

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



## EXAMPLE A

### NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR AN AIR QUALITY PERMIT

#### PROPOSED AIR QUALITY PERMIT NUMBERS: 121051 AND PSDTX1418

**APPLICATION AND PRELIMINARY DECISION.** Navasota North Country Peakers Operating Company I LLC, 403 Corporate Wood Dr, Magnolia, Texas 77354-2758, has applied to the Texas Commission on Environmental Quality (TCEQ) for issuance of Proposed Air Quality Permit 121051 and Prevention of Significant Deterioration (PSD) Air Quality Permit PSDTX1418, which would authorize construction of an electrical power generating facility. Driving directions are as follows: from US 75 in Van Alstyne turn east onto Van Alstyne Pkwy and go 0.6 miles then turn south onto Waco St and go 0.1 miles then turn east onto Jefferson St and go 0.2 miles then turn south onto Sherman Rd and go 0.4 miles then turn east on Ballard Rd and go 1.6 miles, Van Alstyne, Grayson County, Texas 75495. This application was submitted to the TCEQ on June 23, 2014. The proposed facility will emit the following air contaminants in a significant amount: volatile organic compounds, carbon monoxide, nitrogen oxides, and particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less. In addition, the facility will emit the following air contaminants: sulfur dioxide, sulfuric acid, hazardous air pollutants, and lead.

A full PSD increment analysis was not required because the predicted impacts of all pollutants subject to PSD review were below the significant impact level for each pollutant.

The executive director has determined that the emissions of air contaminants from the proposed facility which are subject to PSD review will not violate any state or federal air quality regulations and will not have any significant adverse impact on soils, vegetation, or visibility. All air contaminants have been evaluated, and "best available control technology" will be used for the control of these contaminants.

The executive director has completed the technical review of the application and prepared a draft permit which, if approved, would establish the conditions under which the facility must operate. The permit application, executive director's preliminary decision, draft permit, and the executive director's preliminary determination summary and executive director's air quality analysis, will be available for viewing and copying at the TCEQ central office, the TCEQ Dallas/Fort Worth regional office, and at the Sherman Public Library, 421 North Travis Street, Sherman, Grayson County, Texas, and the Van Alstyne Public Library, 117 North Waco Street, Van Alstyne, Grayson County, Texas, beginning the first day of publication of this notice. The facility's compliance file, if any exists, is available for public review at the TCEQ Dallas/Fort Worth Regional Office, 2309 Gravel Dr, Fort Worth, Texas.

**INFORMATION AVAILABLE ONLINE.** These documents are accessible through the Commission's Web site at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid): the executive director's preliminary decision which includes the draft permit, the executive director's preliminary determination summary, the air quality analysis, and, once available, the executive director's response to comments and the final decision on this application. Access the Commissioners' Integrated Database (CID) using the above link and enter the permit number for this application. The public location mentioned above, the Sherman Public Library, 421 North Travis Street,

Sherman, Grayson County, Texas, and the Van Alstyne Public Library, 117 North Waco Street, Van Alstyne, Grayson County, Texas provides public access to the internet. This link to an electronic map of the site or facility's general location is provided as a public courtesy and not part of the application or notice. For exact location, refer to the application.

<http://www.tceq.texas.gov/assets/public/hb610/index.html?lat=33.416062&lng=-96.540188&zoom=13&type=r>.

**PUBLIC COMMENT/PUBLIC MEETING.** A public meeting will be held and will consist of two parts, an Informal Discussion Period and a Formal Comment Period. A public meeting is not a contested case hearing under the Administrative Procedure Act. During the Informal Discussion Period, the public will be encouraged to ask questions of the applicant and TCEQ staff concerning the application. The comments and questions submitted orally during the Informal Discussion Period will not be considered before a decision is reached on the permit and no formal response will be made. Responses will be provided orally during the informal Discussion Period. During the Formal Comment Period, members of the public may state their formal comments orally into the official record. A written response to all formal comments will be prepared by the Executive Director and will be sent to each person who submits a formal comment or who requested to be on the mailing list for this permit application and provides a mailing address. Only relevant and material issues raised during the Formal Comment Period can be considered if a contested case hearing is held.

