Statement of Basis of the Federal Operating Permit

Golden Spread Electric Cooperative, Inc.

Site Name: Antelope Elk Energy Center
Area Name: Elk Station
Physical Location: 1454 County Road 315
Nearest City: Abernathy
County: Hale

Permit Number: O3762
Project Type: Initial Issuance

The North American Industry Classification System (NAICS) Code: 221112
NAICS Name: Fossil Fuel Electric Power Generation

This Statement of Basis sets forth the legal and factual basis for the draft permit conditions in accordance with 30 TAC §122.201(a)(4). An application for initial permit issuance has been submitted in accordance with 30 TAC § 122.201. This document may include the following information:

- A description of the facility/area process description;
- A basis for applying permit shields;
- A list of the federal regulatory applicability determinations;
- A table listing the determination of applicable requirements;
- A list of the New Source Review Requirements;
- The rationale for periodic monitoring methods selected;
- The rationale for compliance assurance methods selected;
- A compliance status; and
- A list of available unit attribute forms.

Prepared on: May 17, 2019
Operating Permit
Basis of Determination

Permit Area Process Description
Golden Spread Electric Cooperative, Inc. (GSEC) owns and operates Antelope Elk Energy Center near Abernathy, Texas. Antelope Elk Energy Center comprises Antelope Station and Elk Station. Antelope Station is a 168 MW generating facility comprising 18 quick start Wartsila engines. Elk Station comprises one operating combustion turbine-generator facility and three additional turbine-generators authorized for construction. Construction of two of the additional turbine-generators began in 2015. Each of the turbine-generators has a site maximum production capacity of 202 MW.

The gas turbine facilities each feature a GE 7F 5-Series gas turbine in a simple cycle application. Supply air will be compressed by the integral 14-stage compressor. Natural gas fuel will be combusted in GE’s DLN 2.6+ combustion system and the combustion exhaust gases will power the 3-stage expansion turbine. The turbine is air cooled, and an evaporative air cooler is also used for inlet air cooling during summer peak ambient air temperatures.

The 7F 5-Series turbine is the latest development of GE’s F-class turbine technology, which is used in over 1100 gas turbines worldwide. The 14-stage air compressor is equipped with super-finish 3-dimensional airfoils for improved efficiency with less long-term degradation. The 3-stage combustion turbine in the 5-Series features a hot gas path with advanced cooling and sealing technologies to improve efficiency and lower lifecycle costs. A new model-based process control system also improves performance efficiency. As a result, the 7F 5-Series turbine achieves efficiency above 38.7% in a simple-cycle application. The unit can produce up to 202 MW in cold weather conditions, and nominally 196 MW in peak summer operation. Compared to other 7F class turbines, the 5-Series turbine also has improvements in start-up and turndown capability, ramp-up rate, and lifecycle costs in peaking, cyclic, and steady-state operation. During normal start-up, the 5-Series turbine will achieve 50% capacity load in 30 minutes, and thereafter operate at design emission limits. During “peaking start-up”, a combination of measures allows the unit to achieve full load operation in about 11 minutes. (Peaking start-ups increase the rotor and hot gas maintenance costs relative to normal startups.) The turbine Dry Low NOx (DLN) 2.6+ combustion System achieves normal emission levels of 9 ppmvd nitrogen oxides (NOx) @15% O2 and 9 ppmvd carbon monoxide (CO) at operation from 100% load to nominally 50% load.

Combustion exhaust emissions from the turbines comprise the majority of air emissions from the plant site, with smaller emissions from the natural gas supply equipment, natural gas heater, emergency/backup diesel generator, and electrical equipment. The gas turbines will exhaust through stack Emission Point Numbers (EPNs) TURB1, TURB2, TURB3, and TURB4. Leaks from the natural gas supply equipment are shown as EPN NG-FUG. Sulfur hexafluoride (SF6) will be released in low-volume leaks from circuit breakers as EPN SF6-FUG. The natural gas heaters are indirect-fired water batch heaters used to heat the natural gas fuel above the dewpoint. These are fueled with natural gas and discharge through EPNs NGHEATR2, NGHEATR2A, NGHEATR3, and NGHEATR4. The emergency/backup diesel generators discharge through EPNs EMERGE N, EMERGEN2, EMERGEN3, and EMERGEN4 and are fueled with diesel oil from storage tanks EPNs DIES-TANK, DIES-TANK2, DIES-TANK3, and DIES-TANK4.

The emission units with specific regulatory requirement are the turbines (TURB1, TURB2, TURB3, and TURB4), the emergency/backup diesel generators (EMERGEN, EMERGEN2, EMERGEN3, and EMERGEN4) and the natural gas heaters (NGHEATR-2, NGHEATR-2A, NGHEATR-3 and NGHEATR-4)

FOPs at Site

The “application area” consists of the emission units and that portion of the site included in the application and this permit. Multiple FOPs may be issued to a site in accordance with 30 TAC § 122.201(e). When there is only one area for the site, then the application information and permit will include all units at the site. Additional FOPs that exist at the site, if any, are listed below.

