a method of control at all stockpiles, including at stock piles E and G.¹³⁹ The ED points out that all representations made in the permit application, as well as the terms and conditions of the permit are enforceable representations.¹⁴⁰ The ED also points out that, because the modeling demonstrates compliance with the secondary NAAQS, no nuisance conditions are expected at the proposed facility, if it is operated in compliance with the terms of the proposed draft permit.¹⁴¹

In a written document dated September 17, 2008, Mr. Buller, however, expressed hesitancy to increase the heights due to intense public interest and the lack of experience with the company. A tiered approach was suggested where stockpile heights would be limited to the standard 45 feet height for the first 18 months of operation, then staggered upward if there are no

¹³⁵ ED Ex., p. 31 (000031); ED Ex.16, p. 19 (000351); ED Ex. 13, p.000186; ED Exh.19, p.000357.

¹³⁶ ED Ex.1, p. 25 (000026).

¹³⁷ *Id.*

¹³⁸ ED Ex.12, p. 000169.

¹³⁹ ED Ex.12, p. 000170.

¹⁴⁰ 30 TAC § 116.116(a)(1).

¹⁴¹ App. Ex., pp. 10-11.

complaints and no notice of violations (NOVs) with regard to the operation.¹⁴² To address the concerns, Aggregate represented that the stockpiles were necessary to operate two shifts at the plant to reduce noise and truck traffic, agreed to excavate the proposed base elevation for the taller Surge Pile E, and represented that surrounding vegetation would be continuously maintained to serve as a buffer between plant operations and property lines.

The ALJ concludes that TCEQ does not have jurisdiction to consider blasting or mining in determining whether to approve a permit application for facilities that will emit air contaminants.¹⁴³ Blasting operations are associated with quarry operations, which are specifically excluded from the definition of “facility” for purposes of air quality permitting.¹⁴⁴ Therefore, TCEQ does not have jurisdiction to enforce limitations on quarry operations within an air quality permit, and it is inappropriate to include such limitations within an air quality permit.¹⁴⁵

Based on the evidence presented, the ALJ is persuaded that the stockpile heights specified in the permit are sufficiently protective. The Applicant, however, has made representations to the Opposing Parties that the surge pile heights are necessary because it plans to limit blasting and loud noises at night by processing accumulated material from the surge piles and that surrounding vegetation would be continuously maintained to serve as a buffer between plant operations and property lines. Aggregate should make every effort to adhere to these representations.

E. Whether the Draft Permit Conditions Contain Adequate Monitoring, Reporting, and Recordkeeping Requirements to Ensure Permit Compliance Including Whether a Continuous Onsite Operator Should Be Required?

Applicant maintains that the draft permit contains adequate monitoring provisions to ensure permit compliance. The Opposing parties did not present contrary evidence.

¹⁴² App. Ex. N, p. 00357.

¹⁴³ App. G, p. 21.

¹⁴⁴ THSC § 382.003(6).

¹⁴⁵ *Id.*

Applicant points to several general and special conditions in the permit that assure adequate monitoring, reporting, and recording keeping to insure compliance. Specifically, Special Condition 8 provides that monitoring will be conducted at the request of the TCEQ Regional Director and that such monitoring may include sampling air upwind and downwind of the site and measuring the amount of dust at each monitoring location.¹⁴⁶ General Condition 7 provides required recordkeeping in addition to any already required in the permit's special conditions including compliance with 40 CFR Part 60, Subparts A and OOO. Special Condition 9 requires Applicant to maintain on-site for a 24-month period the following: daily, monthly, and annual amounts of materials processed, summarized in tons per hour, tons per month, and tons per year; hours of operation; daily road cleaning, daily applications of road dust control, or daily road maintenance for dust control; and records of all repairs and maintenance of abatement systems.¹⁴⁷ General Condition 3 requires that Applicant report to the TCEQ Regional Office the start of construction, construction interruptions exceeding 45 days, and completion of construction. Further, Mr. Nicholls testified that the draft permit conditions contain adequate reporting provisions by requiring certain notifications by the Applicant through construction and commencement of operations as well as reporting of any upsets and maintenance issues.¹⁴⁸

Applicant argues that there is no need for a continuous on-site operator because of the periodic nature of the business. Mr. Refer explained that it will have a plant manager on-site at all times at a facility that is in operation but that at times the facility will be shut-down and locked.¹⁴⁹ Given the nature of the rock crushing industry, in which market conditions often dictate operations, Mr. Refer explained that having an operator on-site 24 hours a day is not feasible or practical because the facility may be shut down for days at a time.¹⁵⁰ Therefore, Applicant maintains that a continuous onsite operator is not needed for this type of facility.

¹⁴⁶ App. Ex. 8, p. 35.

¹⁴⁷ App. Ex. 8, p. 35; ED Ex. 12, General Conditions 7 and 9.

¹⁴⁸ App. Ex. 8, p. 36; ED Ex. General Conditions 4 and 9.

¹⁴⁹ App. Ex. 1, p. 15.

¹⁵⁰ *Id.*

Based on the evidence presented, the ALJ is persuaded that the draft permit conditions contain adequate monitoring, reporting, and recordkeeping requirements to ensure permit compliance. Because the facility will not be operation at all times, however, a continuous onsite operator was not established as necessary. Applicant, however, pledged that a plant manager will be onsite at all times the facility is operated and Applicant should fulfill this obligation.

F. Whether the Applicant has an Acceptable Compliance History in Texas?

Applicant asserts that it has an acceptable compliance history in Texas. The Opposing Parties did not present contrary evidence or argument, although an issue was raised concerning Applicant's affiliation with Holcim.

The ED explained that a compliance history consists of multimedia compliance-related information which includes, for example, final enforcement orders or consent decrees of this state or the federal government which are evidence of an Applicant's ability to act in accordance with, "applicable legal requirements under the jurisdiction of the Commission or the [U.S.] EPA."¹⁵¹ Therefore, the compliance history the Commission considers in deciding whether to issue the permit for any air quality authorization includes information related to operations and activities of applicants within Texas, or any compliance-related information regarding legal requirements under the jurisdiction of the U.S. EPA. New operators or facilities are classified as "average performers by default."¹⁵² Specifically, the Commission is required to consider the compliance history of any applicant when making decisions related to ". . . the issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit."¹⁵³

Mr. Buller reviewed the compliance history of the Applicant on December 7, 2009, including the five-year compliance period prior to the date the permit application was received.¹⁵⁴ Mr. Buller testified that the site rating and classification for the Applicant was 3.01,

¹⁵¹ 30 TAC § 60.1 (c)(1); ED Ex.1, p. 36 (000036).

¹⁵² 30 TAC § 60.2(b).

¹⁵³ 30 TAC § 60.1(a)(1)(A)

¹⁵⁴ ED Ex.11, p.00163.

or Average by Default.¹⁵⁵ Applicant's witness Mr. Gary Nicholls testified that Aggregate Industries was a new operator in Texas, and was issued a default rating of "Average."¹⁵⁶ Aggregate's status as a new operator was also reflected in the TCEQ Core Date Form completed by Aggregate and submitted to the TCEQ.¹⁵⁷ Moreover, Mr. Buller concluded that the Applicant's compliance history would not have a "detrimental impact on the proposed authorization."¹⁵⁸

Applicant asserts that its compliance history rating is legally acceptable for obtaining an air quality permit registration.¹⁵⁹ Mr. Refer testified that Applicant does not have current operations in Texas but has had quarry operations in Colorado for the past five years. Mr. Refer noted that the Applicant has not had any NOVs over the last five years in Colorado.¹⁶⁰

The evidence supports, and the ALJ finds, that Applicant has an acceptable compliance history in Texas. Although the Opposing Parties raised the inference that Holcim was the parent company and might have had a violation, no testimony or evidence was offered that contradicted Applicant's status as average by default. Further, for purposes of a compliance history, TCEQ is required to evaluate the person's site-specific compliance history and classification.¹⁶¹ Thus, Holcim's status as the parent company is not a contested issue in a permitting hearing.¹⁶²

VIII. ADVERSE HEALTH AND ENVIRONMENTAL IMPACTS

The Commission has asked a number of questions regarding whether the proposed facility's emission will adversely impact the health or environment of those living around the site. Specifically, the Commission has asked about the emissions impact on health, welfare or

¹⁵⁵ ED Ex.1, p. 38 (000038); ED Ex.10, p.00162; ED Ex. 11, p.00163.

¹⁵⁶ App. Ex. 8, p. 15.

¹⁵⁷ App. Ex 19, p. 00064.

¹⁵⁸ ED Ex.1, p. 38 (000038).

¹⁵⁹ ED Ex.10.

¹⁶⁰ App. Ex. 1, pp. 16-17.

¹⁶¹ 30 TAC § 60.3(a).

¹⁶² 30 TAC § 60.3(g).

physical property, including a health effects review; the impact to livestock, wildlife, endangered species, and agricultural activities; the existence of nuisance conditions; the effect on children and nearby schools; road safety and traffic condition impact; and the control of fugitive dust emissions. The Opposing Parties generally allege that operation of the facility has the potential to adversely affect the health and environment of those living around the site. They present three main arguments: (1) emissions from limestone will exceed the 1-hour effective screening level (ESL); (2) emissions from the facility will endanger the golden-cheek warblers, an endangered species; and (3) emissions from the facility in combination with those from the roads will contribute to nuisance conditions.

A. Overview

1. Effects Screening Levels

Effects Screening Levels (ESLs) are used and published by the TCEQ Toxicology Division to evaluate the potential for effects to occur as a result of exposure to constituents or contaminants in the air, expressed in terms of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).¹⁶³ ESLs are based on data concerning health effects, odor/nuisance potential, and effects on vegetation. A concentration below an ESL is generally considered protective of a significant risk of adverse human health or welfare effects. Short-term ESLs indicate a one-hour averaging period, while long-term ESLs indicate an annual averaging period. An ESL review is not usually required for a TCEQ application for a rock crusher permit because particulate matter from rock crushers is not likely to cause adverse health effects.¹⁶⁴ Generally, limestone is considered non- to low-toxic nuisance dust and does not require a health effects review.¹⁶⁵ Nonetheless, an ESL review as part of a health effects evaluation was conducted by Dr. Lucy Fraiser in this case in order to predict the impact of emissions outside the plant property.

¹⁶³ App. Ex. 58, p. 1.

¹⁶⁴ App. Ex. 52, p. 3.

¹⁶⁵ App. Ex. 52, p. 9.

Of the contaminants for which there are ESLs, only two will be emitted by Applicant in significant quantities: limestone and silica.¹⁶⁶ All parties agree that limestone, which has a diameter less than or equal to four microns, will be emitted during the crushing. As applicable, the short-term ESL for limestone is $50 \mu\text{g}/\text{m}^3$, while the long-term limestone ESL is $5 \mu\text{g}/\text{m}^3$. Modeling of limestone assumes that 100% of the material mined and handled at the rock crushing unit is composed of limestone.¹⁶⁷

Silica amounts can be predicted by assuming the limestone mined at the site contains up to 3% silica.¹⁶⁸ Annual maximum emissions of silica are determined by multiplying the annual PM_{10} emissions by 3% to convert the emissions to silica and then by 50% to account for only PM_4 sized particles.¹⁶⁹ As applicable, the short-term ESL for silica is $14 \mu\text{g}/\text{m}^3$, while the long-term silica ESL is $0.27 \mu\text{g}/\text{m}^3$.

2. Health Effects Screening

Dr. Fraiser performed a health effects screening by evaluating the predicted 24-hour (short-term) and annual (long-term) air concentrations from PM_{10} , $\text{PM}_{2.5}$, limestone, and crystalline silica from the air dispersion modeling generated using the AERMOD dispersion model.¹⁷⁰

As far as $\text{PM}_{2.5}$, Dr. Fraiser found that the predicted $\text{PM}_{2.5}$ concentrations, both short- and long-term, from the proposed facility would not exceed the primary or secondary NAAQS and therefore would not impact the health, welfare, or physical property of the public, including "sensitive" populations such as asthmatics, children, and the elderly. Specifically, Dr. Fraiser found the total maximum short-term $\text{PM}_{2.5}$ concentration based on an average of the three highest years of meteorological data is $32.4 \mu\text{g}/\text{m}^3$, which is below the 24-hour NAAQS of 35

¹⁶⁶ App. Ex. 52, p. 4.

¹⁶⁷ App. Ex. 39, p. 17.

¹⁶⁸ App. Ex. 39, p. 16.

¹⁶⁹ *Id.*

¹⁷⁰ App. Ex. 52, p. 12.

$\mu\text{g}/\text{m}^3$.¹⁷¹ Dr. Fraiser also established that the total maximum long-term $\text{PM}_{2.5}$ concentration based on the same average is $11.5 \mu\text{g}/\text{m}^3$, below the annual NAAQS of $15 \mu\text{g}/\text{m}^3$.¹⁷² She also noted that livestock, wildlife, or vegetation, including agricultural activities would not be impacted since the predicted $\text{PM}_{2.5}$ concentrations fell below the secondary $\text{PM}_{2.5}$ standards.¹⁷³

Similarly, Dr. Fraiser found that the predicted PM_{10} concentrations, both short- and long-term, from the proposed facility would not exceed the primary or secondary NAAQS and therefore would not impact the health, welfare, or physical property of the public or livestock, wildlife, or vegetation, including agricultural activities. In particular, she found that the total maximum 24-hour PM_{10} concentration for all sources based on an average of the three highest years of meteorological data is $46.2 \mu\text{g}/\text{m}^3$, while the total maximum annual PM_{10} concentrations for all sources based on an average of the three highest years of meteorological data is $20 \mu\text{g}/\text{m}^3$. Based on the 24-hour background concentration, the maximum total predicted 24-hour PM_{10} standard concentration would be below the $150 \mu\text{g}/\text{m}^3$ NAAQS standard. Also based on the annual background concentration of $25 \mu\text{g}/\text{m}^3$, the maximum total predicted annual PM_{10} concentration of $48.9 \mu\text{g}/\text{m}^3$ would be below the $50 \mu\text{g}/\text{m}^3$ NAAQS standard.