**The Public Meeting is to be held:  
Tuesday, January 13, 2015 at 7:00 PM  
Grayson County Courthouse  
East Court Room Courthouse  
100 W. Houston St.  
Sherman, TX 75090**

**You may submit additional written public comments either electronically at [www.tceq.texas.gov/about/comments.html](http://www.tceq.texas.gov/about/comments.html) or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087, within 30 days of the date of newspaper publication of this notice.**

After the deadline for public comment, the executive director will consider the comments and prepare a response to all relevant and material or significant public comments. **The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on the mailing list for this application. The mailing will also provide instructions for requesting a contested case hearing or reconsideration of the executive director's decision.**

**OPPORTUNITY FOR A CONTESTED CASE HEARING.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court. **A person who may be affected by emissions of air contaminants from the facility is entitled to request a hearing. A contested case hearing request must include the following: (1) your name (or for a group or association, an official representative), mailing address, daytime phone number, and fax number, if any; (2) applicant's name and permit number; (3) the statement "I/we request a contested case hearing;" (4) a specific description of how you would be adversely affected by the application and air emissions from the facility in a way not common to the general public; (5) the location and distance of your property relative to the facility; and (6) a description of how you use the property which may be impacted by the facility. If the request is made by a group or association, then one or more members who have standing to request a hearing and the interests the group or association seeks to protect must also be identified. You may also submit your proposed adjustments to the application/permit which would satisfy your concerns. Requests for a contested case hearing must be submitted in writing within 30 days following**

**this notice to the Office of the Chief Clerk, at the address provided in the information section below.**

A contested case hearing will only be granted based on disputed issues of fact that are relevant and material to the Commission's decisions on the application. Further, the Commission will only grant a hearing on issues raised by you or others during the public comment period that have not been withdrawn. Issues that are not raised in public comments may not be considered during a hearing.

**EXECUTIVE DIRECTOR ACTION.** A timely hearing request has been received by the TCEQ. However, if all timely contested case hearing requests have been withdrawn and no additional comments are received, the executive director may issue final approval of the application. The response to comments, along with the executive director's decision on the application will be mailed to everyone who submitted public comments or is on a mailing list for this application, and will be posted electronically to the Commissioners' Integrated Database (CID). If all timely hearing requests are not withdrawn, the executive director will not issue final approval of the permit and will forward the application and requests to the Commissioners for their consideration at a scheduled commission meeting.

**INFORMATION AVAILABLE ONLINE.** When they become available, the executive director's response to comments and the final decision on this application will be accessible through the Commission's website at [www.tceq.texas.gov/goto/cid](http://www.tceq.texas.gov/goto/cid). Once you have access to the CID using the above link, enter the permit number for this application which is provided at the top of this notice.

**MAILING LIST.** You may ask to be placed on a mailing list to obtain additional information on this application by sending a request to the Office of the Chief Clerk at the address below.

**AGENCY CONTACTS AND INFORMATION.** Public comments and requests must be submitted either electronically at [www.tceq.texas.gov/about/comments.html](http://www.tceq.texas.gov/about/comments.html), or in writing to the Texas Commission on Environmental Quality, Office of the Chief Clerk, MC-105, P.O. Box 13087, Austin, Texas 78711-3087. If you communicate with the TCEQ electronically, please be aware that your email address, like your physical mailing address, will become part of the agency's public record. For more information about this permit application or the permitting process, please call the Public Education Program toll free at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040.

Further information may also be obtained from Navasota North Country Peakers Operating Company I LLC at the address stated above or by calling Mr. Bill Skinner, Director of Engineering at (281) 252-5221.

Persons with disabilities who need special accommodations at the meeting should call the Office of the Chief Clerk at (512) 239-3300 or 1-800-RELAY-TX-(TDD) at least one week prior to the meeting.