Additional FOPs: O3358
Major Pollutants

The table below specifies the pollutants for which the site is a major source:

| Major Pollutants | VOC, PM, NOX, HAPS, CO |

Reading State of Texas’s Federal Operating Permit

The Title V Federal Operating Permit (FOP) lists all state and federal air emission regulations and New Source Review (NSR) authorizations (collectively known as “applicable requirements”) that apply at a particular site or permit area (in the event a site has multiple FOPs). The FOP does not authorize new emissions or new construction activities. The FOP begins with an introductory page which is common to all Title V permits. This page gives the details of the company, states the authority of the issuing agency, requires the company to operate in accordance with this permit and 30 Texas Administrative Code (TAC) Chapter 122, requires adherence with NSR requirements of 30 TAC Chapter 116, and finally indicates the permit number and the issuance date.

This is followed by the table of contents, which is generally composed of the following elements. Not all permits will have all of the elements.

- General Terms and Conditions
- Special Terms and Conditions
  - Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting
  - Additional Monitoring Requirements
  - New Source Review Authorization Requirements
  - Compliance Requirements
  - Protection of Stratosphere Ozone
  - Permit Location
  - Permit Shield (30 TAC § 122.148)
- Attachments
  - Applicable Requirements Summary
    - Unit Summary
    - Applicable Requirements Summary
  - Additional Monitoring Requirements
  - Permit Shield
  - New Source Review Authorization References
  - Compliance Plan
  - Alternative Requirements
- Appendix A
  - Acronym list
- Appendix B
  - Copies of major NSR authorizations

General Terms and Conditions

The General Terms and Conditions are the same and appear in all permits. The first paragraph lists the specific citations for 30 TAC Chapter 122 requirements that apply to all Title V permit holders. The second paragraph describes the requirements for record retention. The third paragraph provides details for voiding the permit, if applicable. The fourth paragraph states that the permit holder shall comply with the requirements of 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit. The fifth paragraph provides details on submission of reports required by the permit.

Special Terms and Conditions

Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting. The TCEQ has designated certain applicable requirements as site-wide requirements. A site-wide requirement is a requirement that
applies uniformly to all the units or activities at the site. Units with only site-wide requirements are addressed on Form OP-REQ1 and are not required to be listed separately on a OP-UA Form or Form OP-SUM. Form OP-SUM must list all units addressed in the application and provide identifying information, applicable OP-UA Forms, and preconstruction authorizations. The various OP-UA Forms provide the characteristics of each unit from which applicable requirements are established. Some exceptions exist as a few units may have both site-wide requirements and unit specific requirements.

Other conditions. The other entries under special terms and conditions are in general terms referring to compliance with the more detailed data listed in the attachments.

Attachments

Applicable Requirements Summary. The first attachment, the Applicable Requirements Summary, has two tables, addressing unit specific requirements. The first table, the Unit Summary, includes a list of units with applicable requirements, the unit type, the applicable regulation, and the requirement driver. The intent of the requirement driver is to inform the reader that a given unit may have several different operating scenarios and the differences between those operating scenarios.

The applicable requirements summary table provides the detailed citations of the rules that apply to the various units. For each unit and operating scenario, there is an added modifier called the “index number,” detailed citations specifying monitoring and testing requirements, recordkeeping requirements, and reporting requirements. The data for this table are based on data supplied by the applicant on the OP-SUM and various OP-UA forms.

Additional Monitoring Requirement. The next attachment includes additional monitoring the applicant must perform to ensure compliance with the applicable standard. Compliance assurance monitoring (CAM) is often required to provide a reasonable assurance of compliance with applicable emission limitations/standards for large emission units that use control devices to achieve compliance with applicable requirements. When necessary, periodic monitoring (PM) requirements are specified for certain parameters (i.e. feed rates, flow rates, temperature, fuel type and consumption, etc.) to determine if a term and condition or emission unit is operating within specified limits to control emissions. These additional monitoring approaches may be required for two reasons. First, the applicable rules do not adequately specify monitoring requirements (exception- Maximum Achievable Control Technology Standards (MACTs) generally have sufficient monitoring), and second, monitoring may be required to fill gaps in the monitoring requirements of certain applicable requirements. In situations where the NSR permit is the applicable requirement requiring extra monitoring for a specific emission unit, the preferred solution is to have the monitoring requirements in the NSR permit updated so that all NSR requirements are consolidated in the NSR permit.

Permit Shield. A permit may or may not have a permit shield, depending on whether an applicant has applied for, and justified the granting of, a permit shield. A permit shield is a special condition included in the permit document stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirement(s) or specified applicable state-only requirement(s).

New Source Review Authorization References. All activities which are related to emissions in the state of Texas must have a NSR authorization prior to beginning construction. This section lists all units in the permit and the NSR authorization that allowed the unit to be constructed or modified. Units that do not have unit specific applicable requirements other than the NSR authorization do not need to be listed in this attachment. While NSR permits are not physically a part of the Title V permit, they are legally incorporated into the Title V permit by reference. Those NSR permits whose emissions exceed certain PSD/NA thresholds must also undergo a Federal review of federally regulated pollutants in addition to review for state regulated pollutants.

Compliance Plan. A permit may have a compliance schedule attachment for listing corrective actions plans for any emission unit that is out of compliance with an applicable requirement.

Alternative Requirements. This attachment will list any alternative monitoring plans or alternative means of compliance for applicable requirements that have been approved by the EPA Administrator and/or the TCEQ Executive Director.