As for silica, Dr. Fraiser found that the predicted 1-hour concentration of silica for modeling year 1991 is $8.88 \mu\text{g}/\text{m}^3$, while the maximum annual concentration in 1991 is $0.0942 \mu\text{g}/\text{m}^3$.¹⁷⁴ These numbers are below the short-term ESL of $14 \mu\text{g}/\text{m}^3$ and the long-term ESL of $0.27 \mu\text{g}/\text{m}^3$.

Limestone, however, presents more of a problem. Dr. Fraiser found that the maximum predicted short-term concentration for the 1991 modeling year is $267 \mu\text{g}/\text{m}^3$, while the maximum annual concentration for the 1991 modeling year is $6.28 \mu\text{g}/\text{m}^3$.¹⁷⁵ As applicable, the short-term ESL for limestone is $50 \mu\text{g}/\text{m}^3$, while the long-term limestone ESL is $5 \mu\text{g}/\text{m}^3$. Dr. Fraiser noted

¹⁷¹ App. Ex. 52, p. 13.

¹⁷² *Id.*

¹⁷³ App. Ex. 52, p. 15.

¹⁷⁴ App. Ex. 52, p. 19.

¹⁷⁵ App. Ex. 52, p. 20.

that the 1-hour limestone concentration exceeds the short-term ESL by approximately a factor of 6, while the maximum annual limestone concentration only slightly exceeds the long-term limestone ESL.¹⁷⁶ Further, the maximum predicted off-site non-industrial hourly and annual limestone concentrations based on the 1988 modeling year date is $107 \mu\text{g}/\text{m}^3$ and $1.32 \mu\text{g}/\text{m}^3$, respectively. Thus, the maximum predicted off-site hourly concentration that occurs on non-industrial property exceeds the 1-hour ESL of $50 \mu\text{g}/\text{m}^3$ by slightly more than a factor of 2, but the annual predicted off-site non-industrial concentration is less than the long-term limestone ESL of $5 \mu\text{g}/\text{m}^3$.¹⁷⁷

TCEQ staff has published an air permit reviewer reference guide entitled “Modeling and Effects Review Applicability: How to Determine the Scope of Modeling and Effects Review for Air Permits” (MERA).¹⁷⁸ Dr. Fraiser noted that according to MERA, if an ESL is exceeded by two-fold or more, it can do so if the maximum off-site ground-level concentrations occur on industrial property.

Dr. Fraiser testified that the maximum predicted off-site concentration of $\text{PM}_{2.5}$, PM_{10} , silica, and limestone, both short- and long-term, occurred at the Union Pacific rail line that traverses the site between the proposed primary and secondary plants, within Aggregate’s property line and inaccessible to the public.¹⁷⁹

3. Modeling Effects Review Applicability

According to MERA, if an ESL is exceeded by two-fold then further analysis must occur with case-specific factors that have a bearing on exposure. The following factors must be evaluated: the potential for public exposure, the frequency of high concentrations, and the likelihood that concentrations have been overestimated and would not occur.¹⁸⁰

¹⁷⁶ *Id.*

¹⁷⁷ App. Ex. 52, p. 21.

¹⁷⁸ App. Ex. 45. Modeling and Effects Review Applicability: How to Determine the Scope of Modeling and Effects Review for Air Permits” (MERA) (2009).

¹⁷⁹ App. Ex. 52, pp. 13-14.

¹⁸⁰ App. Ex. 45, p. 02214.

B. Whether the Proposed Facility's Emissions Will Adversely Impact the Requestors' Health, Welfare, or Physical Property Including Whether the Health Effects Review for the Permit was Properly Conducted?

1. Applicant's Argument and Evidence

Applicant argues that the evidence establishes that the proposed facility will be operated in a manner to ensure that the air emissions from the proposed facility will not adversely impact the Protestants' health, welfare, or physical property. Applicant points out that Dave Knollhoff, Michael Hunt and Lucy Fraiser all testified that the predicted emissions from the Applicant's facility are below the primary and secondary NAAQS for both PM₁₀ and PM_{2.5}.¹⁸¹ In addition, TCEQ independently reviewed the Applicant's modeling and concluded that "the modeling analysis was determined to be acceptable."¹⁸² Because the NAAQS are set at a level designed to protect human health, welfare, and property (with an adequate margin for safety), the Applicant's demonstrated compliance with the NAAQS proves that emissions from the facility will not adversely affect health, welfare, or property, including non-health-related effects such as decreased visibility; effects to animals, crops, and vegetation; and damage to and deterioration of property.¹⁸³

Applicant also referenced Dr. Fraiser's health effects review finding which predicted emissions above the ESLs for limestone, necessitating a MERA case-specific review of the potential impact.¹⁸⁴ Applicant argued that several case-specific factors warrant against concluding that there will be any adverse impacts due to limestone.¹⁸⁵ Applicant pointed out that the ESL for limestone is not based on any specific health effects associated with limestone.¹⁸⁶ This is a key reason a health effects review is not generally required for a rock crushing facility.¹⁸⁷ Dr. Fraiser testified that confidence in the toxicity database for limestone is very

¹⁸¹ App. Ex. 32, p. 18; App. Ex. 39, pp. 12, 14-15; App. Ex. 52, pp. 17-18.

¹⁸² App. Ex. G, p. 6; App. Ex. D; App. Ex. E; App. Ex. 32, p.5.

¹⁸³ App. Ex. G, p. 5; App. Ex. 52, pp. 15 and 18.

¹⁸⁴ App. Ex. 52, p. 21.

¹⁸⁵ App. Ex. 52, pp. 23-24.

¹⁸⁶ *Id.*

¹⁸⁷ App. Ex. G, p. 5.

low.¹⁸⁸ The American Conference of Governmental Industrial Hygienists (ACGIH) withdrew the threshold limit value for limestone in 2007, and TCEQ is contemplating either changing the limestone ESLs or evaluating limestone emissions against PM₁₀ standards.¹⁸⁹

Second, Applicant argues that the maximum predicted off-site ground-level air concentrations are likely substantially overstated due to the conservative operating schedule assumed in the air dispersion modeling.¹⁹⁰ For instance, Dr. Fraiser noted that the modeling assumed that the plant would operate non-stop for all 8,760 hours per year. With vacation, holidays, maintenance, or other reasons, the more likely schedule would be 6,000 hours per year. Thus the predicted off-site concentrations are overstated by 31%.¹⁹¹ Further, maximum predicted off-site hourly limestone would exceed 2-times the ESL for only 55 hours/year, or less than 1% of the time.

Next, Applicant points out that Dr. Fraiser considered the potential for public exposure and considered it almost nonexistent.¹⁹² She testified that the modeling performed by Mr. Knollhoff and Mr. Hunt showed that all of the maximum impacts stay within the property boundaries in part because fugitive emissions are not expected to travel very far because the release height is not high.¹⁹³ Thus, after considering all of the relevant factors, Dr. Fraiser concluded that, in her professional opinion, the predicted limestone concentrations from the proposed facility would not adversely impact the health, welfare, or physical property of any of the Protestants in this case.¹⁹⁴

As to silica, Applicant notes that Dr. Fraiser testified that the emissions from the proposed rock crusher would be below the 24-hour and annual effects screening levels for

¹⁸⁸ App. Ex. 52, p. 24.

¹⁸⁹ *Id.*

¹⁹⁰ App. Ex. 52, p. 23.

¹⁹¹ *Id.*

¹⁹² App. Ex. 45, p. 02214.

¹⁹³ Tr. at 430.

¹⁹⁴ App. Ex. 52, p. 24.

silica.¹⁹⁵ Because predicted off-site concentrations are less than the ESLs, they would not be expected to adversely impact the health, welfare, or physical property of any of the Protestants.¹⁹⁶

As to the close proximity of the Fey property located just 430 feet from the predicted off-site location which exceeds the 1-hour ESL by a two-fold factor, Mr. Refer testified that “[a]nd in particular for the Feys’ residence, we will extend an earthen berm around the edge of the corner there to dampen the noise also.”¹⁹⁷ In later testimony, Mr. Refer described the planned earthen berm as “approximately a 150,000 cubic yard berm.”¹⁹⁸

Lastly, Applicant points out that the Opposing Parties did not offer evidence from any medical source such as a toxicologist, medical doctor or allergist to controvert Dr. Frasier’s analysis and conclusion.

2. The Opposing Parties’ Evidence and Argument

The Opposing Parties argue that the emissions would adversely impact health because the facility’s limestone concentrations exceed allowable amounts on property adjacent to Protestant Fey’s household.

Because the maximum predicted off-site hourly limestone concentration is $107 \mu\text{g}/\text{m}^3$,¹⁹⁹ more than twice the ESL, the MERA case-specific factors for determining whether the exceedances are allowable is triggered. The Opposing Parties argue that Applicant has not met the burden of proof to show that conditions warrant the risk of exposure. Specifically, “[t]o be considered allowable, concentrations more than 2-fold greater than the ESL must meet the following conditions: (a) the potential for public exposure is almost nonexistent; (b) air dispersion modeling predicts a low frequency of concentrations that exceed the ESL; and (3) the

¹⁹⁵ App. Ex. 52, p. 20.

¹⁹⁶ *Id.*

¹⁹⁷ Tr. at 79.

¹⁹⁸ Tr. at 91.

¹⁹⁹ Tr. at 682.

predicted concentrations are overestimated and not likely to occur.”²⁰⁰ The Opposing Parties point out that Dr. Frasier could not say that public exposure is almost nonexistent at the receptor point, described as the railroad right-of-way that traverses the site between the proposed primary and secondary plants.

ESLs are established based on a constituent’s potential to cause adverse human health effects, odor nuisances, vegetation effects, or materials damage. Therefore, the Opposing Parties argue that Applicant failed to demonstrate that a ground level concentration value that is twice the ESL is acceptable.

3. ED’s Argument and Evidence

The ED pointed out that the modeling demonstration for the draft permit application showed that no exceedance of the NAAQS for the applicable criteria pollutant, particulate matter, is expected from this facility.²⁰¹ The likelihood that adverse health effects caused by emissions from Aggregate Industry’s proposed facility could occur in members of the general public, including sensitive subgroups such as children, the elderly, or people with existing respiratory conditions, was determined by comparing the facility’s predicted air dispersion computer modeling concentrations to the relevant federal standards and effects screening levels.²⁰² The modeling predictions were reviewed by the TCEQ ADMT, and the modeling analysis was determined to be acceptable.²⁰³ Therefore, no adverse impacts to the requestors’ health or physical property are expected, if the facility is operated in compliance with the terms of the draft permit.

²⁰⁰ App. Ex. 52, p. 22.

²⁰¹ ED Ex.16, p.19 (000351).

²⁰² ED Ex.1, pp. 33-34. (000033-34).

²⁰³ ED Ex. 13, (000186); ED Ex. 16, p. 19 (000351); ED Ex.18 (000355-356); and ED Ex. 19 (000357-358); Tr. at 689– 690.

4. ALJ'S Analysis

The ALJ concludes that the testimony supports a finding that the health effects review was properly conducted and that the proposed facility will not adversely impact the requestors' health, welfare, or physical property. The evidence shows that the predicted emissions from the Applicant's facility are below the primary and secondary NAAQS for both PM₁₀ and PM_{2.5}. As to silica, the emissions from the proposed rock crusher would be below the 24-hour and annual effects screening levels for silica. As predicted off-site concentrations are less than the ESLs, it would not be expected to adversely impact the health, welfare, or physical property of any of the Protestants.²⁰⁴

Because the maximum predicted off-site limestone concentration is 107 µg/m³,²⁰⁵ more than twice the ESL standard, the MERA case-specific factors for determining whether the exceedances are allowable is triggered. The evidence showed that the location is the Union Pacific rail line, which is restricted to the public, meaning that the public exposure is almost non-existent. With the infrequency of the event and the overstated conservative modeling with a predicted reduced operating schedule, the ALJ concludes that there is no showing that adverse health effects will occur.

Nonetheless, Applicant has made representations in the hearing that it intends to build an earthen berm to protect the Fey's property from noise.²⁰⁶ Although TCEQ does not have specific jurisdiction to consider noise from a facility when establishing permit conditions, Applicant, should fulfill its commitment to construct an earthen berm adjacent to the land currently owned by Tim and Sharlene Fey.

²⁰⁴ App. Ex. 52, p. 20.

²⁰⁵ Tr. at 682.

²⁰⁶ Tr. at 79 and 91.

C. Whether Emissions from the Proposed Facility Will Adversely Affect Livestock; Wildlife, Including Endangered Species; or Vegetation, Including the Agricultural Activities of the Requestors?

1. Applicant's Evidence and Argument

The Applicant contends that the proposed facility will not adversely affect livestock, wildlife, or vegetation, including endangered species or agricultural activities. Applicant highlights that the air dispersion modeling showed that it did not exceed the secondary NAAQS standard, designed to protect against effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate.²⁰⁷ In addition, Dr. Fraiser's health effects review of the site concluded that off-site concentrations of limestone and silica would not be expected to adversely impact human health.²⁰⁸ Because human-health based ESLs are also protective of wildlife and livestock, no adverse impacts to wildlife and livestock are expected.²⁰⁹

Mr. Mathews testified that an evaluation of the presence/absence of endangered species on the site was conducted using protocol consistent with requirements of the U.S. Fish & Wildlife Service.²¹⁰ The survey indicated that the site contained some habitat for the golden-cheeked warbler, a bird listed as endangered under ESA.²¹¹ To ensure protection of this habitat, Mr. Matthews testified that a buffer zone around the habitat has been established, and no mining activity will take place in the vicinity.²¹² Mr. Mathews also noted that on January 19, 2008, a Finding of No Significant Impact Supplemental Environmental Assessment was prepared by the Federal Emergency Management Agency which concluded that another project on the Aggregate Industries' site will not result in any significant impacts to existing biological resources, vegetation, fish and wildlife, or state and federally listed, threatened, and endangered species and critical habitats.²¹³

²⁰⁷ 42 U.S.C. § 7409(b)(2); App. Ex. 52, p. 7-8.