Notice Issuance Date: December 19, 2014

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 121051 and PSDTX1418

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

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CTG1	Simple cycle CT Model - GE 7FA.04	NO <sub>x</sub>	65.6	84.1
		NO <sub>x</sub> MSS (5)	80.3	--
		CO	33.1	113.4
		CO MSS (5)	219.4	--
		VOC	5.1	13.9
		VOC MSS (5)	28.1	--
		SO <sub>2</sub>	2.8	3.3
		PM	8.6	10.8
		PM <sub>10</sub>	8.6	10.8
		PM <sub>2.5</sub>	8.6	10.8
CTG2	Simple cycle CT Model - GE 7FA.04	H <sub>2</sub> SO <sub>4</sub> (6)	0.2	0.3
		NO <sub>x</sub>	65.6	84.1
		NO <sub>x</sub> MSS (5)	80.3	--
		CO	33.1	113.4
		CO MSS (5)	219.4	--
		VOC	5.1	13.9
		VOC MSS (5)	28.1	--
		SO <sub>2</sub>	2.8	3.3
		PM	8.6	10.8
		PM <sub>10</sub>	8.6	10.8
PM <sub>2.5</sub>	8.6	10.8		
H <sub>2</sub> SO <sub>4</sub> (6)	0.2	0.3		

## Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
CTG3	Simple cycle CT Model - GE 7FA.04	NO <sub>x</sub>	65.6	84.1
		NO <sub>x</sub> MSS (5)	80.3	--
		CO	33.1	113.4
		CO MSS (5)	219.4	--
		VOC	5.1	13.9
		VOC MSS (5)	28.1	--
		SO <sub>2</sub>	2.8	3.3
		PM	8.6	10.8
		PM <sub>10</sub>	8.6	10.8
		PM <sub>2.5</sub>	8.6	10.8
		H <sub>2</sub> SO <sub>4</sub> (6)	0.2	0.3
FP-1	Firewater Pump Engine (Normal and MSS Operation)	NO <sub>x</sub>	1.4	0.35
		CO	1.7	0.43
		VOC	0.6	0.15
		SO <sub>2</sub>	0.003	<0.01
		PM	0.10	0.02
		PM <sub>10</sub>	0.10	0.02
		PM <sub>2.5</sub>	0.10	0.02
NG1	Natural Gas Piping Fugitives (7)	VOC	0.04	0.2
DE1	Diesel Fuel Storage Tank (Normal and MSS Operation)	VOC	0.03	<0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name. For fugitive sources, use area name or fugitive source name.

(3) NO<sub>x</sub> - total oxides of nitrogen

CO - carbon monoxide

Emission Sources - Maximum Allowable Emission Rates

- VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
- SO<sub>2</sub> - sulfur dioxide
- PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>
- PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>
- PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
- H<sub>2</sub>SO<sub>4</sub> - sulfuric acid

- (4) Compliance with annual emission limits (tons per year) is based on a 12-month rolling period. Annual limits include normal and planned MSS emissions.
- (5) Emission limits applicable during planned MSS activities. Hourly emissions of NO<sub>x</sub>, CO, and VOC are the only emissions that are higher than emissions during normal operations. During CT MSS, normal operations emission limits apply to all pollutants not shown with separate MSS limits. The MSS hourly emission limits apply to any clock hour during which the CT has any operation in MSS mode.
- (6) PM/PM<sub>10</sub>/PM<sub>2.5</sub> includes H<sub>2</sub>SO<sub>4</sub>.
- (7) Fugitive emission rates are estimates and are enforceable through compliance with the applicable special conditions and permit application representations.

Date: \_\_\_\_\_

## Special Conditions

Permit Numbers 121051 and PSDTX1418

### Emission Rates and Permit Representations

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 that attached table. This permit authorizes planned maintenance, startup, and shutdown (MSS) activities which comply with the emission limits in the maximum allowable emission rates table (MAERT).
2. Emission limits are based upon representations in the permit application received June, 23 2014, as subsequently updated.