Appendix A
Acronym list. This attachment lists the common acronyms used when discussing the FOPs.

Appendix B

Copies of major NSR authorizations applicable to the units covered by this permit have been included in this Appendix, to ensure that all interested persons can access those authorizations.

Stationary vents subject to 30 TAC Chapter 111, Subchapter A, § 111.111(a)(1)(B) addressed in the Special Terms and Conditions

The site contains stationary vents with a flowrate less than 100,000 actual cubic feet per minute (acfm) and constructed after January 31, 1972 which are limited, over a six-minute average, to 20% opacity as required by 30 TAC § 111.111(a)(1)(B). As a site may have a large number of stationary vents that fall into this category, they are not required to be listed individually in the permit’s Applicable Requirement Summary. This is consistent with EPA’s White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995, that states that requirements that apply identically to emission units at a site can be treated on a generic basis such as source-wide opacity limits.

Periodic monitoring is specified in Special Term and Condition 3 for stationary vents subject to 30 TAC § 111.111(a)(1)(B) to verify compliance with the 20% opacity limit. These vents are not expected to produce visible emissions during normal operation. The TCEQ evaluated the probability of these sources violating the opacity standards and determined that there is a very low potential that an opacity standard would be exceeded. It was determined that continuous monitoring for these sources is not warranted as there would be very limited environmental benefit in continuously monitoring sources that have a low potential to produce visible emissions. Therefore, the TCEQ set the visible observation monitoring frequency for these sources to once per calendar quarter.

The TCEQ has exempted vents that are not capable of producing visible emissions from periodic monitoring requirements. These vents include sources of colorless VOCs, non-fuming liquids, and other materials that cannot produce emissions that obstruct the transmission of light. Passive ventilation vents, such as plumbing vents, are also included in this category. Since this category of vents are not capable of producing opacity due to the physical or chemical characteristics of the emission source, periodic monitoring is not required as it would not yield any additional data to assure compliance with the 20% opacity standard of 30 TAC § 111.111(a)(1)(B).

In the event that visible emissions are detected, either through the quarterly observation or other credible evidence, such as observations from company personnel, the permit holder shall either report a deviation or perform a Test Method 9 observation to determine the opacity consistent with the 6-minute averaging time specified in 30 TAC § 111.111(a)(1)(B). An additional provision is included to monitor combustion sources more frequently than quarterly if alternate fuels are burned for periods greater than 24 consecutive hours. This will address possible emissions that may arise when switching fuel types.

Stationary Vents subject to 30 TAC Chapter 111 not addressed in the Special Terms and Conditions

All other stationary vents subject to 30 TAC Chapter 111 not covered in the Special Terms and Conditions are listed in the permit’s Applicable Requirement Summary. The basis for the applicability determinations for these vents are listed in the Determination of Applicable Requirements table.
Federal Regulatory Applicability Determinations

The following chart summarizes the applicability of the principal air pollution regulatory programs to the permit area:

<table>
<thead>
<tr>
<th>Regulatory Program</th>
<th>Applicability (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention of Significant Deterioration (PSD)</td>
<td>Yes</td>
</tr>
<tr>
<td>Nonattainment New Source Review (NNSR)</td>
<td>No</td>
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<tr>
<td>Minor NSR</td>
<td>Yes</td>
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<tr>
<td>40 CFR Part 60 - New Source Performance Standards</td>
<td>Yes</td>
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<tr>
<td>40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)</td>
<td>No</td>
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<tr>
<td>40 CFR Part 63 - NESHAPs for Source Categories</td>
<td>Yes</td>
</tr>
<tr>
<td>Title IV (Acid Rain) of the Clean Air Act (CAA)</td>
<td>Yes</td>
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<tr>
<td>Title V (Federal Operating Permits) of the CAA</td>
<td>Yes</td>
</tr>
<tr>
<td>Title VI (Stratospheric Ozone Protection) of the CAA</td>
<td>Yes</td>
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<tr>
<td>CSAPR (Cross-State Air Pollution Rule)</td>
<td>Yes</td>
</tr>
<tr>
<td>Federal Implementation Plan for Regional Haze (Texas SO₂ Trading Program)</td>
<td>No</td>
</tr>
</tbody>
</table>

Basis for Applying Permit Shields

An operating permit applicant has the opportunity to specifically request a permit shield to document that specific applicable requirements do not apply to emission units in the permit. A permit shield is a special condition stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements. A permit shield has been requested in the application for specific emission units. For the permit shield requests that have been approved, the basis of determination for regulations that the owner/operator need not comply with are located in the “Permit Shield” attachment of the permit.