²⁰⁸ App. Ex. 52, pp. 20 and 24.

²⁰⁹ App. Ex. 52, p. 6.

²¹⁰ Tr. at 435-436.

²¹¹ Tr. at 436.

²¹² Tr. at 439.

²¹³ App. Ex. 59, p 29.

Mr. Mathews further explained that the source of water to be used at the site is Trinity Aquifer groundwater.²¹⁴ Mr. Mathews explained that based on pump tests of the groundwater well, there should be no appreciable effect on neighboring wells within the Trinity Aquifer, which in the immediate area are used for neighboring quarry operations.²¹⁵ The majority of domestic and livestock wells in the immediate area of the site produce water from the Edwards Aquifer, not the Trinity Aquifer, so they will not be impacted.²¹⁶ Mr. Mathews concluded that the proposed facility will not adversely impact livestock, wildlife, vegetation or agricultural operations.²¹⁷

As to the Opposing Parties' contention that Applicant should have modeled off-site and on-site emissions, rather than just off-site emissions, Applicant responds that analysis of on-site emissions is not required for an air quality permit for a rock crushing facility. Specifically, 30 TAC § 101.1(4) defines "ambient air" as "[t]hat portion of the atmosphere, external to buildings, to which the general public has access." Since the general public does not have access to the property, the relevant analysis is whether there will be exceedances of the primary or secondary NAAQS for particulate matter at off-site receptors.²¹⁸ Further, Applicant argues that the Opposing Parties did not establish any on-site impacts to endangered species although such impacts would be addressed under ESA.

Lastly, Applicant points out that General Condition 10 of the draft permit requires compliance with all state and federal rules and regulations, including compliance with the Endangered Species Act.²¹⁹ Further, Applicant has the responsibility to request and acquire any additional authorizations that may be needed by local or federal law.²²⁰

²¹⁴ App. Ex.59, p 30.

²¹⁵ *Id.*

²¹⁶ *Id.*

²¹⁷ *Id.*

²¹⁸ App. Ex. 8, p. 13.

²¹⁹ App. Ex. B, General Condition 10.

²²⁰ App. Ex. G, p. 23.

2. The Opposing Parties' Argument and Evidence

The Opposing Parties contend that Aggregate admits that there are golden cheeked warblers on the site, and although it conducted modeling exercises for the facility emissions, no modeling results were conducted regarding the concentrations to be experienced by the golden-cheeked warblers in their habitat area. Thus, the analysis for secondary NAAQS should also include projected on-site concentrations.

The Opposing Parties point out that Mr. Matthews is the president of the company hired to evaluate the application but without supporting data, the health of the endangered species cannot be assured. Further, the Opposing Parties point to Mr. Hunt's testimony that including short-term roads in the modeling which could lead to high concentrations of PM₁₀ in close proximity to the golden-cheeked warbler.

3. ED's Argument

The ED contends that because the modeling analysis submitted by Aggregate demonstrates that the facility would not cause a violation of primary or secondary NAAQS standards, it has also demonstrated that there will be no adverse health effects if the facility is operated in accordance with the permit conditions and representations. Further, the ED notes that Staff's review of the air application evaluates the effects of emissions on human health and welfare, and the proposed control technology, given both state and federal NAAQS standards. The Endangered Species Act (ESA) is a federal statute that is implemented by the U. S. Fish and Wildlife Service and the U.S. National Oceanic and Atmospheric Administration's Fisheries Service. The proposed permit contains a general condition that requires compliance with applicable federal rules and regulations.²²¹ This includes the federal ESA, and the issuance of an air quality permit by the TCEQ does not supersede compliance with other applicable laws.²²² Therefore, the ED points out that Aggregate is subject to any applicable requirements of the federal Endangered Species Act.

²²¹ ED Ex. 12, p. 000168, General Condition 10.

²²² *Id.*

4. ALJ's Analysis

The ALJ concludes that the evidence supports a finding that Applicant has properly demonstrated that it has complied with primary and secondary NAAQS. Because the secondary NAAQS standard was designed to protect against effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, the Applicant has established that the emissions from the proposed facility are protective of livestock; wildlife, including endangered species; vegetation; and agricultural activities.

As reiterated by the ED, however, the Applicant is responsible for complying with all state and federal laws, including the Endangered Species Act. If and when, the Applicant violates the Endangered Species Act then appropriate enforcement activity can ensue by the federal authorities under the auspices of the U. S. Fish and Wildlife Service and the U.S. National Oceanic and Atmospheric Administration's Fisheries Service.

D. Whether the Emissions from the Facility Will Contribute to Nuisance Conditions?

For purposes of clarity, the ALJ will first consider the Opposing Parties' Argument and Evidence in this analysis.

1. The Opposing Parties' Position

The Opposing Parties assert that Aggregate's proposed operation will create a nuisance condition. A nuisance is defined as:

No person shall discharge from any source whatsoever one or more air contaminants or combinations thereof, in such concentration and of such duration as are or may tend to be injurious to or to adversely affect human health or welfare, animal life, vegetation, or property, or as to interfere with the normal use and enjoyment of animal life, vegetation, or property.²²³

²²³ 30 TAC § 101.4.

Although the Opposing Parties acknowledge that a facility's emissions do not include those from roads and quarries; nonetheless, roads and quarries are included in the definition of nuisance.²²⁴ As such, the controversy is whether the proposed rock crusher emissions will combine with other source emissions, such as road and quarrying operations, to create a nuisance situation.

The Opposing Parties note that Mr. Nicholls conceded that an operator must be required to control the dust from their activities.²²⁵ Specifically, the Opposing Parties point to the testimony of Mr. Hunt who modeled projected PM₁₀ emissions from the proposed rock crushing operation for a 24-hour average and included projected emissions from paved and unpaved roads. Mr. Hunt testified that the results from his modeling indicated that emissions from the rock crushing operation could result in as much as 630 µg/m³ of PM₁₀ in the atmosphere on a 24-hour average.²²⁶ According to the Opposing Parties, these levels represent a significant and dangerous exposure level that would cause serious health problems, confirmed by Dr. Frasier who testified that a potential nuisance condition could exist when the NAAQS are exceeded.²²⁷

The Opposing Parties concede that Mr. Hunt clarified his estimation as "unrealistic"²²⁸ and "not a good number,"²²⁹ but did not disavow his analysis.²³⁰ Therefore, the Opposing Parties argue that because the dangerously high level of PM₁₀ concentration that Mr. Hunt projected was measured at a receptor off the Aggregate site, the facility will adversely affect the health of the neighboring landowners and qualifies as a nuisance.²³¹

²²⁴ THSC § 382.003 (6) provides that "[a] mine, quarry, well test, or road is not considered to be a facility.

²²⁵ Tr. at 119.

²²⁶ App. Ex. 39, p. 13.

²²⁷ Tr. at 409.

²²⁸ Tr. at 341.

²²⁹ Tr. at 345.

²³⁰ Tr. at 376.

²³¹ Tr. at 326-327.

Further, because Aggregate plans to operate 24 hours a day, seven days a week, 52 weeks a year,²³² the brunt of the impacts from the operations will fall on the nearby Fey household.²³³ In attempt to dampen the impacts, Aggregate has considered constructing an earthen berm, including a fence on top of the berm.²³⁴ However, Mr. Refer testified that the only way to build a berm is to put a portion of the berm on the Fey's property, although he acknowledged that they do not want to surrender a portion of their property.²³⁵ Based on Mr. Refer's testimony, it appears that the only reason an adequate berm cannot be placed entirely on Aggregate's property is because the "railroad track pinches us off right there, and [Aggregate] can only put a partial berm on [its] property."²³⁶ If this is the case, the Opposing Parties argue that Aggregate should be required to maneuver the track to enable a full berm to prevent the nuisance condition that would violate TCEQ rules.

Accordingly, the Opposing Parties requests that a specific condition be added to the permit that binds Aggregate to build the necessary berm to prevent a nuisance condition.

2. Applicant's Position

Applicant asserts that its operation will not create a nuisance condition. The conditions in the draft permit require the Applicant to comply with all state and federal laws, which would include the avoidance of nuisance conditions.²³⁷ Moreover, if an actual nuisance condition were to arise, the TCEQ has enforcement authority to require the Applicant to abate any nuisance.

In addition, Applicant points to the testimony of Mr. Buller who testified that TCEQ had concluded that the location of the facility is not a sensitive location with respect to nuisance.²³⁸ Further, Dr. Fraiser's testified that based on the information she reviewed, including the site visit

²³² Tr. at 78.

²³³ Tr. at 89.

²³⁴ Tr. at 79.

²³⁵ Tr. at. 93-95.

²³⁶ Tr. at 95.

²³⁷ App. Ex. B, p. 1, General Condition 10.

²³⁸ Tr. at 636.

she completed with the Applicant on July 27, 2010, the potential for nuisance from the rock crusher's emissions appears to be very low.²³⁹ In addition, Mr. Mathews testified that based on his experience, when an aggregates facility complies with the BACT requirements and special conditions of their permit they will not cause or contribute to a nuisance condition.²⁴⁰

Applicant further responds that Mr. Hunt testified that he attempted to determine potential short-term impacts with roads included in the modeling, so he ran the AERMOD air dispersion modeling program with road dust emissions included. However, TCEQ guidance related to road emission calculations and modeling provides that road dust emissions should be calculated and impacts evaluated for long-term periods (annual) only. Since there is no reliable calculation methods for shorter time periods (24 hour, 3 hour, 1 hour), emissions from road dust should not be calculated or impacts analysis performed.²⁴¹

Further, Mr. Hunt explained that the result was artificially high because of the meteorological data incorporated in the model.²⁴² The modeling looks at the predicted road emissions for each of 365 days, and then selects the day with the highest predicted emissions.²⁴³ The particular date in this instance with the highest predicted emissions only used 14 hours of data because 6 hours of data were missing and 4 hours of data were during a "calm" period.²⁴⁴ As a result, all of the emissions recorded for the day were divided by 14, rather than 24.²⁴⁵ Based on these factors, Mr. Hunt concluded that unusually high result was not an accurate representation of the predicted actual concentrations for the site.

²³⁹ App. Ex. 52, p. 27.

²⁴⁰ App. Ex. 50, p. 32.

²⁴¹ App. Ex. 8, p. 31; App. Ex. 28, p. 00374; App. Ex. 8, p. 31.

²⁴² Tr. at 326.

²⁴³ Tr. at 338-339.

²⁴⁴ Tr. at 326.

²⁴⁵ Tr. at 338.

3. ED's Argument

The ED points out that Mr. Buller testified that the proposed emissions are not expected to create nuisance conditions if the proposed facility is operated in compliance with the draft permit conditions.²⁴⁶ Accordingly, as long as the facility is operated in compliance with the terms of the draft permit, nuisance conditions, or conditions of air pollution, are not expected.

4. ALJ's Analysis

The ALJ concludes that TCEQ cannot perform a prospective nuisance enforcement case without any evidence that a nuisance has occurred. TCEQ has enforcement authority to punish or abate a nuisance if and when it occurs. The Opposing Parties rely on Mr. Hunt's model that projected emissions for a 24-hour average and included projected emissions from on-site road sources. However, as discussed in the modeling section, TCEQ's guidelines are clear that road emissions in permit modeling analyses for short-term averaging periods should not be included in modeling.²⁴⁷

E. **Whether the Emissions from the Facility Will Adversely Affect the Health of Requestors' Children or Grandchildren when they are Attending Comal Elementary School?**

Applicant asserts that emissions from the facility will adversely affect the health of requestors' children or grandchildren when they are attending Comal Elementary School. The Opposing Parties did not present contrary evidence or argument.

The TCAA requires the Commission to consider possible adverse health effects on individuals attending schools which are located within 3,000 feet of a facility or proposed facility.²⁴⁸ As an initial matter, it should be noted that Comal Elementary School no longer

²⁴⁶ Tr. at 674.

²⁴⁷ ED Exhibit 15, p. 58-59.

²⁴⁸ THSC § 382.052.

operates at the location and the Comal Independent School District formally withdrew as a party on August 10, 2010.²⁴⁹

The modeling performed for this draft permit evaluated the maximum concentrations at the property line, at the nearest off-property receptor, and at any schools located within 3,000 feet of the facilities.²⁵⁰ The site review indicated that Comal Elementary School was greater than 3,000 feet from the proposed site.²⁵¹ Since the Commission referred this matter to SOAH, Comal Elementary School has moved from its original location to one that is at an even greater distance from the proposed site.²⁵² Because Comal Elementary School is well beyond 3,000 feet from the proposed site and further from the facility than the points of maximum predicted concentrations, emissions from the facility will not adversely affect the health of the requestors' children or grandchildren when they are attending Comal Elementary School.

Further, Mr. Nicholls testified that area schools, including the former Comal Elementary School location, were identified during the permit application process and determined to be well over 3,000 feet from the proposed facility.²⁵³ Dr. Fraiser testified that she conducted a site visit on July 27, 2010 and noted that there was no school within 3,000 feet of the proposed crusher.²⁵⁴ The Applicant also provided the ALJ with aerial maps of the site, the crushing facility, and surrounding land use, which show that no schools are in close proximity to the crusher.²⁵⁵

Because Comal Elementary School and other area schools are well beyond 3,000 feet from the proposed site, the ALJ concludes that emissions from the facility will not adversely affect the health of the requestors' children or grandchildren when they are attending Comal Elementary School.