### Federal Applicability

3. The sources identified in this condition are subject to and shall comply with applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), New Source Performance Standards (NSPS) as follows:

Source	Emission Point Number (EPN)	Subpart	Standards of Performance for:
Combustion Turbines (CTs)	CTG-1, CTG-2, CTG-3	KKKK	Stationary Gas Turbines
Fire Water Pump Engine	FP-1	IIII	Stationary Compression-Ignition Internal Combustion Engines
All of the above sources		A	General Conditions

The sources identified in this condition are subject to and shall comply with applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations in 40 CFR Part 63), National Emission Standards for Hazardous Air Pollutants for Source Categories as follows:

Source	Emission Point Number (EPN)	Subpart	Standards of Performance for:
Fire Water Pump Engine	FP-1	ZZZZ	Stationary Reciprocating Internal Combustion Engines
		A	General Conditions

### Operating Limitations, Performance Standards, and Fuel Specifications

4. This permit authorizes three natural gas-fired CTs identified as Emission Point Numbers (EPNs) CTG-1, CTG-2 and CTG-3 to operate in simple cycle, and one emergency fire water pump engine (EPN FP-1). Each CT shaft drives an electric generator. The CTs may employ evaporative cooling for power enhancement.
  - A. This permit authorizes construction and operation of CT model: GE 7FA.04 (General Electric);
  - B. The CTs are authorized to operate in normal operation, defined as operation that is not MSS operation.
  - C. The CTs are authorized for planned MSS operations as follows:
    - (1) startup, as defined in Special Condition No. 9C.;
    - (2) shutdown, as defined in Special Condition No. 9D.; and
    - (3) planned maintenance, subject to the conditions of this permit and the representations in the permit application.
  - D. The 300-horsepower (hp) emergency fire water pump engine is limited to 100 hours of non-emergency operation per year, on a rolling 12-month basis.
5. Fuel Specifications
  - A. Fuel for the CTs shall be limited to firing pipeline-quality, sweet natural gas containing no more than 0.5 grain total sulfur per 100 dry standard cubic feet (dscf).
  - B. The emergency fire water pump engine must use diesel fuel containing no more than 0.0015 percent (%) sulfur by weight.
  - C. Upon request by the Executive Director of the TCEQ or any air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel-fired in the CTs and fire water pump, or shall allow air pollution control agency representatives to obtain a sample for analysis.
6. Emissions from CTG-1, CTG-2 and CTG-3 while operating in normal operation shall not exceed the following concentrations in parts per million by volume, dry basis (ppmvd) at 15% oxygen (O<sub>2</sub>). Compliance with the NO<sub>x</sub> and CO concentration limits shall be demonstrated on a three-hour rolling average using the continuous emissions monitoring systems (CEMS) required by Special Condition No. 13.

Pollutant	Concentration
Nitrogen oxides	9.0
Carbon monoxide (CO)	9.0



7. Operating Limitations

- A. Annual emissions shall be limited by limiting the combined total of CTG-1, CTG-2 and CTG-3 annual operating activities to the following:

CT Activity	Combined Annual Limit(1) CTG-1, CTG-2 + CTG-3
Fuel use	14,136,600 MMBtu, LHV (2)
Startup hours	450
Shutdown hours	450
Operating hours (3)	2,500 multiplied by the number of turbines actually installed at the site

(1) Annual is a 12-month rolling average.

(2) MMBtu, LHV – million British thermal units, lower heating value.

(3) Including normal and MSS operations.

- B. The annual fuel usage limit in Special Condition No. 7A is calculated by converting the volume of delivered fuel, as measured by the fuel meters specified in Special Condition No. 14, into MMBtu, LHV, using a LHV-to-higher heating value (HHV) ratio of 0.9017.
- C. The number of hours of CT operation in startup, shutdown, and normal operating modes may be demonstrated with operating time records of parameters such as fuel feed rates or power generation. Only the portion of the hours that CTG-1, CTG-2 and CTG-3 are in startup or shutdown mode, as defined in Special Condition No. 9C and 9D, will be used to demonstrate compliance with the limits for startup and shutdown hours in Special Condition No. 7A.
8. During normal operation, opacity of emissions from the CTG-1, CTG-2 and CTG-3 exhaust stacks shall not exceed 5% averaged over a six-minute period. During planned MSS activities, the opacity shall not exceed 15%. Each determination shall be made by first observing for visible emissions while the facility is operating. Visible emission observations shall be made at least 15 feet and no more than 0.25 mile from the emission point. If visible emissions are observed from a stack, then opacity shall be determined in accordance with 40 CFR Part 60, Appendix A, Test Method 9. The opacity test must be performed by a certified opacity reader. Contributions from uncombined water shall not be included in determining compliance with this condition.