Acid Rain Permit

The permitted area is subject to Federal Clean Air Act Title IV Acid Rain rules for Phase II units, as codified in 40 CFR Parts 72 through 78, because it meets the definition of “affected source.” Applicability of affected sources are defined in 40 CFR § 72.6 and include those sources that burn fossil fuel, and generates electricity for sale. Under 40 CFR Part 72, incorporated by reference into 30 TAC Chapter 122, all acid rain permits must contain specific terms and conditions, including monitoring, reporting, recordkeeping and excess emission requirements, established by the U.S. EPA. The Title IV permitting procedures are described within 30 TAC Chapter 122, Subchapter E. The applicable requirements of the Acid Rain Permit are contained in the Special Terms and Conditions of the FOP. The Acid Rain permit is effective as of the date of the issuance of the FOP and has a term ending in concurrence with the FOP.
Cross-State Air Pollution Rule

The Cross-State Air Pollution Rule (CSAPR) was established to mitigate the interstate transport of NO\textsubscript{x} and SO\textsubscript{2} which contribute to the formation of fine particles (PM\textsubscript{2.5}) and ground-level ozone and has replaced the previous Clean Air Interstate Rule (CAIR) program. The EPA has promulgated a model cap and trade program in 40 CFR Part 97 to implement CSAPR. While Texas is no longer included in the CSAPR NO\textsubscript{x} or SO\textsubscript{2} Annual Trading Programs, Texas remains included in the CSAPR NO\textsubscript{x} Ozone Season Group 2 Trading Program for the 2008 Ozone National Ambient Air Quality Standards. This rule has been adopted by reference into 30 TAC Chapter 122 as part of an effective rulemaking (Rule Project No. 2016-012-122-AI), which included the repeal of 30 TAC Chapter 122, Subchapter E, Division 2: Clean Air Interstate Rule.

The permitted area is subject to CSAPR as it contains units that meet a definition of a CSAPR unit in 40 CFR Part 97 (CSAPR NO\textsubscript{x} and SO\textsubscript{2} Trading Programs). The applicable CSAPR requirements are contained in the Special Terms and Conditions of the FOP.

Insignificant Activities

In general, units not meeting the criteria for inclusion on either Form OP-SUM or Form OP-REQ1 are not required to be addressed in the operating permit application. Examples of these types of units include, but are not limited to, the following:

1. Office activities such as photocopying, blueprint copying, and photographic processes.
2. Sanitary sewage collection and treatment facilities other than those used to incinerate wastewater treatment plant sludge. Stacks or vents for sanitary sewer plumbing traps are also included.
3. Food preparation facilities including, but not limited to, restaurants and cafeterias used for preparing food or beverages primarily for consumption on the premises.
4. Outdoor barbecue pits, campfires, and fireplaces.
5. Laundry dryers, extractors, and tumblers processing bedding, clothing, or other fabric items generated primarily at the premises. This does not include emissions from dry cleaning systems using perchloroethylene or petroleum solvents.
6. Facilities storing only dry, sweet natural gas, including natural gas pressure regulator vents.
7. Any air separation or other industrial gas production, storage, or packaging facility. Industrial gases, for purposes of this list, include only oxygen, nitrogen, helium, neon, argon, krypton, and xenon.
8. Storage and handling of sealed portable containers, cylinders, or sealed drums.
9. Vehicle exhaust from maintenance or repair shops.
10. Storage and use of non-VOC products or equipment for maintaining motor vehicles operated at the site (including but not limited to, antifreeze and fuel additives).
11. Air contaminant detectors and recorders, combustion controllers and shut-off devices, product analyzers, laboratory analyzers, continuous emissions monitors, other analyzers and monitors, and emissions associated with sampling activities. Exception to this category includes sampling activities that are deemed fugitive emissions and under a regulatory leak detection and repair program.
12. Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including but not limited to, assorted vacuum producing devices and laboratory fume hoods.
13. Steam vents, steam leaks, and steam safety relief valves, provided the steam (or boiler feedwater) has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
14. Storage of water that has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
15. Well cellars.
16. Fire or emergency response equipment and training, including but not limited to, use of fire control equipment including equipment testing and training, and open burning of materials or fuels associated with firefighting training.
17. Crucible or pot furnaces with a brim full capacity of less than 450 cubic inches of any molten metal.
18. Equipment used exclusively for the melting or application of wax.
19. All closed tumblers used for the cleaning or deburring of metal products without abrasive blasting, and all open tumblers with a batch capacity of 1,000 lbs. or less.
20. Shell core and shell mold manufacturing machines.
21. Sand or investment molds with a capacity of 100 lbs. or less used for the casting of metals;
22. Equipment used for inspection of metal products.
23. Equipment used exclusively for rolling, forging, pressing, drawing, spinning, or extruding either hot or cold metals by some mechanical means.
24. Instrument systems utilizing air, natural gas, nitrogen, oxygen, carbon dioxide, helium, neon, argon, krypton, and xenon.
25. Battery recharging areas.
26. Brazing, soldering, or welding equipment.

Determination of Applicable Requirements

The tables below include the applicability determinations for the emission units, the index number(s) where applicable, and all relevant unit attribute information used to form the basis of the applicability determination. The unit attribute information is a description of the physical properties of an emission unit which is used to determine the requirements to which the permit holder must comply. For more information about the descriptions of the unit attributes specific Unit Attribute Forms may be viewed at www.tceq.texas.gov/permitting/air/nav/air_all_ua_forms.html.