²⁴⁹ Order No. 4 (Order Granting CISD Motion to Withdraw).

²⁵⁰ App. Ex. G, pp. 23-24.

²⁵¹ *Id.*

²⁵² App. Ex. 59, pp. 30-31.

²⁵³ App. Ex. 8, pp. 38-39.

²⁵⁴ App. Ex 52, p. 25.

²⁵⁵ App. Ex 19, pp.00083-00084.

F. Whether Emissions from the Proposed Facility Will Adversely Affect Road Safety and Traffic Conditions?

Applicant asserts that emissions from the proposed facility will not adversely affect road safety and traffic conditions. The Opposing Parties did not present contrary evidence or argument.

Applicant presented evidence that the nearest public road, FM 482, is more than 2,000 feet away from the rock crushing plant.²⁵⁶ The Applicant contends that its air dispersion modeling successfully demonstrated that impacts to off-site receptors, including those on roadways, are not anticipated to cause adverse impacts.²⁵⁷ Given the distance of the nearest roadway and the requirements of the draft permit, Mr. Nicholls concluded that emissions from the site will not cause adverse impacts to the roadway.²⁵⁸

Applicant also points out that the draft permit also includes protective limits that will ensure visibility on nearby roadways will not be adversely affected: Special Condition 4 requires that no visible fugitive emissions for longer than a cumulative 30 seconds in duration for any 6 minute period may leave the property;²⁵⁹ Special Condition 5 limits the opacity of emissions;²⁶⁰ and Special Condition 6L requires that a wheel wash station be installed and operated to remove mud and road dust from all product trucks leaving the site.²⁶¹ Further, Applicant contends it will use water sprays, water trucks, watering and washing of roads and other best management practices to minimize, if not eliminate, the potential for emissions to impact road safety.²⁶²

²⁵⁶ App. Ex 8, p. 39; App. Ex 59, p. 32.

²⁵⁷ App. Ex 8, p. 39.

²⁵⁸ App. Ex 8, p. 40.

²⁵⁹ App. Ex B, Special Condition 4.

²⁶⁰ App. Ex B, Special Condition 5.

²⁶¹ App. Ex B, Special Condition 6L.

²⁶² App. Ex 8, p. 23.

Further, Mr. Refer testified that the Applicant had studied potential traffic effects, including discussions with the Texas Department of Transportation.²⁶³ Any impacts will be lessened by splitting the direction truck traffic will travel on FM 482, so that all trucks will not be using one route.²⁶⁴ In addition, Mr. Mathews testified that approximately 50% of the material produced at the site will be shipped by rail.²⁶⁵ The remaining production will be shipped via truck to local markets and thus the proposed facility will add additional traffic in the immediate area of the plant entrance/exit.²⁶⁶

The ED points out that it has limited authority to regulate sources of emissions as they affect or relate to road traffic.²⁶⁷ Specifically, TCEQ rule §101.5 prohibits owners or operators of facilities from creating a traffic hazard with their equipment.²⁶⁸ However, the draft permit does contain BMP requirements relating to on-site roads, and the cleaning of trucks before they leave the property. Specifically, the draft permit contains BMPs that require the Applicant to coat all paved roads with a “cohesive hard surface,” for which the Applicant would be required to clean, and a condition for installing and operating a wheel wash for product trucks leaving the site.²⁶⁹ With regard to unpaved surfaces, the Applicant is required in accordance with its BMPs to spray those areas with water or a sensitive chemical “upon detection of visible particulate emissions.”²⁷⁰

The ALJ concludes that the Applicant has demonstrated that if it operates its facility within the terms of the permit, no adverse effects on road safety or traffic conditions are expected to occur.

²⁶³ Tr. at 80.

²⁶⁴ Tr. at 81.

²⁶⁵ App. Ex 59, p. 32.

²⁶⁶ *Id.*

²⁶⁷ App. Ex G, p. 22.

²⁶⁸ 30 TAC §101.5.

²⁶⁹ ED Ex.1, p. 16 (000016); ED Ex.12, Special Conditions 6G, H, and L (000171).

²⁷⁰ ED Ex.1, p. 16 (000016).

G. Whether the Permit Properly Controls for Fugitive Dust Emissions?

Applicant asserts that the permit properly controls for fugitive dust emissions. The Opposing Parties did not present contrary evidence or argument.

Fugitive dust emissions are those emissions that are not or cannot be readily controlled by a stack.²⁷¹ Mr. Nicholls explained that essentially all of the dust emission sources from the proposed facility will be fugitive emissions, including emissions from hoppers, crushers, screens, conveyors and wash equipment as well as other sources such as stockpiles and roads.²⁷² As a result, the same controls that are used to suppress dust and reduce or eliminate particulate matter emissions will also reduce or eliminate fugitive dust emissions.²⁷³ Additionally, the draft permit's visible emissions and opacity limits further ensure fugitive dust emissions will be properly controlled.²⁷⁴

Both Applicant and the ED note that Special Conditions are incorporated into the draft permit to control fugitive dust emissions. Specifically, Special Condition 4 limits visible emissions from the rock crushing facility's crushers, screens, transfer points on belt conveyors, material storage areas, feed bins, loadout bins, surge bins, hoppers, stockpiles, internal roads and work areas.²⁷⁵ This condition also states that no visible fugitive emissions exceeding 30 seconds duration during any 6 minute period may leave Aggregate Industries' property line.²⁷⁶ Special Condition 5 of the draft permit also imposes limits on the opacity of emissions from the proposed facility.²⁷⁷ Special conditions 6G and H also require actions such as paving and watering roads to prevent fugitive emissions.²⁷⁸ Furthermore, Special Condition 6L requires the installation and

²⁷¹ App. Ex 8, p. 21.

²⁷² App. Ex 8, p. 28.

²⁷³ App. Ex. 8, p. 25.

²⁷⁴ App. Ex B, Special Condition 4-5.

²⁷⁵ App. Ex B, Special Condition 4.

²⁷⁶ *Id.*

²⁷⁷ App. Ex B, Special Condition 5.

²⁷⁸ App. Ex B, Special Condition 6G and H.

operation of a wheel wash station to remove mud and/or road dust from the undercarriage of product trucks leaving the facility.²⁷⁹

The ALJ is persuaded that given the protective limitations expressed in the draft permit and the requirement to implement various technologies and best management practices to control fugitive dust emissions, the Applicant has demonstrated that the permit properly controls for fugitive dust emissions. Further, the modeling demonstrates that when the facility is operated in compliance with all terms and conditions of the proposed permit, no NAAQS exceedances are expected.²⁸⁰ Thus, the proposed controls in the draft permit for fugitive emissions are sufficient.

H. Transcript Costs

The Commission's rules provide the transcript cost will not be assessed against the ED or OPIC. And the Commission's rules also provide a list of factors to be considered when determining a proper allocation of transcript costs.²⁸¹

Protestants argue that "the financial ability of the party to pay the costs" is an important consideration in determining that Protestants should pay no costs of the transcript, or at most a very limited amount. In contrast, they argue that the financial ability of Aggregate, a nationwide company, would allow it to fully absorb the transcript costs. Moreover, Protestants contend that they stand to obtain no financial benefit from the contested case hearing, while Aggregate has the potential of generating substantial revenue from the process. Accordingly, Protestants request that Applicant be allotted 100 percent of the cost.

Applicant argues that Protestants used significantly more time than the Applicant or the other parties in cross-examining witnesses and putting on their case. Specifically, the Applicant estimates that Protestants utilized approximately 10.3 hours at the contested case hearing held on October 11-13, 2010, while the Applicant only used around 4.6 hours over the course of the

²⁷⁹ App. Ex B, Special Condition 6L.

²⁸⁰ ED Ex.16, p. 19.

²⁸¹ 30 T.A.C. § 80.23(d).

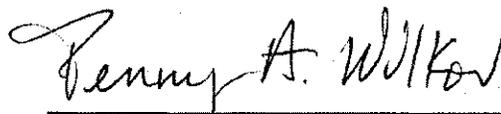
hearing. Applicant requests that 69% of the costs be apportioned to the Protestants and 31% be charged to the Applicant.

In considering the factors and what is just and reasonable, the ALJ recommends that the Commission assess 100% of the transcript costs against Applicant. Applicant participated in the hearing extensively, used the transcript significantly in its briefing, has the financial resources to bear the costs, and has arguably benefitted most from the transcript as evidenced by the fact the ALJ is recommending its application be granted. Accordingly, 100% appears to be a just and reasonable allocation of costs to Applicant.

IX. CONCLUSION

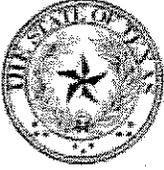
Given the additional safeguard provided by the recommended permit condition and the protection of health suggested by Applicant's modeling and testimony, the preponderance of the evidence suggests Applicant's proposed rock crushing operations will not create a nuisance, will be protective of public health, and should be granted. Therefore, the ALJ recommends the application be granted.

SIGNED January 13, 2011.



PENNY A. WILKOV
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

**TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
AIR QUALITY PERMIT**



A PERMIT IS HEREBY ISSUED TO
Aggregate Industries-WCR, Inc.
AUTHORIZING THE CONSTRUCTION AND OPERATION OF
Rock Crushing Plant
LOCATED AT **New Braunfels, Comal County, Texas**
LATITUDE **29° 39' 55" LONGITUDE** **096° 12' 30"**

1. **Facilities covered by this permit** shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code § 116.116 (30 TAC § 116.116)]
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120(a), (b) and (c)]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify to the Office of Permitting and Registration the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** 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; keep all required records 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; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction; comply with any additional recordkeeping requirements specified in special conditions attached to the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)]
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification for upsets and maintenance in accordance with §§ 101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC § 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. This permit may be appealed pursuant to 30 TAC § 50.139.
12. This permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
13. There may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
14. **Emissions from this facility** must not cause or contribute to a condition of "air pollution" as defined in TCAA § 382.003(3) or violate TCAA § 382.085, as codified in the Texas Health and Safety Code. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.

STATE OF TEXAS
COUNTY OF TRAVIS **MAR 29 2010**

I hereby certify this is a true and correct copy of a
Texas Commission on Environmental Quality (TCEQ)
document, which is filed in the Records of the Commission
Given under my hand and the seal of office.

Rick Thomas, Custodian of Records
Texas Commission on Environmental Quality

For the Commission

PERMIT 83755

Date: _____

SPECIAL CONDITIONS

Permit Number 83755

EMISSION STANDARDS and FUEL SPECIFICATIONS

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in the attached table.
2. All equipment shall comply with all requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Subparts A and OOO on Standards of Performance for New Stationary Sources (NSPS) promulgated for Nonmetallic Mineral Processing Plants except as otherwise represented in the permit application.
3. This permit does not authorize the operation of a stationary internal combustion engine in conjunction with this facility. The holder of this permit shall obtain prior authorization for any engine which remains or will remain at a single point or location for more than 12 consecutive months. Any portable engine which remains or will remain at a single point or location for less than or equal to 12 consecutive months is not considered stationary and no authorization is required.

OPACITY/VISIBLE EMISSION LIMITATIONS

4. No visible fugitive emissions from the crushers, screens, transfer points on belt conveyors, material storage areas, feed bins, loadout bins, surge bins, hoppers, stockpiles, or internal roads and work areas shall leave the property. Visible fugitive emission is defined as emissions that shall not exceed a cumulative 30 seconds in duration in any six-minute period as determined using EPA Test Method (TM) 22. If this condition is violated, additional controls or process changes may be required to limit visible particulate matter (PM) emissions.
5. Opacity of emissions from any transfer point on belt conveyors (except those listed in Special Condition 6D) or any screen (except those listed in Special Condition 6C) shall not exceed seven percent and from any crusher shall not exceed 12 percent, averaged over a six-minute period as determined by EPA TM 9 or equivalent.

SPECIAL CONDITIONS

Permit Number 83755

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OPERATIONAL REPRESENTATIONS

6. As represented by the applicant, the following shall occur:

- A. Throughput at this facility is limited to 2000 tons per hour (tph) and 5,000,000 tons per year (tpy) in any rolling 12-month period with throughput limits for each crusher as listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates."
- B. Permanently mounted spray bars shall be installed at the inlet and outlet of all crushers, at all shaker screens, and at all material transfer points, except for those designated by EPNs listed in Special Conditions Nos. 6C, 6D, 6E, and 6F.

Area-type water sprays shall be installed at the primary plant stockpiles designated as Stockpiles A, B, C, and D and at the surge piles designated as Stockpiles E and G. All other stockpiles and active work areas shall be watered by a water truck or treated with dust-suppressant chemicals as necessary to control dust.

All water spray systems shall be operated as necessary to maintain compliance with TCEQ rules and regulations.

- C. There shall be no visible emissions from the following screens that have been designated to be operating under saturated conditions: Screen 11 (EPN 78), Screen 12 (EPN 76), Screen 13 (EPN 94), Screen 14 (EPN 96), Screen 15 (EPN 84), and Screen 16 (EPN 86).
- D. There shall be no visible emissions from the conveyor transfer points defined as EPNs 75, 77, 79 - 81, 85, 87, 88, 95, 97 - 103, and 112 that have been designated to be operating under saturated conditions.
- E. Partial enclosures shall be utilized on Screens 3, 4, 5 and 6, designated as EPNs 42, 40, 38, and 36 respectively. Each screen partial enclosure shall consist of an enclosed drop into the screen, covered screen deck, metal screen sidewalls and enclosed chutes out of the screen.

Partial enclosures shall also be utilized on VSI Crushers 2 and 3, designated as EPNs 34 and 32, and on Cone Crushers 1 and 2, designated as EPNs 50 and 52. Each crusher partial enclosure shall consist of metal sidewalls extended above the crusher at the inlet, rubber skirting at the outlet of the crusher on the conveyor beneath the crusher, and box cover of the conveyor beneath the crusher.