Visible emission observations shall be performed and recorded once per quarter. If the opacity exceeds 5% during normal operation or 15% during MSS activities, corrective action to eliminate the source of visible emissions shall be taken promptly and documented within one week of first observation.

### **Routine Maintenance, Startup and Shutdown**

9. The emissions from planned MSS activities related to CTG-1, CTG-2 and CTG-3 are reflected in the MAERT. These emissions will be minimized by the following:
  - A. Facility and air pollution control equipment will be operated in a manner consistent with good practices for minimizing emissions.
  - B. The duration of operation in MSS mode will be minimized and the applicable emissions monitoring systems will be kept in operation.
  - C. Startup.
    - (1) A single startup event for each CT shall not exceed 120 minutes except for those startup events that are also planned maintenance activities under Special Condition No. 9E(2).
    - (2) A startup event is defined as the period that begins when fuel flow is initiated in the CT as indicated by flame detection and ends when the normal operating low-NO<sub>x</sub> combustion mode is achieved plus 15 minutes.
  - D. Shutdown.
    - (1) A single shutdown event for each CT shall not exceed 60 minutes.
    - (2) A shutdown event is defined as the time period that begins when the CT drops out of the normal operating low-NO<sub>x</sub> combustion mode following an instruction to shut down, and ends when flame is no longer detected in the CT combustors. A shutdown event will also end if the CT is instructed to return to normal operating low-NO<sub>x</sub> combustion operating mode and subsequently achieves normal operating low-NO<sub>x</sub> combustion mode.
  - E. Maintenance.
    - (1) Maintenance activities authorized in this permit for the CTs are identified as any of the following:
      - (a) CEMs maintenance and calibration.
      - (b) Dry low NO<sub>x</sub> (DLN) burner tuning sessions. Tuning sessions are scheduled events and would occur after the completion of initial construction, a combustor change-out, a major repair, maintenance to a combustor, or other similar circumstances.
      - (c) Rotor maintenance, including rotor burn-in.
    - (2) Combustion tuning/optimization and rotor burn-in of the CT is limited to 20 hours per event.
  - F. The MSS activities identified in 9C, 9D, and 9E of this Special Condition are authorized provided that the mass emission rates in pounds per hour (lbs/hr) do not exceed those specified in the MAERT.

### **Initial Determination of Compliance**

10. Sampling ports and platforms shall be incorporated into the design of all exhaust stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.
11. The holder of this permit shall perform stack sampling and other testing as required to establish the actual quantities of air contaminants being emitted into the atmosphere from EPNs CGT-1, CGT-2, and CGT-3 to determine initial compliance with all emission limits established in this permit. Sampling shall be conducted in accordance with the appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the appropriate EPA Reference Methods to be determined during the pretest meeting.

Fuel sampling using the methods and procedures of 40 CFR § 60.4415 may be conducted in lieu of stack sampling for sulfur dioxide (SO<sub>2</sub>) or the permit holder may be exempted from fuel monitoring of SO<sub>2</sub> as provided under 40 CFR § 60.4365(a). If fuel sampling is used, compliance with NSPS Subpart KKKK, SO<sub>2</sub> limits shall be based on 100 percent conversion of the sulfur in the fuel to SO<sub>2</sub>. Any deviations from those procedures must be approved by the Executive Director of the TCEQ prior to sampling. The TCEQ Executive Director or his designated representative shall be afforded the opportunity to observe all such sampling.

The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense.