A list of unit attribute forms is included at the end of this document. Some examples of unit attributes include construction date; product stored in a tank; boiler fuel type; etc. Generally, multiple attributes are needed to determine the requirements for a given emission unit and index number. The table below lists these attributes in the column entitled “Basis of Determination.” Attributes that demonstrate that an applicable requirement applies will be the factual basis for the specific citations in an applicable requirement that apply to a unit for that index number. The TCEQ Air Permits Division has developed flowcharts for determining applicability of state and federal regulations based on the unit attribute information in a Decision Support System (DSS). These flowcharts can be accessed via the internet at www.tceq.texas.gov/permitting/air/nav/air_supportsys.html. The Air Permits Division staff may also be contacted for assistance at (512) 239-1250.

The attributes for each unit and corresponding index number provide the basis for determining the specific legal citations in an applicable requirement that apply, including emission limitations or standards, monitoring, recordkeeping, and reporting. The rules were found to apply or not apply by using the unit attributes as answers to decision questions found in the flowcharts of the DSS. Some additional attributes indicate which legal citations of a rule apply. The legal citations that apply to each emission unit may be found in the Applicable Requirements Summary table of the draft permit. There may be some entries or rows of units and rules not found in the permit, or if the permit contains a permit shield, repeated in the permit shield area. These are sets of attributes that describe negative applicability, or; in other words, the reason why a potentially applicable requirement does not apply.

If applicability determinations have been made which differ from the available flowcharts, an explanation of the decisions involved in the applicability determination is specified in the column “Changes and Exceptions to RRT.” If there were no exceptions to the DSS, then this column has been removed.

The draft permit includes all emission limitations or standards, monitoring, recordkeeping and reporting required by each applicable requirement. If an applicable requirement does not require monitoring, recordkeeping, or reporting, the word “None” will appear in the Applicable Requirements Summary table. If additional periodic monitoring is required for an applicable requirement, it will be explained in detail in the portion of this document entitled “Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected.”

When attributes demonstrate that a unit is not subject to an applicable requirement, the applicant may request a permit shield for those items. The portion of this document entitled “Basis for Applying Permit Shields” specifies which units, if any, have a permit shield.

Operational Flexibility

When an emission unit has multiple operating scenarios, it will have a different index number associated with each operating condition. This means that units are permitted to operate under multiple operating conditions. The applicable requirements for each operating condition are determined by a unique set of unit attributes. For example, a tank may store two different products at different points in time. The tank may, therefore, need to comply with two distinct sets of
requirements, depending on the product that is stored. Both sets of requirements are included in the permit, so that the permit holder may store either product in the tank.
## Determination of Applicable Requirements

<table>
<thead>
<tr>
<th>Unit ID</th>
<th>Regulation</th>
<th>Index Number</th>
<th>Basis of Determination</th>
<th>Changes and Exceptions to DSS**</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRP-DIESEL</td>
<td>40 CFR Part 60, Subpart III</td>
<td>60IIII-1</td>
<td>Applicability Date = Stationary CI ICE commenced construction, reconstruction, or modification after 07/11/2005.</td>
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<td>Diesel = Diesel fuel is used.</td>
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<td>Kilowatts = Power rating is greater than 560 KW and less than or equal to 2237 KW.</td>
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<td>Exemptions = The CI ICE is not exempt due to national security, testing at an engine test cell/stand or as a temporary replacement.</td>
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<td>Displacement = Displacement is less than 10 liters per cylinder.</td>
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<td>Service = CI ICE is an emergency engine.</td>
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<td>Standards = The emergency CI ICE does not meet the standards applicable to non-emergency engines.</td>
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<td>Commencing = CI ICE was newly constructed after 07/11/2005.</td>
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<td>Compliance Option = The CI ICE and control device is installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions.</td>
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<td>Manufacture Date = Date of manufacture was after 04/01/2006.</td>
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<td>Model Year = CI ICE was manufactured in model year 2012.</td>
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<tr>
<td>GRP-DIESEL</td>
<td>40 CFR Part 63, Subpart ZZZZ</td>
<td>63ZZZZ-1</td>
<td>HAP Source = The site is a major source of hazardous air pollutants as defined in 40 CFR § 63.2.</td>
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<td>Brake HP = Stationary RICE with a brake HP greater than 500 HP.</td>
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<td></td>
<td>Construction/Reconstruction Date = Commenced construction or reconstruction on or after June 12, 2006.</td>
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<tr>
<td></td>
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<td></td>
<td>Service Type = Emergency use where the RICE does not operate as specified in 40 CFR §63.6640(f)(2)(ii) and (iii) or does not operate as specified in 40 CFR §63.6640(f)(4)(ii).</td>
<td></td>
</tr>
<tr>
<td>GRP-HEAT</td>
<td>40 CFR Part 63, Subpart DDDDDD</td>
<td>63DDDDDD-1</td>
<td>CONSTRUCTION/RECONSTRUCTION DATE = Construction or reconstruction began after June 4, 2010.</td>
<td>The rule citations were determined from an analysis of the rule text and the basis of determination.</td>
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<tr>
<td></td>
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<td></td>
<td>FUEL TYPE = NATURAL GAS</td>
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<tr>
<td>GRP-HEAT</td>
<td>40 CFR Part 60, Subpart Dc</td>
<td>60Dc-1</td>
<td>Construction/Modification Date = After February 28, 2005.</td>
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<td></td>
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<td>Maximum Design Heat Input Capacity = Maximum design heat input capacity is less than 10 MMBtu/hr (2.9 MW).</td>
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<tr>
<td>GRP-TURB</td>
<td>40 CFR Part 60, Subpart KKKK</td>
<td>60KKKK-1</td>
<td>75% of Peak = The combustion turbine does not operate at less than 75% of peak load or at temperatures less than zero degrees F.</td>
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<td></td>
<td>Unit Type = Simple Combustion Turbine</td>
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<td></td>
<td>Construction/Modification Date = Turbine was constructed after February 18, 2005.</td>
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<td>SO\textsubscript{2} Standard = The heat input based SO\textsubscript{2} emission standard in § 60.4330(a)(2) or (a)(3) is being used.</td>
<td></td>
</tr>
<tr>
<td>Unit ID</td>
<td>Regulation</td>
<td>Index Number</td>
<td>Basis of Determination*</td>
<td>Changes and Exceptions to DSS**</td>
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<tr>
<td>---------</td>
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<td>-----------------------------------</td>
</tr>
<tr>
<td>GRP-TURB</td>
<td>40 CFR Part 60, Subpart TTTT</td>
<td>60TTTT-1</td>
<td>Construction/Reconstruction/Modification Date = Commenced construction after January 8, 2014.</td>
<td>The rule citations were determined from an analysis of the rule text and the basis of determination.</td>
</tr>
<tr>
<td>GRP-TURB</td>
<td>40 CFR Part 63, Subpart YYYY</td>
<td>63YYYY-1</td>
<td>Construction/Reconstruction Date = Turbine was constructed, modified or reconstructed after 1/14/2003. Rate Peak Power Output = Power output rating is one megawatt or greater. Type of Service = Turbine is used in non-emergency service. Fuel Fired = Turbine is fired with natural gas. Affected Pollutant - 112(B) HAPS: Reporting - § 63.6145(b) was removed because the units were built after March 5, 2004.</td>
<td></td>
</tr>
<tr>
<td>GRP-TURB</td>
<td>30 TAC Chapter 111, Visible Emissions</td>
<td>R111-1</td>
<td>Alternate Opacity Limitation = Not complying with an alternate opacity limit under 30 TAC § 111.113. Vent Source = The source of the vent is not a steam generator fired by solid fossil fuel, oil or a mixture of oil and gas and is not a catalyst regenerator for a fluid bed catalytic cracking unit. Opacity Monitoring System = Optical instrument capable of measuring the opacity of emissions is not installed in the vent or optical instrumentation does not meet the requirements of § 111.111(a)(1)(D), or the vent stream does not qualify for the exemption in § 111.111(a)(3). Construction Date = After January 31, 1972 Effluent Flow Rate = Effluent flow rate is at least 100,000 actual cubic feet per minute.</td>
<td></td>
</tr>
</tbody>
</table>