SPECIAL CONDITIONS

Permit Number 83755

Page 3

All screen and crusher partial enclosure hardware and covers shall be in place at all times when the facilities are operating.

- F. There shall be no emissions from the submerged Classifiers nor Sand Screws.
- G. In-plant roads designated as PRD 1 through PRD 4 shall be paved with a cohesive hard surface which can be cleaned by sweeping or washing. Upon detection of visible particulate emissions, these paved roads will be watered or swept to maintain compliance with all TCEQ rules and regulations.
- H. In-plant roads designated as URD 1 and URD 2 and all other traffic areas and active work areas shall be sprayed with water and/or environmentally sensitive chemicals upon detection of visible particulate emissions to maintain compliance with all TCEQ rules and regulations.
- I. An operational water truck shall be maintained on site at all times.
- J. All stockpiles shall be sprayed with water and/or environmentally sensitive chemicals upon detection of visible particulate emissions to maintain compliance with all TCEQ rules and regulations.
- K. Stockpile heights are site specific and, with the exception of the surge piles designated as Stockpiles E and G, shall not exceed 45 feet in height unless approved by the TCEQ Regional Office and/or any appropriate local air programs with delegation.

The surge pile designated as Stockpile E shall not exceed 90 feet in height and shall be no closer than 700 feet from the nearest property line. The surge pile designated as Stockpile G shall not exceed 60 feet in height and shall be no closer than 500 feet from the nearest property line.

- L. A wheel wash station shall be installed and operated. This station shall direct water sprays onto the undercarriage of product trucks to remove mud and/or road dust and shall be utilized on all product trucks leaving the site.

DETERMINATION OF COMPLIANCE

- 7. Upon initial issuance, the permit holder shall comply with NSPS Subpart A and OOO requirements within the specified time frame. Requests for additional time to perform observations shall be submitted in writing to the TCEQ Regional Office. Requests for

SPECIAL CONDITIONS

Permit Number 83755

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additional time to comply with the applicable requirements of 40 CFR Part 60 require EPA approval and shall be submitted in writing to the TCEQ Compliance Support Division.

8. Upon request of the TCEQ Regional Director having jurisdiction, the holder of this permit shall perform ambient air monitoring, or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere. The tests shall be performed during normal operation of the facilities and shall be performed in accordance with accepted TCEQ practices and procedures.

RECORDKEEPING REQUIREMENTS

9. In addition to the record keeping requirements specified in General Condition No. 7 and 40 CFR Part 60, Subparts A and OOO, the following records shall be kept and maintained on site for a rolling 24-month period:
 - A. Daily, monthly and annual amounts of materials processed, summarized in tons per hour, tons per month and tons per year;
 - B. Hours of operation;
 - C. Daily road cleaning, daily application of road dust control, or daily road maintenance for dust control; and
 - D. Records of all repairs and maintenance of abatement systems.

Dated _____

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Permit Number 83755

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. 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 *	
			lb/hr	TPY**
5	Jaw Crusher 1 (4)	PM	0.21	0.26
		PM ₁₀	0.10	0.13
6	Jaw Crusher 2 (4)	PM	0.21	0.26
		PM ₁₀	0.10	0.13
18	VSI Crusher 1 (4)	PM	0.24	0.30
		PM ₁₀	0.11	0.14
34	VSI Crusher 2 (4)	PM	0.14	0.17
		PM ₁₀	0.06	0.08
32	VSI Crusher 3 (4)	PM	0.14	0.17
		PM ₁₀	0.06	0.08
50	Cone Crusher 1 (4)	PM	0.09	0.11
		PM ₁₀	0.04	0.05
52	Cone Crusher 2 (4)	PM	0.09	0.11
		PM ₁₀	0.04	0.05
9	Screen 1 (4)	PM	2.20	2.75
		PM ₁₀	0.74	0.93
11	Screen 2 (4)	PM	2.64	3.30
		PM ₁₀	0.89	1.11
36	Screen 6 (4)	PM	0.21	0.26
		PM ₁₀	0.07	0.09
38	Screen 5 (4)	PM	0.21	0.26
		PM ₁₀	0.07	0.09

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
40	Screen 4 (4)	PM	0.21	0.26
		PM ₁₀	0.07	0.09
42	Screen 3 (4)	PM	0.21	0.26
		PM ₁₀	0.07	0.09
55	Screen 7 (4)	PM	0.42	0.52
		PM ₁₀	0.14	0.18
58	Screen 8 (4)	PM	0.42	0.52
		PM ₁₀	0.14	0.18
61	Screen 9 (4)	PM	0.42	0.52
		PM ₁₀	0.14	0.18
64	Screen 10 (4)	PM	0.42	0.52
		PM ₁₀	0.14	0.18
76	Screen 12 (4)	PM	0.01	0.02
		PM ₁₀	<0.01	0.01
78	Screen 11 (4)	PM	0.01	0.02
		PM ₁₀	<0.01	0.01
84	Screen 15 (4)	PM	0.13	0.16
		PM ₁₀	0.05	0.06
86	Screen 16 (4)	PM	0.13	0.16
		PM ₁₀	0.05	0.06
94	Screen 13 (4)	PM	0.10	0.12
		PM ₁₀	0.03	0.04
96	Screen 14 (4)	PM	0.10	0.12
		PM ₁₀	0.03	0.04
1, 3, 44, 91, and 103	Loading/Unloading Operations (4)	PM	0.20	0.25
		PM ₁₀	0.08	0.10
MHFUG	Material Handling (4, 5)	PM	7.25	9.06
		PM ₁₀	2.39	2.99

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

AIR CONTAMINANTS DATA

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates *	
			lb/hr	TPY**
STFUG	Stockpiles (4, 6)	PM	---	21.68
		PM ₁₀	---	10.84
T-1 and T-2	10,000 gal Diesel Tanks	VOC	<0.01	0.02

- (1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
- (2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
- (3) PM - particulate matter, suspended in the atmosphere, including PM₁₀ and PM_{2.5}
 PM₁₀ - particulate matter equal to or less than 10 microns in diameter
 PM_{2.5} - particulate matter equal to or less than 2.5 microns in diameter
 VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- (4) Fugitive emissions are an estimate only.
- (5) Includes emissions from Emission Point Nos. 2, 4, 7, 8, 10, 12-17, 19-31, 33, 35, 37, 39, 41, 43, 45-49, 51, 53, 54, 56, 57, 59, 60, 62, 63, 65-75, 77, 79-83, 85, 87-90, 92, 93, 95, 97-102, 104-112, 114, and 115.
- (6) Stockpile emissions are cumulative emissions from Stockpiles A through Q totaling 30.0 acres in area.

* Emission rates are based on and the facilities are limited by the maximum operating schedule and throughput rates shown below.

** Compliance with annual emission limits is based on a rolling 12-month period.

Maximum operating schedule:

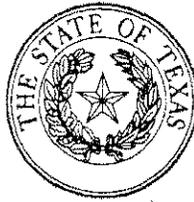
24 Hrs/day, 7 Days/week, and 52 Weeks/year or 8,760 Hrs/year

Production Rates:

Jaw Crusher 1 (EPN 5):	1,000 tons/hour	2,500,000 tons/year
Jaw Crusher 2 (EPN 6):	1,000 tons/hour	2,500,000 tons/year
VSI Crusher 1 (EPN 18):	200 tons/hour	500,000 tons/year
VSI Crusher 2 (EPN 34):	750 tons/hour	1,875,000 tons/year
VSI Crusher 3 (EPN 32):	750 tons/hour	1,875,000 tons/year
Cone Crusher 1 (EPN 50):	510 tons/hour	1,275,000 tons/year
Cone Crusher 2 (EPN 52):	510 tons/hour	1,275,000 tons/year
 Total Facility:	 2,000 tons/hour	 5,000,000 tons/year

Dated _____

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER

**CONCERNING THE APPLICATION OF AGGREGATE INDUSTRIES-WCR, INC.
FOR A NEW AIR QUALITY PERMIT NUMBER 83755 IN COMAL COUNTY, TEXAS
TCEQ DOCKET NO. 2009-1842-AIR
SOAH DOCKET NO. 582-10-2489**

On _____, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of Aggregate Industries-WCR, Inc., (Aggregate or Applicant) for a new Air Quality Permit No. 83755, in Comal County, Texas. A Proposal for Decision (PFD) was presented by Penny A. Wilkov, an Administrative Law Judge (ALJ) with the State Office of Administrative Hearings (SOAH), who conducted a hearing in this case on October 11-13, 2010.

After considering the Proposal for Decision, the Commission makes the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

Procedural History, Notice, and Jurisdiction

Whether the Public Notice for the Application was Sufficient to Meet the Requirements of the Texas Clean Air Act and TCEQ Rules

1. On December 28, 2007, Aggregate Industries-WCR, Inc. filed an application (Application) with the Texas Commission on Environmental Quality (TCEQ or Commission) requesting an air quality permit to construct and authorize a rock crusher at

5900 FM 482, New Braunsfels, Comal County, Texas, which is located on 1,000 acres of land approximately three miles south of New Braunsfels.

2. The TCEQ Executive Director (ED) declared the Application administratively complete on January 28, 2008.
3. The Notice of Receipt and Intent to Obtain an Air Quality Permit was published on February 26, 2008 in the *New Braunsfels Herald-Zeitung* and on February 25, 2008 in *El Norte*; both generally circulated newspapers in Comal County, Texas.
4. The Applicant's Modeling Report dated June 30, 2008, was submitted to TCEQ on or about July 1, 2008, as a part of the Application.
5. On February 17, 2009, the ED declared the Application technically complete and issued a notice of Preliminary Decision recommending issuance of the permit.
6. On February 25, 2009, a combined Notice of Application and Preliminary Decision and Notice of Public Meeting for an Air Quality Permit was published in the *New Braunsfels Herald-Zeitung* and *El Norte* newspapers.
7. A public meeting was held on March 10, 2009, in New Braunsfel, Texas.
8. On July 1, 2009, the ED issued a Response to Public Comment.
9. On January 13, 2010, the Commission considered the Application and, by Interim Order dated January 25, 2010, the Commission granted the hearing requests of Curtis A. Fey, Jr., Sharlene and Tim Fey, Daryl and Jeri Hoffman, Kathleen Hoffman, Todd Hoffman, Dennis Parma, Maggie Parma, Dwight and Sandra Reeh, Vandeline Sahn, Carol Warwick Smith, Heather Hoffmann-Stewart and Jason Stewart, Magnolia Springs Associates, Tressie Mae Russell, and Craig and Teresa McKee (Protestants Group 1).

10. In the Interim Order, the Commission referred the following issues to SOAH for consideration:

- Whether the proposed facility will have adverse effects on air quality, or cause violations of the Texas Clean Air Act, or other applicable state or federal requirements;
- Whether the draft permit conditions fully comply with applicable air quality regulations, including BACT, enforceability, and consideration of emission sources and emission rates;
- Whether the draft permit conditions contain adequate monitoring, reporting, and recordkeeping requirements to ensure permit compliance including whether a continuous onsite operator should be required;
- Whether the air dispersion modeling of proposed particulate matter emissions was accurate and appropriate including whether the classification of surrounding land uses, consideration of cumulative effects, the NAAQS for PM_{2.5}, and use of emission factors were accurate;
- Whether the proposed facility's emissions will adversely impact the requestors' health, welfare, or physical property including whether the health effects review for the permit was properly conducted;
- Whether emissions from the proposed facility will adversely affect livestock; wildlife, including endangered species; or vegetation, including the agricultural activities of the Requestors;
- Whether the emissions from the facility will contribute to nuisance conditions;

- Whether the emissions from the facility will adversely affect the health of requestors' children or grandchildren when they are attending Comal Elementary School;
 - Whether the public notice for the application was sufficient to meet the requirements of the Texas Clean Air Act and TCEQ rules;
 - Whether the proposed operating schedule, throughput, and equipment were adequately and fully addressed in the impact evaluation;
 - Whether the Applicant has an acceptable compliance history in Texas;
 - Whether the stockpile heights specified in the permit are sufficiently protective;
 - Whether emissions from the proposed facility will adversely affect road safety and traffic conditions; and
 - Whether the permit properly controls for fugitive dust emissions.
11. On March 3, 2010, the Chief Clerk of the TCEQ mailed notice of an April 20, 2010, preliminary hearing on the Application to potentially affected persons, including those whose hearing requests had been granted.
12. On March 12, 2010, the *New Braunfels Herald-Zeitung* newspaper published notice of that same preliminary hearing.
13. On April 20, 2010, ALJs Penny A. Wilkov and Sharon Cloninger held a preliminary hearing. The following appeared and were admitted as the only parties in this case:
- the Applicant, represented by Attorneys Aldean E. Kainz and Chris B. Pepper;
 - the ED, represented by TCEQ Attorneys Amy Lynn Browning and Alexis Lorick;
 - Office of Public Interest Counsel (OPIC), represented by Assistant Public Interest Counsel James B. Murphy;

- Protestants Group I, represented by Attorneys James B. Blackburn and Adam Friedman;
 - Numerous individuals: Robert Aguirre, William V. Blount, P.E., Clifford Curtis, Dennis Felix, Rita Foust, Mark Freisenhahn, Raja Saad, Carolyn Schulle, Walter Schulle, Karen “Katie” Stout (Protestants Group II), represented by Attorneys James B. Blackburn and Adam Friedman;
 - Securing a Future Environment (SAFE), represented by William B. Jackson;
 - Citizens Alliance for Smart Expansion (CASE), represented by Sharon Levett;
and
 - Comal Independent School District (CISD), represented by Roy Linnatz.
14. Prior to the hearing on the merits, CASE and CISD withdrew as parties. SAFE withdrew as a party at the hearing. Protestants I and II merged at the hearing, as they were represented by the same counsel and are collectively referred to as Protestants.
15. The hearing on the merits convened on October 11-13, 2010, before ALJ Penny A. Wilkov. With the filing of the transcript, closing arguments and responses on November 19, 2010, the record closed.
16. The following witnesses testified at the hearing:
- For the Applicant:
- Mike Refer, the Vice-President of Aggregate Industries-WCR, Inc.;
 - Gary Nicholls, a Professional Engineer and Vice-President of Westward Environmental, Inc., who drafted and submitted the air permit application;
 - Dave Knollhoff, a Certified Consulting Meteorologist, with Westward Environmental, Inc.;

- Michael Hunt, a Registered Professional Engineer;
- Lucy Fraiser, Ph.D., a Toxicologist; and
- Tommy Mathews, a Professional Geoscientist and President and Owner of Westward Environmental, Inc.