- A. The TCEQ Dallas/Fort Worth Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.
- B. The notice shall include:
  - (1) Date for pretest meeting.
  - (2) Date sampling will occur.
  - (3) Name of firm conducting sampling.
  - (4) Type of sampling equipment to be used.
  - (5) Method or procedure to be used in sampling.
  - (6) Procedure used to determine turbine loads during and after the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions, or the TCEQ or EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive

testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate or equivalent procedure proposals for NSPS testing which must have EPA approval shall be submitted to the EPA and copied to TCEQ Regional Director.

- C. Air contaminants and diluents to be sampled and analyzed from each stack include (but are not limited to) NO<sub>x</sub>, CO, volatile organic compounds, SO<sub>2</sub>, and O<sub>2</sub>.
- D. Each CTG shall be tested at or above 90% of the maximum turbine load for the given atmospheric conditions at the time of testing. Each tested turbine load shall be identified in the sampling report. The permit holder shall present at the pretest meeting the manner in which stack sampling will be executed in order to demonstrate compliance with emission standards found in 40 CFR Part 60, Subpart KKKK, Table 1.
- E. Sampling as required by this condition shall occur within 60 days after achieving the nominal power output at which the turbine will be operated, but no later than 180 days after initial start-up of the combustion turbine. Additional sampling may be required by TCEQ or EPA.
- F. Within 60 days after the completion of the testing and sampling required herein, three copies of the sampling reports shall be distributed as follows:
  - (1) One copy to the TCEQ Dallas/Fort Worth Regional Office.
  - (2) One copy to the EPA Region 6 Office, Dallas.

### **Continuous Determination of Compliance**

- 12. The permit holder shall install, calibrate, and maintain a CEMS to measure and record the in-stack concentration of NO<sub>x</sub>, CO, and O<sub>2</sub> from each CT stack, EPNs CTG-1, CTG-2 and CTG-3.
  - A. The NO<sub>x</sub> and O<sub>2</sub> CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 2 and 3, 40 CFR Part 60, Appendix B. The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, 5.2.3 and any CEMS downtime shall be reported to the TCEQ Dallas/Fort Worth Regional Director, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the TCEQ Dallas/Fort Worth Regional Director. Compliance with the CEMS requirements of 40 CFR Part 60 can be demonstrated by meeting the applicable requirements of 40 CFR Part 75 provided that the holder of this permit demonstrates compliance with all applicable 40 CFR Part 60 emission standards.
  - B. The CO CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable performance specifications in 40 CFR Part

- 60, Performance Specification No. 4. The CEMS shall meet the applicable quality assurance requirements specified in 40 CFR Part 60, Appendix F, except that cylinder gas audits (CGA) conducted in all four quarters may be used in lieu of the annual relative accuracy test audit. Quarterly CGAs shall be conducted at least 60 days apart. A CGA is not required in any quarter in which the CT operates less than 168 hours.
- C. Relative accuracy exceedances (as specified in 40 CFR 60, Appendix F), CGA exceedances of  $\pm 15\%$  accuracy, and any CEMS downtime shall be reported to the TCEQ Dallas/Fort Worth Regional Director, and necessary corrective action shall be taken. Supplemental stack sampling may be required at the discretion of the TCEQ Dallas/Fort Worth Regional Director.
  - D. If any emission monitor fails to meet specified performance, it shall be repaired or replaced immediately. If repair or replacement is not immediately feasible, the monitor shall be repaired or replaced no later than seven days after the failure is first detected by an employee at the site, unless written permission is obtained from the TCEQ which allows for longer repair/replacement time. The holder of this permit shall develop an operation and maintenance program (including stocking necessary spare parts) to ensure that the continuous monitors are available as required. A monitor with downtime due to breakdown or repair of more than 10% of the facility operating time for any calendar year will be considered as a defective monitor and the monitor must be replaced within two weeks after exceeding the 10% threshold.
  - E. The monitoring data shall be reduced to hourly average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of lbs/hr at least once every day.
  - F. The monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS will be used to determine compliance with the conditions of this permit. During periods where the CEMS data is unavailable or not quality assured, compliance may alternatively be determined by using manufacturer emission factors or valid and representative data previously measured and recorded by the unit's CEMS under similar operating conditions.
  - G. The TCEQ Regional Office in Fort Worth shall be notified at least 30 days prior to any relative accuracy test audit (RATA) in order to provide them the opportunity to observe the testing.
13. The holder of this permit shall either measure, or develop a program to calculate, the total mass flow rate through the stacks to ensure continuous compliance with the emission limitations specified in the MAERT. The permit holder shall calculate hourly mass emissions in lbs/hr using the measured or calculated exhaust flow rate and the measured concentrations of  $\text{NO}_x$  and CO from the CEMS required in Special Condition No. 12. The hourly calculated values will be cumulatively added during each hour of the month and stored on a computer hard drive or other TCEQ-accepted computer media. Records of this information shall also be available in a form suitable for inspection.