* - The "unit attributes" or operating conditions that determine what requirements apply

** - Notes changes made to the automated results from the DSS, and a brief explanation why
NSR Versus Title V FOP

The state of Texas has two Air permitting programs, New Source Review (NSR) and Title V Federal Operating Permits. The two programs are substantially different both in intent and permit content.

NSR is a preconstruction permitting program authorized by the Texas Clean Air Act and Title I of the Federal Clean Air Act (FCAA). The processing of these permits is governed by 30 Texas Administrative Code (TAC) Chapter 116.111. The Title V Federal Operating Program is a federal program authorized under Title V of the FCAA that has been delegated to the state of Texas to administer and is governed by 30 TAC Chapter 122. The major differences between the two permitting programs are listed in the table below:

<table>
<thead>
<tr>
<th>NSR Permit</th>
<th>Federal Operating Permit (FOP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issued Prior to new Construction or modification of an existing facility</td>
<td>For initial permit with application shield, can be issued after operation commences; significant revisions require approval prior to operation.</td>
</tr>
<tr>
<td>Authorizes air emissions</td>
<td>Codifies existing applicable requirements, does not authorize new emissions</td>
</tr>
<tr>
<td>Ensures issued permits are protective of the environment and human health by conducting a health effects review and that requirement for best available control technology (BACT) is implemented.</td>
<td>Applicable requirements listed in permit are used by the inspectors to ensure proper operation of the site as authorized. Ensures that adequate monitoring is in place to allow compliance determination with the FOP.</td>
</tr>
<tr>
<td>Up to two Public notices may be required. Opportunity for public comment and contested case hearings for some authorizations.</td>
<td>One public notice required. Opportunity for public comments. No contested case hearings.</td>
</tr>
<tr>
<td>Applies to all point source emissions in the state.</td>
<td>Applies to all major sources and some non-major sources identified by the EPA.</td>
</tr>
<tr>
<td>Applies to facilities: a portion of site or individual emission sources</td>
<td>One or multiple FOPs cover the entire site (consists of multiple facilities)</td>
</tr>
<tr>
<td>Permits include terms and conditions under which the applicant must construct and operate its various equipment and processes on a facility basis.</td>
<td>Permits include terms and conditions that specify the general operational requirements of the site; and also include codification of all applicable requirements for emission units at the site.</td>
</tr>
<tr>
<td>Opportunity for EPA review for Federal Prevention of Significant Deterioration (PSD) and Nonattainment (NA) permits for major sources.</td>
<td>Opportunity for EPA review, Affected states review, and a Public petition period for every FOP.</td>
</tr>
<tr>
<td>Permits have a table listing maximum emission limits for pollutants</td>
<td>Permit has an applicable requirements table and Periodic Monitoring (PM) / Compliance Assurance Monitoring (CAM) tables which document applicable monitoring requirements.</td>
</tr>
<tr>
<td>Permits can be altered or amended upon application by company. Permits must be issued before construction or modification of facilities can begin.</td>
<td>Permits can be revised through several revision processes, which provide for different levels of public notice and opportunity to comment. Changes that would be significant revisions require that a revised permit be issued before those changes can be operated.</td>
</tr>
<tr>
<td>NSR permits are issued independent of FOP requirements.</td>
<td>FOP are independent of NSR permits, but contain a list of all NSR permits incorporated by reference</td>
</tr>
</tbody>
</table>
New Source Review Requirements