For Protestants:

- Richard C. Bost, a Professional Engineer and a Senior Partner at Environmental Resources Management.

For the ED:

- Larry Buller, a Professional Engineer and an Engineer V with the TCEQ Air Permits Division;
- Matthew Kovar, an Engineering Specialist III with the TCEQ Air Dispersion Modeling Team; and
- Daniel Menendez, a Natural Resource Special Team Leader, with the TCEQ Air Dispersion Modeling Team.

Project Description, Proposed Operation, and Project Site

17. The proposed facility will consist of a primary plant, a secondary plant, a truck loadout area and a rail loadout area. The primary plant would be located below the current ground level and contain feed hoppers, primary crushers, screens, conveyors and a surge pile. The secondary plant would be located to the Southeast of the primary plant and consist of the remaining feed hoppers, secondary crushers, screens, conveyors, classifiers and a surge pile.
18. The truck loadout area would be located east of the secondary plant and would house wash screens, conveyors, truck loading bins and stockpiles. The rail loadout area would

also be located east of the secondary plant with wash screens, conveyors, and railcar loading bins.

19. The permit seeks authorization to construct a rock crushing plant consisting of three feed hoppers, seven crushers, 16 screens, associated conveyor belts, 30 acres of stockpiles, and two 10,000-gallon tanks of diesel fuel for onsite vehicle use.
20. The plant is proposed to operate 24 hours per day, seven days per week, 52 weeks per year, with a process limit of 2,000 tons per hour and 5,000,000 tons per year.
21. Limestone aggregate will be quarried at the site. The proposed plant would process the limestone for aggregate materials to be used in the construction industry.
22. As envisioned, the primary plant would likely run for 10-12 hours a day with a maximum production rate of 2,000 tons per hour. Once the primary surge pile reaches a sufficient height, the primary plant is shut down and the secondary plant will operate overnight using the material from the primary plant surge pile.
23. The Holcim Corporation (Holcim), a cement and aggregates company, has owned the site since the early 1980s, but the site has been used as farmland.
24. In 2007, Aggregate was offered the opportunity to mine the land in 2007 as the operator for the site.
25. The site is located directly between two existing quarry sites with a lime manufacturing plant and cement manufacturing plant operating within a few miles of the proposed site.

National Ambient Air Quality Standards and Air Dispersion Modeling

26. The Draft Permit will authorize the emission of Particulate Matter (PM) and particulate matter equal to or less than 10 micrometers in diameter (PM₁₀) from multiple sources at

- the facility. Included as a subset of PM₁₀ is particulate matter equal to or less than 2.5 micrometers in diameter (PM_{2.5}).
27. Adverse effects on air quality are measured by whether a facility's proposed emissions will improperly exceed applicable air quality standards.
 28. The United States Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for pollutants, including PM₁₀ and PM_{2.5}. The only NAAQS components at issue in this case are those for PM₁₀ and PM_{2.5}.
 29. Potential emissions are evaluated to determine whether the concentration of pollutants, when added to the other emissions in the area, will surpass the NAAQS.
 30. If emissions are less than the NAAQS, there are no adverse effects. The existing NAAQS for PM_{2.5} (both primary and secondary) are 15 per cubic meter ($\mu\text{g}/\text{m}^3$) for the annual standard and 65 $\mu\text{g}/\text{m}^3$ for the 24-standard. The existing NAAQS for PM₁₀ (both primary and secondary) are 50 $\mu\text{g}/\text{m}^3$ for the annual standard and 150 $\mu\text{g}/\text{m}^3$ for the 24-standard.
 31. Primary NAAQS are designed to protect human health, while secondary NAAQS are designed to protect public welfare, including wildlife, crops, vegetation and property.
 32. On April 3, 2008, the ED requested that Aggregate prepare and submit an air dispersion modeling analysis to show compliance with all applicable state and federal regulations.
 33. There are two types of computerized air dispersion models acceptable to the EPA and TCEQ: Industrial Source Complex Model, Version 3 (ISC3) and AERMOD. TCEQ allows use of ISC3 model over AERMOD if, among other reasons, the modeled source is a minor source of pollutants, such as a rock crushing facility.

Whether the Air Dispersion Modeling of Proposed Particulate Matter Emissions Was Accurate and Appropriate Including Whether the Classification of Surrounding Land Uses, Consideration of Cumulative Effects, the NAAQS for Pm_{2,5}, and Use of Emission Factors Were Accurate

Whether the proposed facility will have adverse effects on air quality or cause violations of the Texas Clean Air Act, or other applicable state or federal requirements

34. The Applicant used the ISC3 model to predict maximum ground level concentrations of PM₁₀ that would result from the facility's emissions.
35. The ISC3 air dispersion model requires information, also known as "inputs," such as meteorological data, surface characteristics (elevated or flat) of the modeling domain, sources for emissions, emission rates, and receptor locations.
36. The Applicant additionally modeled its facility using AERMOD, to predict maximum ground level concentrations of PM₁₀ and PM_{2.5}.

AP-42, Compilation of Air Pollutant Emission Factors

37. The AP-42, Compilation of Air Pollutant Emission Factors (AP-42), is the primary compilation of EPA's emission factor information, containing emission factors and process information for more than 200 air pollution industry sectors.
38. The Applicant applied the emission factors to its modeling as calculated in the AP-42 publication, *Background Information for Revised AP-42 Section 11.19.2, Crushed Stone Processing and Pulverized Mineral Processing*, found in the May 12, 2003 Air Control Techniques, P.C. memorandum to the EPA.
39. The use of the AP-42 emission factors to determine emission rates for this type of facility is a common engineering practice and is the accepted method for TCEQ engineers when evaluating a permit application of this type.

40. The EPA's official policy statement on rock type, *i.e.* granite or limestone, states that research indicates that rock type is not a major variable when comparing fugitive dust emissions from crushed stone operations.
41. Because Applicant used all applicable guidance and current TCEQ practices, including the AP-42 guidance, in calculating emission rates, the Applicant used a valid calculation of standardized and acceptable emission factors from the proposed facility in its air modeling program.

Background Concentrations and Cumulative Effects

42. An important part of modeling is the background concentration, which is a measurement of all of the off-property emission sources already existing in the area, including nearby existing emission sources (other limestone processing facilities, for instance) and screening background concentrations.
43. For the nearby off-site sources, Applicant correctly used the TCEQ's Point Source Database, a report of existing off-property sources of emissions, as well as other sources such as the permit by rule emissions, new source review, and prevention of significant deterioration permits, for off-site emission sources in their modeling.
44. As for screening background concentrations, for counties that do not have an air monitor, like Comal County, TCEQ sets screening background concentration, which are based on the nearby monitor data located in Selma, Bexar County, Texas (Selma monitor).
45. Applicant appropriately selected $75 \mu\text{g}/\text{m}^3$ as the Comal County screening background concentration value, based on the most current TCEQ guidance document, the September 4, 1998 memo from Dom Ruggeri (Ruggeri memo), who was the leader of the Air Dispersion Modeling Team for the Commission's predecessor at the time, the Texas

Natural Resource Conservation Commission (TNRCC), with attached tables of screening background concentrations listed by county.

46. The Ruggeri memo is still the standard guidance for estimating background concentration values for counties without an air monitor, as confirmed by the TCEQ Air Dispersion Modeling Team's approval of Aggregate's modeling on August 15, 2008.
47. At the time the Applicant submitted its application, the most recent data for the Selma monitor was for 2006. The 2006 data from the Selma monitor produced a number lower than the conservative TCEQ guidance number of 75 $\mu\text{g}/\text{m}^3$ for 24-hour PM_{10} .
48. Even though the actual data from the monitor nearest to Comal County indicated a lower screening background concentration, the Applicant used the higher, more conservative value provided in the TCEQ guidance.
49. The cumulative effects analysis, consisting of off-site emission sources and background concentrations, conducted by Applicant was accurate, appropriate and was conservative and exceeded what was required by TCEQ.
50. Applying the AP-42 factors and the background concentrations, the NAAQS analysis as submitted is as follows:

NAAQS Analysis					
Air Pollutant	Averaging Time	Predicted GLC_{max}	Screening Background Concentration	Total Predicted Concentration	NAAQS
PM_{10}	24-hr	64 $\mu\text{g}/\text{m}^3$	75 $\mu\text{g}/\text{m}^3$	139 $\mu\text{g}/\text{m}^3$	150 $\mu\text{g}/\text{m}^3$
	Annual	22 $\mu\text{g}/\text{m}^3$	25 $\mu\text{g}/\text{m}^3$	47 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$

Road Emissions

51. In a February 2000 memo from John Steib, TCEQ's Director of Air Permits Division at the time, Mr. Steib indicated that the ED's policy for road emissions evaluations was that road dust emissions should be calculated and impacts evaluated for long-term periods (annual) only because there is no reliable calculation methods for shorter time periods.
52. If on-site roads are included in calculating short-term emissions, then the modeling calculations become unreliable, overstating emissions significantly; particularly given the public's limited access to roads.
53. In conducting air permit analysis, road dust emissions should be calculated and impacts evaluated for long-term periods (annual) only because there is no reliable calculation methods for shorter time periods.
54. It was proper for Applicant's short-term modeling to not include road emissions.

Surrounding Land Uses

55. In the modeling, Applicant's engineer classified the area where the facility would be located as rural based on a review of a topographic map for elevation data (digital elevation model), digitized aerial photography (2006), and visits to the proposed site and surrounding locations.
56. The TCEQ engineer who audited the modeling report concurred that the surrounding land uses were properly characterized as rural, in that over 50% of the use within 3,000 meters of the facility was classified as rural, verified by examining aerial photography, a site visit, and the AERSURFACE component of AERMOD which calculates certain parameters.

57. The characterization as rural was a more conservative approach to modeling, leading to higher predicted concentrations.
58. Applicant's characterization of the terrain as rural and elevated is accurate as confirmed by site visit, photography, and investigation.

NAAQS for PM_{2.5}

59. PM_{2.5} is comprised of fine particles that are 2.5 micrometers in diameter and smaller. Particles in this size range are believed to pose the greatest health risk because, as a result of their small size, they can lodge deeply into the lungs.
60. In the Application, modeling of PM_{2.5} was not required because on the date the ED requested an air dispersion modeling analysis, April 3, 2008, TCEQ's surrogate policy was in force to demonstrate PM_{2.5} protectiveness.
61. Under the PM_{2.5} surrogate policy, if the modeling evaluation predicted compliance with the PM₁₀ NAAQS, compliance with the PM_{2.5} is presumed.
62. The EPA has allowed Texas and other states a three-year period to devise implementation plans for new source review programs for PM_{2.5}. TCEQ has not yet promulgated procedures for modeling secondary, indirectly formed PM_{2.5}, and has not set significant impact levels.
63. Modeling was performed using existing measures and Applicant has established the predicted concentrations of PM_{2.5} are well below the 24-hour and annual NAAQS for PM_{2.5}. The modeling results for PM_{2.5} are summarized in the following table:

Averaging Period	Modeling Results	Background Concentration	Total Concentration	Standard
24-Hour	9.13	22.1	31.2	35
Annual	1.91	9.59	11.5	15

64. The results confirmed that the predicted concentrations of PM_{2.5} are well below the 24-hour and annual NAAQS for PM_{2.5}.
65. Applicant has established that the modeling correctly considered PM_{2.5} NAAQS.

Conclusion

66. Applicant properly applied approved AP-42 emission factors, applicable background concentrations, and proper surrounding land use categories.
67. Applicant also accurately considered road emissions and PM_{2.5} concentrations in its calculations.

Whether the Draft Permit Conditions Fully Comply With Applicable Air Quality Regulations, Including BACT, Enforceability, and Consideration of Emission Sources and Emission Rates?

BACT

68. The TCEQ's *Technical Guidance for Rock Crushing Plants* states that to meet best available control technology (BACT) expected performance levels, there must be a minimum 70% reduction of fugitive dust emissions from the crushing, conveying, and stockpiling of aggregate material and from all vibrating screens; and that the implementation of best management practices (BMP) to reduce fugitive dust emission from road and traffic areas are required.
69. The Draft Permit includes fourteen General Conditions and nine Special Conditions that provide specific controls and requirements to ensure the facility will operate within applicable standards, statutes and regulations. The Special Conditions include BACT controls and BMP as follows:
 - Special Condition 4 requires no visible fugitive emissions may leave the property that exceed a cumulative 30 seconds in duration in any 6 minute period;

- Special Condition 5 places an opacity limit of 7% on any screen or transfer point and 12% on any crusher, which means that a maximum of 7% or 12% of background may be obscured by dust;
 - Special Condition 6B requires permanently mounted water sprays at the inlet and outlet of all crushers, all shaker screens, and all material transfer points;
 - Special Conditions 6C, 6D and 6F require no visible emissions from wash screens, conveyor transfers after saturated processes and submerged processes;
 - Special Condition 6E requires partial enclosures on some screens and crushers;
 - Special Condition 6G requires roads to be paved, washed and watered;
 - Special Condition 6H requires that unpaved roads and all other traffic areas and active work areas be watered;
 - Special Condition 6J requires that stockpiles be watered; and
 - Special Conditions 6L requires the wheel wash for trucks leaving Applicant's property.
70. Applicant will meet or exceed the BACT 70% control by using these practices and by dust suppression technologies, including: water sprays, partial enclosures, wheel wash, washing of paved roads on-site, wash screens, and saturation or submersion of equipment and materials.