14. The permit holder shall monitor fuel consumption from CTG-1, CTG-2, and CTG-3 individually and continuously, using monitoring devices that are accurate to  $\pm 2.0\%$  of the unit's maximum flow and maintain, calibrate, and operate the devices in accordance with the manufacturer's specifications. The devices shall be calibrated in accordance with the manufacturer's recommendations or at least annually.
15. After the initial demonstration of compliance, ongoing compliance with the VOC and PM tons per year emission rates in the MAERT shall be demonstrated by calculating rolling 12-month annual emissions from emission factors (lb/MMBtu, HHV) obtained from the results of the sampling required by Special Condition No. 11 and the monthly total heat input (MMBtu, HHV) from natural gas fuel.

### **Recordkeeping Requirements**

16. The following records shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction.
  - A. A copy of this permit.
  - B. Permit application received June 23, 2014 and supplemental information.
  - C. A complete copy of the testing reports and records of the initial performance testing completed pursuant to Special Condition No. 11 to demonstrate initial compliance.
  - D. Stack sampling results or other air emissions testing (other than CEMS data) that may be conducted on units authorized under this permit after the date of issuance of this permit.
17. The following records, written or electronic, shall be maintained at the plant site on a five-year rolling basis and be made readily available at the request of personnel from the TCEQ or any air pollution control agency with jurisdiction:
  - A. Records to show compliance with relevant requirements of applicable federal NSPS standards as required by Special Condition No. 3.
  - B. Records of natural gas fuel usage and the sulfur content according to the fuel suppliers for the CTs to show compliance with Special Condition Nos. 3, 5, and 7.
  - C. Records of hours of operation to show compliance with Special Condition No. 7.
  - D. Records of visible emission observations and if required, opacity readings, as specified in Special Condition No. 8.
  - E. Records of NO<sub>x</sub>, CO, and O<sub>2</sub> CEMS emissions data to demonstrate compliance with the emission rates listed in the MAERT.
  - F. Raw data files of all CEMS data including calibration checks and adjustments and maintenance performed on these systems.

- G. Records of the hours of operation and sulfur content of diesel fuel fired in the firewater pump engine, pursuant to Special Condition Nos. 4 and 5.
- H. For records of planned MSS:
  - (1) Date, time, and duration of the event; and
  - (2) Emissions from the event.

**Reporting**

- 18. The holder of this permit shall submit to the TCEQ Dallas/Fort Worth Regional Office and the Air Enforcement Branch of the EPA in Dallas semiannual reports as described in 40 CFR § 60.7. Such reports are required for each emission unit which is required to be continuously monitored pursuant to this permit.

Date: \_\_\_\_\_ dated \_\_\_\_\_

# Preliminary Determination Summary

Navasota North Country Peakers Operating Company I, L.L.C.  
Permit Numbers 121051 and PSDTX1418

## I. Applicant

Navasota North Country Peakers Operating Company I, L.L.C.  
403 Corporate Wood Dr  
Magnolia, Texas 77354-2758

## II. Project Location

Van Alstyne Energy Center  
Driving directions are as follows: from US 75 in Van Alstyne turn east onto Van Alstyne Pkwy and go 0.6 miles then turn south onto Waco St and go 0.1 miles then turn east onto Jefferson St and go 0.2 miles then turn south onto Sherman Rd and go 0.4 miles then turn east on Ballard Rd and go 1.6 miles.  
Grayson County  
Van Alstyne, Texas 75495

## III. Project Description

Navasota North Country Peakers Operating Company I, L.L.C. proposes to install three new natural gas fired combustion turbine generators (CTGs). The CTGs will be the General Electric 7FA (nominal 183 MW each) operating as peaking units in simple cycle mode.