Below is a list of the New Source Review (NSR) permits for the permitted area. These NSR permits are incorporated by reference into the operating permit and are enforceable under it. These permits can be found in the main TCEQ file room, located on the first floor of Building E, 12100 Park 35 Circle, Austin, Texas. In addition, many of the permits are accessible online through the link provided below. The Public Education Program may be contacted at 1-800-687-4040 or the Air Permits Division (APD) may be contacted at 1-512-239-1250 for help with any question.

Additionally, the site contains emission units that are permitted by rule under the requirements of 30 TAC Chapter 106, Permits by Rule. Permit by Rule (PBR) registrations submitted by permittees are also available online through the link provided below. The following table specifies the PBRs that apply to the site.

The TCEQ has interpreted the emission limits prescribed in 30 TAC §106.4(a) as both emission thresholds and default emission limits. The emission limits in 30 TAC §106.4(a) are all considered applicable to each facility as a threshold matter to ensure that the owner/operator qualifies for the PBR authorization. Those same emission limits are also the default emission limits if the specific PBR does not further limit emissions or there is no lower, certified emission limit claimed by the owner/operator.

This interpretation is consistent with how TCEQ has historically determined compliance with the emission limits prior to the addition of the "as applicable" language. The "as applicable" language was added in 2014 as part of changes to the sentence structure in a rulemaking that made other changes to address greenhouse gases and was not intended as a substantive rule change. This interpretation also provides for effective and practical enforcement of 30 TAC §106.4(a), since for the TCEQ to effectively enforce the emission limits in 30 TAC §106.4(a) as emission thresholds, all emission limits must apply. As provided by 30 TAC §106.4(a)(2) and (3), an owner/operator shall not claim a PBR authorization if the facility is subject to major New Source Review. The practical and legal effect of the language in 30 TAC §106.4 is that if a facility does not emit a pollutant, then the potential to emit for that particular pollutant is zero, and thus, the facility is not authorized to emit the pollutant pursuant to the PBR.

The status of air permits, applications, and PBR registrations may be found by performing the appropriate search of the databases located at the following website:

www.tceq.texas.gov/permitting/air/nav/air_status_permits.html

Details on how to search the databases are available in the Obtaining Permit Documents section below.

New Source Review Authorization References

<table>
<thead>
<tr>
<th>Prevention of Significant Deterioration (PSD) Permits</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PSD Permit No.: GHGPSDTX41M1</td>
<td>Issuance Date: 05/20/2015</td>
</tr>
<tr>
<td>PSD Permit No.: PSDTX1358M1</td>
<td>Issuance Date: 05/03/2017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization No.: 109148</td>
<td>Issuance Date: 05/03/2017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Permits By Rule (30 TAC Chapter 106) for the Application Area</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number: 106.263</td>
<td>Version No./Date: 11/01/2001</td>
</tr>
<tr>
<td>Number: 106.373</td>
<td>Version No./Date: 09/04/2000</td>
</tr>
</tbody>
</table>
Emission Units and Emission Points

In air permitting terminology, any source capable of generating emissions (for example, an engine or a sandblasting area) is called an Emission Unit. For purposes of Title V, emission units are specifically listed in the operating permit when they have applicable requirements other than New Source Review (NSR), or when they are listed in the permit shield table.

The actual physical location where the emissions enter the atmosphere (for example, an engine stack or a sandblasting yard) is called an emission point. For New Source Review preconstruction permitting purposes, every emission unit has an associated emission point. Emission limits are listed in an NSR permit, associated with an emission point. This list of emission points and emission limits per pollutant is commonly referred to as the “Maximum Allowable Emission Rate Table”, or “MAERT” for short. Specifically, the MAERT lists the Emission Point Number (EPN) that identifies the emission point, followed immediately by the Source Name, identifying the emission unit that is the source of those emissions on this table.

Thus, by reference, an emission unit in a Title V operating permit is linked by reference number to an NSR authorization, and its related emission point.

Monitoring Sufficiency

Federal and state rules, 40 CFR § 70.6(a)(3)(i)(B) and 30 TAC § 122.142(c) respectively, require that each federal operating permit include additional monitoring for applicable requirements that lack periodic or instrumental monitoring (which may include recordkeeping that serves as monitoring) that yields reliable data from a relevant time period that are representative of the emission unit’s compliance with the applicable emission limitation or standard. Furthermore, the federal operating permit must include compliance assurance monitoring (CAM) requirements for emission sources that meet the applicability criteria of 40 CFR Part 64 in accordance with 40 CFR § 70.6(a)(3)(i)(A) and 30 TAC § 122.604(b).