Enforceability

71. Non-compliance with the permit may result in enforcement action by TCEQ, which could involve a number of consequences including fines, designation as a "poor performer" in compliance history (which affects renewal time periods and use of streamlined permitting procedures), and the requirement to perform ambient air sampling at the facility.

72. The TCEQ Air Permits Division and the TCEQ Region 13 Office performed a thorough technical review of the draft permit limits and concluded that the permit limits are enforceable and demonstrate compliance with state and federal air quality standards.

Consideration of Emission Sources and Emission Rates

73. The representation of emission sources that were evaluated to determine compliance with the NAAQS are contained in the permit application and are reflected in the Maximum Allowable Emissions Rate Table (MAERT).

74. The MAERT would authorize the emission of PM and PM₁₀ from 32 specific emission points: multiple crushers, screens, a wash plant, assorted material handling conveyors, stockpiles, two fuel tanks and truck and rail loading facilities.

75. The permit would also authorize fugitive emissions of the same contaminants from other sources: loading and unloading areas, points where material would be handled; two diesel tanks, and stockpiles A-Q totaling 30.0 acres in area.

76. Emission sources, including fugitive emissions, were correctly and accurately accounted for in the Applicant's air permit Application, and the Draft Permit conditions properly considered and addressed emission sources and rates.

77. The Draft Permit conditions fully comply with applicable air quality regulations, including BACT, enforceability, and consideration of emission sources and emission rates.

Whether the Stockpile Heights Specified in the Permit are Sufficiently Protective

78. Stockpile heights on average will not exceed 45 feet in height, with the exception of Surge Piles E and G, proposed to reach possible maximum heights of 90 and 60 feet respectively.

79. As proposed, Surge Pile E would contain course material ranging from one to eight inches with the finer material removed, while Surge Pile G would have washed aggregates with fine particles removed by the washing process.
80. Surge Piles E and G will have minimal active areas due to the movement of material by a tunnel conveyor underneath the pile rather than through front-end loaders.
81. Emissions from the stockpiles and surge piles were properly calculated and modeled, considering a worst-case scenario and taking into account horizontal and vertical dimensions of the stockpile and will be controlled by the application of BACT, as set forth in Special Conditions 6B (permanently mounted spray bars), 6J (watering of stockpiles), and 6K (height and setback restrictions) of the draft permit.
82. An audit of air dispersion modeling submitted by the Applicant was performed by TCEQ's Air Dispersion Modeling team, who found the proposed heights protective of the NAAQS. The audit concluded that the increased height of the stock piles would not lead to an exceedance of the PM₁₀ NAAQS, and therefore the increased heights would be acceptable limits in the draft permit.
83. Aggregate represented that the stockpiles were necessary to operate two shifts at the plant to reduce noise and truck traffic, agreed to excavate the proposed base elevation for the taller Surge Pile E, and represented that surrounding vegetation would be continuously maintained to serve as a buffer between plant operations and property lines.
84. Surge Pile G has a 500-foot setback requirement from the property line, as indicated in Special Condition 6K, while Surge Pile E has a 700-foot setback from the property line and will be located below grade to limit visibility and emissions from the surge pile.

85. Emissions from stockpiles and surge piles were properly calculated and modeled, considering a worst-case scenario and taking into account horizontal and vertical dimensions of the stockpile.
86. Emissions from stockpiles and surge piles are not expected to cross the Applicant's property line.
87. The stockpile heights and emission estimations, with the conditions agreed to be Aggregate, are appropriate and sufficiently protective.

Whether the Draft Permit Conditions Contain Adequate Monitoring, Reporting, and Recordkeeping Requirements to Ensure Permit Compliance Including Whether a Continuous Onsite Operator Should Be Required

88. Applicant is required to maintain the following records under the Draft Permit:
 - Daily, monthly and annual amounts of material processed, summarized in tons per hour, per month and per year;
 - Hours of operation;
 - Repairs and maintenance of abatement systems;
 - Daily road cleaning; and
 - Daily application and maintenance for road dust control.
89. Special Condition 8 of the Draft Permit requires Applicant to monitor and perform air sampling to demonstrate compliance with permit requirements and the NAAQS under certain circumstances.
90. The Draft Permit conditions further require Applicant to report to the TCEQ the start of construction, construction interruptions exceeding 45 days, completion of construction, and upsets and maintenance during operations.

91. Applicant must also notify the TCEQ Regional Office prior to commencement of operations.
92. Applicant is required to maintain all records on-site and provide records to the TCEQ investigators upon request.
93. General Condition 7 requires the Applicant to maintain records containing information and data sufficient to demonstrate compliance with the permit.
94. Special Condition 9 requires the Applicant to keep and maintain on site for a rolling 24-month period: (a) daily, monthly and annual amounts of materials processed, (b) hours of operation, (c) daily road cleaning, daily application of road dust control, or daily road maintenance for dust control, and (d) records of all repairs and maintenance of abatement systems.
95. A continuous onsite operator is not required because there are times when the plant will be shut down and locked, making it unnecessary and economically infeasible.
96. Applicant represented that a plant manager will be onsite at all times the facility is operated, pursuant to its internal policy.
97. The draft permit conditions contain adequate monitoring, reporting, and recordkeeping requirements to ensure permit compliance.

Whether the Applicant has an Acceptable Compliance History in Texas

98. The compliance history the Commission considers in deciding whether to issue the permit for any air quality authorization includes information related to operations and activities of applicants within Texas, or any compliance-related information regarding legal requirements under the jurisdiction of the EPA.

99. For purposes of a compliance history, TCEQ is required to evaluate the person's site-specific compliance history and classification.
100. The Applicant is a new operator in Texas and has no prior compliance history in Texas.
101. The Applicant has been assigned an average by default rating for its compliance classification.
102. TCEQ policy in permitting matters is to allow processing of applications when an applicant has a compliance rating of "average" or better.
103. The Applicant does not have current operations in Texas but has had quarry operations in Colorado for the past five years. Applicant has not had any NOV's over the last five years in Colorado.
104. The Applicant has an acceptable compliance history in Texas.

Whether the Proposed Facility's Emissions Will Adversely Impact the Requestors' Health, Welfare, or Physical Property Including Whether the Health Effects Review for the Permit was Properly Conducted

105. The Applicant performed a health effects screening by evaluating the predicted 24-hour (short-term) and annual (long-term) air concentrations from PM₁₀, PM_{2.5}, limestone, and crystalline silica from the air dispersion modeling generated using the AERMOD dispersion model.
106. The Applicant's emission calculations show PM₁₀ predicted maximum ground level total concentrations as being at 47 µg/m³ annually and 139 µg/m³ for the 24-hour averaging period for the rock crushing facility. The predicted concentrations for PM₁₀ are below the 24-hour and annual NAAQS for PM₁₀.
107. The predicted PM₁₀ concentrations, both short- and long-term, from the proposed facility would not exceed the primary or secondary NAAQS and therefore would not impact the

- health, welfare, or physical property of the public or livestock, wildlife, or vegetation, including agricultural activities.
108. The Applicant's emission calculations show PM_{2.5} predicted maximum ground level total concentrations as being at 11.5 µg/m³ annually and 32.4 µg/m³ for the 24-hour averaging period for the rock crushing facility. These predicted emissions fall below the NAAQS for PM_{2.5}.
 109. Effects Screening Levels (ESLs) are used and published by the TCEQ Toxicology Division to evaluate the potential for effects to occur as a result of exposure to constituents or contaminants in the air, expressed in terms of micrograms per cubic meter (µg/m³). ESLs are based on data concerning health effects, odor/nuisance potential, and effects on vegetation. Short-term ESLs indicate a one-hour averaging period, while long-term ESLs indicate an annual averaging period.
 110. A concentration below an ESL is generally considered protective of a significant risk of adverse human health or welfare effects.
 111. An ESL review is not usually required for a TCEQ application for a rock crusher permit because particulate matter from rock crushers is not likely to cause adverse health effects. Limestone is considered non- to low-toxic nuisance dust and does not require a health effects review.
 112. An ESL review as part of a health effects evaluation was conducted by the Applicant in this case in order to predict the impact of emissions outside the plant property.
 113. Of the contaminants for which there are ESLs, only two will be emitted by Applicant in significant quantities: limestone and silica.

114. Limestone, which has a diameter less than or equal to four microns, will be emitted during the crushing. As applicable, the short-term ESL for limestone is $50 \mu\text{g}/\text{m}^3$, while the long-term limestone ESL is $5 \mu\text{g}/\text{m}^3$. Modeling of limestone assumes that 100% of the material mined and handled at the rock crushing unit is composed of limestone.
115. The Applicant's modeling demonstration predicted that the maximum 1-hour concentration of limestone for the 1991 modeling year is $267 \mu\text{g}/\text{m}^3$ and the maximum annual concentration of limestone for the 1991 modeling year is $6.28 \mu\text{g}/\text{m}^3$.
116. The Applicant's predicted emission calculations demonstrate that emissions of limestone exceed the ESL.
117. TCEQ staff has published an air permit reviewer reference guide entitled "Modeling and Effects Review Applicability: How to Determine the Scope of Modeling and Effects Review for Air Permits" (MERA).
118. According to MERA, if an ESL is exceeded by two-fold or more, it can do so if the maximum off-site ground-level concentrations occur on industrial property.
119. The maximum predicted off-site concentration of $\text{PM}_{2.5}$, PM_{10} , silica, and limestone, both short- and long-term, occurred at the Union Pacific rail line that traverses the site between the proposed primary and secondary plants, within Aggregate's property line and inaccessible to the public.
120. The limestone emission impacts are over-predicted based on the assumption that every emission source at the rock crushing facility is operating at maximum operating rates, which is not physically possible.
121. The exceedance for limestone emissions is not within the allowable ESLs for limestone, but in all likelihood will not cause adverse effects to human health or welfare.

122. Based on historic geological information, the composition of the limestone at the Applicant's rock crushing facility contains 2.587% of silica.
123. Silica amounts can be predicted by assuming the limestone mined at the site contains up to 3% silica. Annual maximum emissions of silica are determined by multiplying the annual PM₁₀ emissions by 3% to convert the emissions to silica and then by 50% to account for only PM₄ sized particles.
124. As applicable, the short-term ESL for silica is 14 µg/m³, while the long-term silica ESL is 0.27 µg/m³.
125. The maximum one-hour concentration ESL for silica is 14 µg/m³. The corresponding long-term ESL is currently 0.27 µg/m³. The Applicant's emission calculations predicted a maximum 1-hour concentration of silica for modeling year 1988 of 8.88 µg/m³. The maximum annual concentration of silica for modeling year 1988 is 0.0777 µg/m³.
126. The predicted silica emissions are within the allowable ESLs for silica and are not expected to cause adverse effects to human health or welfare.
127. The proposed facility's emissions will not adversely impact the Protestants' health, welfare, or physical property.

Whether Emissions from the Proposed Facility Will Adversely Affect Livestock; Wildlife, Including Endangered Species; or Vegetation, Including the Agricultural Activities of the Requestors

128. The air dispersion modeling showed that it did not exceed the secondary NAAQS standard, designed to protect against effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate.
129. The health effects review of the site concluded that off-site concentrations of limestone and silica would not be expected to adversely impact human health. Because human-

health based ESLs are also protective of wildlife and livestock, no adverse impacts to wildlife and livestock are expected.

130. The site contains some habitat for the golden-cheeked warbler, a bird listed as endangered under the Federal Endangered Species Act (ESA). To ensure protection of this habitat, a buffer zone around the habitat has been established, and no mining activity will take place in the vicinity.
131. On January 19, 2008, a Finding of No Significant Impact Supplemental Environmental Assessment was prepared by the Federal Emergency Management Agency which concluded that another project on the Aggregate Industries' site will not result in any significant impacts to existing biological resources, vegetation, fish and wildlife, or state and federally listed, threatened, and endangered species and critical habitats.
132. The proposed permit contains a general condition that requires compliance with applicable federal rules and regulations, including ESA.
133. The Applicant has established that the emissions from the proposed facility are protective of livestock; wildlife, including endangered species; vegetation; and agricultural activities.

Whether the Emissions from the Facility Will Contribute to Nuisance Conditions

134. The conditions in the draft permit require the Applicant to comply with all state and federal laws, which would include the avoidance of nuisance conditions.
135. If an actual nuisance condition were to arise, the TCEQ has enforcement authority to require the Applicant to abate any nuisance.
136. The proposed emissions are not expected to create nuisance conditions if the proposed facility is operated in compliance with the draft permit conditions.

137. TCEQ cannot perform a prospective nuisance enforcement case without any evidence that a nuisance has occurred.

Whether the Emissions from the Facility Will Adversely Affect the Health of Requestors' Children or Grandchildren when they are Attending Comal Elementary School

138. The modeling performed for this draft permit evaluated the maximum concentrations at the property line, at the nearest off-property receptor, and at any schools located within 3,000 feet of the facilities.
139. The site review indicated that Comal Elementary School was greater than 3,000 feet from the proposed site. Comal Elementary School has moved from its original location to one that is at an even greater distance from the proposed site.
140. Because Comal Elementary School is well beyond 3,000 feet from the proposed site and further from the facility than the points of maximum predicted concentrations, emissions from the facility will not adversely affect the health of the requestors' children or grandchildren when they are attending Comal Elementary School.
141. Area schools, including the former Comal Elementary School location, were identified during the permit application process and determined to be well over 3,000 feet from the proposed facility.
142. Aerial maps of the site, the crushing facility, and surrounding land use show that no schools are in close proximity to the crusher.
143. The facility will not adversely affect the health of the requestors' children or grandchildren when they are attending Comal Elementary School.

Whether Emissions from the Proposed Facility Will Adversely Affect Road Safety and Traffic Conditions

144. The nearest public road, FM 482, is more than 2,000 feet away from the rock crushing plant.
145. Applicant's air dispersion modeling successfully demonstrated that impacts to off-site receptors, including those on roadways, are not anticipated to cause adverse impacts.
146. The draft permit includes protective limits that will ensure visibility on nearby roadways will not be adversely affected: Special Condition 4 requires that no visible fugitive emissions for longer than a cumulative 30 seconds in duration for any 6 minute period may leave the property; Special Condition 5 limits the opacity of emissions; and Special Condition 6L requires that a wheel wash station be installed and operated to remove mud and road dust from all product trucks leaving the site.
147. Applicant will use water sprays, water trucks, watering and washing of roads and other best management practices to minimize, if not eliminate, the potential for emissions to impact road safety.
148. The Applicant had studied potential traffic effects, including discussions with the Texas Department of Transportation. Any impacts will be lessened by splitting the direction truck traffic will travel on FM 482, so that all trucks will not be using one route.
149. Approximately 50% of the material produced at the site will be shipped by rail. The remaining production will be shipped via truck to local markets and thus the proposed facility will add additional traffic in the immediate area of the plant entrance/exit.

150. The draft permit contains BMP that require the Applicant to coat all paved roads with a “cohesive hard surface,” for which the Applicant would be required to clean, and a condition for installing and operating a wheel wash for product trucks leaving the site..
151. With regard to unpaved surfaces, the Applicant is required in accordance with its BMPs to spray those areas with water or a sensitive chemical upon detection of visible particulate emissions.
152. Applicant has demonstrated that if it operates its facility within the terms of the permit, no adverse effects on road safety or traffic conditions are expected to occur.

Whether the Permit Properly Controls for Fugitive Dust Emissions

153. Fugitive dust emissions are emissions that are not or cannot be readily controlled by a stack.
154. Essentially all of the dust emission sources from the proposed facility will be fugitive emissions, including emissions from hoppers, crushers, screens, conveyors and wash equipment as well as other sources such as stockpiles and roads.
155. As a result, the same controls that are used to suppress dust and reduce or eliminate particulate matter emissions will also reduce or eliminate fugitive dust emissions.
156. The draft permit’s visible emissions and opacity limits further ensure fugitive dust emissions will be properly controlled.
157. Special Condition 4 limits visible emissions from the rock crushing facility’s crushers, screens, transfer points on belt conveyors, material storage areas, feed bins, loadout bins, surge bins, hoppers, stockpiles, internal roads and work areas. This condition also states that no visible fugitive emissions exceeding 30 seconds duration during any 6 minute period may leave Aggregate Industries’ property line. Special Condition 5 of the draft

permit also imposes limits on the opacity of emissions from the proposed facility. Special conditions 6G and H also require actions such as paving and watering roads to prevent fugitive emissions. Furthermore, Special Condition 6L requires the installation and operation of a wheel wash station to remove mud and/or road dust from the undercarriage of product trucks leaving the facility.

158. With the protective limitations expressed in the draft permit and the requirement to implement various technologies and best management practices to control fugitive dust emissions, the Applicant has demonstrated that the permit properly controls for fugitive dust emissions.

Transcript Costs

159. The Applicant ordered and paid for transcripts of the hearing.
160. All parties participated in the hearing extensively and used the transcript significantly in its briefing
161. Applicant has the financial resources to bear the costs, and has arguably benefitted most from the transcript as evidenced by the fact that its application is recommended to be granted.
162. Applicant should bear 100% of the transcript costs, which appears to be a just and reasonable allocation of costs.

II. CONCLUSIONS OF LAW

1. The Commission has jurisdiction to consider the Application. TEX. HEALTH & SAFETY CODE (THSC) §§ 382.011, 392.051, and 382.0518.
2. SOAH has jurisdiction to conduct a hearing and to prepare a PFD in this matter. TEX. GOV'T CODE § 2003.047.

3. Proper notice was given as required by THSC § 382.056, TEX. GOV'T CODE §§ 2001.051 and 2004.052, and 30 TEX. ADMIN. CODE (TAC) § 39.601, *et seq.*
4. Applicant was required to apply for a Preconstruction Permit, under the auspices of the Texas Clean Air Act (TCCA), to construct a new facility that may emit air contaminants. THSC § 382.0518(a).
5. The purpose of the TCAA is to safeguard the state's air resources from pollution by controlling or abating air pollution and emissions of air contaminants, consistent with the protection of public health, general welfare, and physical property, including the esthetic enjoyment of air resources by the public and the maintenance of adequate visibility. THSC § 382.002(a).
6. As defined, air contaminants include particulate matter, dust, fumes, smoke, vapor, or odor. THSC § 382.003(2).
7. As relevant, air pollution is defined as the discharge of air contaminants in such concentration and such duration as may be injurious or adversely affect human health or welfare, animal life, vegetation, or property. THSC § 382.003(3).
8. Each state is responsible for implementation plans that must provide for the establishment and operation of appropriate devices, methods, systems and procedures necessary to monitor, compile, and analyze data on ambient air quality. 42 UNITED STATES CODE (U.S.C.) § 7409(a)(2)(B)(i).
9. The National Primary and Secondary Ambient Air Quality Standards of the TCAA are enforced by TCEQ throughout all parts of Texas. 30 TAC § 101.21.
10. The EPA has established NAAQS for the following pollutants: (1) particulate matter less than or equal to 10 microns in diameter (PM₁₀); (2) particulate matter less than or equal to

- 2.5 microns in diameter (PM_{2.5}); (3) ozone; (4) sulfur dioxide; (5) carbon monoxide; (6) nitrogen dioxide; and (7) lead. 42 U.S.C. § 7409(a); 40 CODE OF FEDERAL REGULATIONS (C.F.R) § 50.
11. In order to obtain the requisite permit, Applicant has the burden of proof by a preponderance of evidence. 30 TAC § 80.17(a).
 12. Applicant must demonstrate to the Commission that there is no indication that the emissions from the facility will contravene the intent of the TCAA, including protection of the public's health and physical property. THSC § 382.0518(b)(2).
 13. Demonstrating Applicant's proposed rock crushing facility complies with pertinent provisions of the TCAA requires a showing that projected emissions for pollutants will meet the NAAQS. 30 TAC § 101.21; 40 CFR § 50.6(a).
 14. The Primary NAAQS standards define levels of air quality that the EPA Administrator has determined are requisite to protect the public health. 40 C.F.R. § 50.2(b); 42 U.S.C. § 7409(b)(1).
 15. The primary NAAQS are set to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. *Lead Industries Ass'n, Inc. v. EPA*, 647 F.2d 1130, 1153 (D.C. Cir. 1980).
 16. The secondary NAAQS are designed to protect the public welfare against non-health-related effects such as decreased visibility; effects to animals, crops, and vegetation; and damage to and deterioration of property. 42 U.S.C. § 7409(b)(2).
 17. The NAAQS for PM₁₀ and PM_{2.5} are listed below, as found in 30 TAC § 116.111(J).

Pollutant	Averaging Time	Primary and Secondary Standard (per cubic meter [$\mu\text{g}/\text{m}^3$])
PM ₁₀	Annual (Arithmetic Mean)	50 $\mu\text{g}/\text{m}^3$
	24-hour	150 $\mu\text{g}/\text{m}^3$
PM _{2.5}	Annual (Arithmetic Mean)	15 $\mu\text{g}/\text{m}^3$
	24-hour	65 $\mu\text{g}/\text{m}^3$

18. Computerized air dispersion modeling may be required by the ED to determine air quality impacts from a proposed new facility or source modification. 30 TAC § 116.111(J).
19. As defined, BACT refers to the best technology available, within technical practicability and economic reasonableness, to reduce or eliminate emissions from the facility. 30 TAC § 116.10(3).
20. TCEQ is expressly authorized to initiate an action to enforce provisions of the Texas Health and Safety Code. TEX. WATER CODE §§ 5.013(a)(11) and 7.002.
21. TCEQ is authorized to institute legal proceedings to compel compliance with the Texas Health and Safety Code and rules, orders, permits, or other decisions of the TCEQ. TEX. WATER CODE § 7.002.
22. TCEQ may also issue an administrative order, including an administrative order that assesses penalties or orders corrective measures, to ensure compliance with the Texas Health and Safety Code. TEX. WATER CODE § 7.002.
23. TCEQ does not have jurisdiction to consider blasting or mining in determining whether to approve a permit application for facilities that will emit air contaminants. THSC § 382.003(6).

24. A compliance history consists of multimedia compliance-related information which includes evidence of an Applicant's ability to act in accordance with applicable legal requirements under the jurisdiction of the Commission or the EPA. 30 TAC § 60.1(c)(1).
25. New operators or facilities are classified as average performers by default. 30 TAC § 60.2(b).
26. The Commission is required to consider the compliance history of any applicant when making decisions related to the issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit. 30 TAC §60.1(a)(1)(A).
27. For purposes of a compliance history, TCEQ is required to evaluate the person's site-specific compliance history and classification. 30 TAC § 60.3(a) and (g).
28. A nuisance is defined, pursuant to 30 TAC § 101.4, as follows:

No person shall discharge from any source whatsoever one or more air contaminants or combinations thereof, in such concentration and of such duration as are or may tend to be injurious to or to adversely affect human health or welfare, animal life, vegetation, or property, or as to interfere with the normal use and enjoyment of animal life, vegetation, or property.
29. A facility's emissions do not include those from roads and quarries. THSC § 382.003 (6).
30. The TCAA requires the Commission to consider possible adverse health effects on individuals attending schools which are located within 3,000 feet of a facility or proposed facility. THSC § 382.052.

31. The Commission's rules provide a list of factors to be considered when determining a proper allocation of transcript costs. 30 T.A.C. § 80.23(d).
32. Based on the above Findings of Fact and Conclusions of Law, the proposed rock crushing facility will not have adverse effects on air quality or cause violations of the Texas Clean Air Act or other applicable state or federal requirements.
33. Based on the above Findings of Fact and Conclusions of Law, the Draft Permit conditions fully comply with applicable air quality regulations, including BACT, enforceability, and consideration of emission sources and emission rates.
34. Based on the above Findings of Fact and Conclusions of Law, the Draft Permit conditions contain adequate monitoring, reporting and recordkeeping requirements to ensure permit compliance.
35. Based on the above Findings of Fact and Conclusions of Law, a continuous onsite operator is not required at the proposed facility.
36. Based on the above Findings of Fact and Conclusions of Law, the air dispersion modeling of proposed particulate matter emissions was accurate and appropriate including the classification of surrounding land uses, consideration of cumulative effects, the NAAQS for PM2.5, and use of emission factors.
37. Based on the above Findings of Fact and Conclusions of Law, the proposed facility's predicted PM10 and PM2.5 emissions do not exceed the NAAQS and are allowable.
38. Based on the above Findings of Fact and Conclusions of Law, a health effects review was not required for the proposed facility.
39. Based on the above Findings of Fact and Conclusions of Law, the proposed facility's emissions will not adversely impact the Protestants' health, welfare, or physical property.

40. Based on the above Findings of Fact and Conclusions of Law, the proposed facility's emissions will not adversely affect livestock; wildlife, including endangered species, or vegetation, including the agricultural activities of the Protestants.
41. Based on the above Findings of Fact and Conclusions of Law, emissions from the proposed facility will not cause or contribute to nuisance conditions.
42. Based on the above Findings of Fact and Conclusions of Law, emissions from the facility will not adversely affect the health of the Protestants' children or grandchildren when they are attending Comal Elementary School or any other school surrounding the facility.
43. Based on the above Findings of Fact and Conclusions of Law, the facility's proposed operating schedule, throughput and equipment were adequately and fully addressed in the impact evaluation.
44. Based on the above Findings of Fact and Conclusions of Law, Applicant has an acceptable compliance history in Texas to obtain an air quality permit.
45. Based on the above Findings of Fact and Conclusions of Law, the stockpile heights specified in the Draft Permit are sufficiently protective.
46. Based on the above Findings of Fact and Conclusions of Law, emissions from the proposed facility will not adversely affect road safety and traffic conditions.
47. Based on the above Findings of Fact and Conclusions of Law, the Draft Permit properly controls for fugitive dust emissions.
48. Based on the above Findings of Fact and Conclusions of Law, the Applicant has met its burden of proof.

49. Based on the above Findings of Fact and Conclusions of Law, the potential air emissions from the proposed facility will not adversely affect air quality, and the draft permit complies with the Texas Clean Air Act and other applicable state and federal requirements.
50. Based on the above Findings of Fact and Conclusions of Law, the Application should be approved and the Draft Permit issued.
51. Based on the above Findings of Fact and Conclusions of Law, and based on factors established in 30 TEX. ADMIN. CODE § 80.23, it would be just to allocate 100% of the transcript costs to Applicant.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW, THAT:

1. The application of Aggregate Industries--WCR, Inc. is granted and the attached permit is issued to it.
2. Aggregate Industries--WCR, Inc. shall pay all of the transcript costs.
3. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.
4. The effective date of this Order is the date the Order is final, as provided by 30 TAC § 80.273 and TEX. GOV'T CODE § 2001.144.
5. The Commission's Chief Clerk shall forward a copy of this Order to all Parties.

6. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any provision shall not affect the validity of the remaining portions of this Order.

ISSUED:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Bryan W. Shaw, Ph.D., Chairman
For the Commission