With the exception of any emission units listed in the Periodic Monitoring or CAM Summaries in the FOP, the TCEQ Executive Director has determined that the permit contains sufficient monitoring, testing, recordkeeping, and reporting requirements that assure compliance with the applicable requirements. If applicable, each emission unit that requires additional monitoring in the form of periodic monitoring or CAM is described in further detail under the Rationale for CAM/PM Methods Selected section following this paragraph.

Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected

Periodic Monitoring:

The Federal Clean Air Act requires that each federal operating permit include monitoring sufficient to assure compliance with the terms and conditions of the permit. Most of the emission limits and standards applicable to emission units at Title V sources include adequate monitoring to show that the units meet the limits and standards. For those requirements that do not include monitoring, or where the monitoring is not sufficient to assure compliance, the federal operating permit must include such monitoring for the emission units affected. The following emission units are subject to periodic monitoring requirements because the emission units are subject to an emission limitation or standard for an air pollutant (or surrogate thereof) in an applicable requirement that does not already require monitoring, or the monitoring for the applicable requirement is not sufficient to assure compliance:
<table>
<thead>
<tr>
<th>Unit/Group/Process Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID No.: GRP-TURB</td>
</tr>
<tr>
<td>Control Device ID No.: N/A</td>
</tr>
<tr>
<td>Control Device Type: N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Applicable Regulatory Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: 30 TAC Chapter 111, Visible Emissions</td>
</tr>
<tr>
<td>SOP Index No.: R111-1</td>
</tr>
<tr>
<td>Pollutant: PM (Opacity)</td>
</tr>
<tr>
<td>Main Standard: § 111.111(a)(1)(C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitoring Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator: Fuel Type</td>
</tr>
<tr>
<td>Minimum Frequency: Annually</td>
</tr>
<tr>
<td>Averaging Period: n/a</td>
</tr>
</tbody>
</table>

Deviation Limit: Burning alternate fuel alone or in combination with natural gas shall be reported as a deviation.

Basis of monitoring:
Industry has demonstrated through performance tests and historical data that opacity and particulate matter standards are consistently met when combustion units fire natural gas only.
Obtaining Permit Documents

The New Source Review Authorization References table in the FOP specifies all NSR authorizations that apply at the permit area covered by the FOP. Individual NSR permitting files are located in the TCEQ Central File Room (TCEQ Main Campus located at 12100 Park 35 Circle, Austin, Texas, 78753, Building E, Room 103). They can also be obtained electronically from TCEQ’s Central File Room Online (https://www.tceq.texas.gov/goto/cfr-online). Guidance documents that describe how to search electronic records, including Permits by Rule (PBRs) or NSR permits incorporated by reference into an FOP, archived in the Central File Room server are available at https://www.tceq.texas.gov/permitting/air/nav/air_status_permits.html

All current PBRs are contained in Chapter 106 and can be viewed at the following website:

https://www.tceq.texas.gov/permitting/air/permitbyrule/air_pbr_index.html

Previous versions of 30 TAC Chapter 106 PBRs may be viewed at the following website:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/old106list/index106.html

Historical Standard Exemption lists may be viewed at the following website:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/oldselist/se_index.html

Additional information concerning PBRs is available on the TCEQ website:

https://www.tceq.texas.gov/permitting/air/nav/air_pbr.html

Compliance Review

1. In accordance with 30 TAC Chapter 60, the compliance history was reviewed on January 6, 2016.
   Site rating: 0.00 / High Company rating: 0.00 / High
   (High < 0.10; Satisfactory ≥ 0.10 and ≤ 55; Unsatisfactory > 55)

2. Has the permit changed on the basis of the compliance history or site/company rating? .................................................No

Site/Permit Area Compliance Status Review

1. Were there any out-of-compliance units listed on Form OP-ACPS? .................................................................No

2. Is a compliance plan and schedule included in the permit? .................................................................No

Available Unit Attribute Forms

OP-UA1 - Miscellaneous and Generic Unit Attributes
OP-UA2 - Stationary Reciprocating Internal Combustion Engine Attributes
OP-UA3 - Storage Tank/Vessel Attributes
OP-UA4 - Loading/Unloading Operations Attributes
OP-UA5 - Process Heater/Furnace Attributes
OP-UA6 - Boiler/Steam Generator/Steam Generating Unit Attributes
OP-UA7 - Flare Attributes
OP-UA8 - Coal Preparation Plant Attributes
OP-UA9 - Nonmetallic Mineral Process Plant Attributes
OP-UA10 - Gas Sweetening/Sulfur Recovery Unit Attributes
OP-UA11 - Stationary Turbine Attributes
OP-UA12 - Fugitive Emission Unit Attributes
OP-UA13 - Industrial Process Cooling Tower Attributes
OP-UA14 - Water Separator Attributes
OP-UA15 - Emission Point/Stationary Vent/Distillation Operation/Process Vent Attributes
OP-UA16 - Solvent Degreasing Machine Attributes
OP-UA17 - Distillation Unit Attributes
OP-UA18 - Surface Coating Operations Attributes