## IV. Emissions

The proposed facility will emit the following pollutants:

Air Contaminant	Proposed Allowable Emission Rates (tpy)
NO <sub>x</sub>	252.7
CO	340.6
VOC	42.1
SO <sub>2</sub>	9.9
PM	32.4
PM <sub>10</sub>	32.4
PM <sub>2.5</sub>	32.4
H <sub>2</sub> SO <sub>4</sub>	0.9

The emission factors used in the emission rate calculations for startup and shutdown (SS) activities were provided by the turbine and associated equipment



vendors. Hourly and annual emission limitations are included on the Maximum Allowable Emission Rate Table (MAERT) separately if emissions were higher than non-SS emissions on an hourly basis.

## V. Federal Applicability

The site is located in an attainment county (Grayson County, city of Van Alstyne). The proposed source is a new major source at a greenfield site. The emissions of nitrogen oxides (NOx) and carbon monoxide (CO) were both above 250 tpy making the project a major source by itself. The remaining criteria pollutants were compared to the significant emission rate for each pollutant where volatile organic compounds (VOC), and particulate matter (PM) including particulate matter less than 10 microns and less than 2.5 microns in diameter (PM10/PM2.5) also triggered a PSD review. The project emissions were above the Prevention of Significant Deterioration (PSD) major modification significance level; therefore, PSD review was triggered for these pollutants and full modeling and impacts analyses were performed. Sulfur dioxide (SO2) and sulfuric acid mist (H2SO4) were below the significant emission rate. The following chart illustrates the annual project emissions for each pollutant and whether this pollutant triggers PSD review. These totals include SS emissions.

Pollutant	Project Emissions (tpy)	Major Mod Trigger (tpy)	PSD Triggered Y/N
NOx	252.7	40	Y
CO	340.6	100	Y
VOC	42.1	40	Y
SO2	9.9	40	N
PM	32.4	25	Y
PM10	32.4	15	Y
PM2.5	32.4	10	Y
H2SO4	0.9	7	N

## VI. Control Technology Review

In addition to a review of control technology for steady state operations, the best available control technology (BACT) analysis includes startup and shutdown emissions and the numerical emission limits in the draft permit reflect this analysis. Although the units may not meet the ppm by volume dry (ppmvd) limits during startup and shutdown, they will meet the mass emission limits (pounds per hour and tons per year) unless a separate limit was established, and

startup and shutdown events will be limited by Special Condition No. 9. Typical startup and shutdown of the turbine are conducted in accordance with manufacturer's recommendations to minimize emissions and maximize efficiencies.

As part of the BACT review process, the Texas Commission on Environmental Quality (TCEQ) evaluates information from the Environmental Protection Agency's (EPA's) RACT/BACT/LAER Clearinghouse (RBLC), on-going permitting in Texas and other states, and the TCEQ's continuing review of emissions control developments.

### CTGs

#### *Nitrogen Oxides (NO<sub>x</sub>):*

Each CTG is gas fired and equipped with dry low-NO<sub>x</sub> burners (DLN) to control NO<sub>x</sub> emissions to 9.0 ppmvd at 15% O<sub>2</sub> during steady state operations. DLN is a combustion zone technology that pre-mixes fuel and air to reduce thermal NO<sub>x</sub> formation without the need for water or steam injection. Since the CTGs are each limited to 2500 hours per year of operation, based on a rolling 12-month period, installing a selective catalytic reduction unit (SCR) would not be economically reasonable. Recently issued permits in Texas for peaking turbines include Tradinghouse (issued 2/7/14), Guadalupe Power Partners (issued 10/2/2013) and DeCordova (8/29/2013). The permits have a NO<sub>x</sub> concentration limit of 9 ppmvd at 15% O<sub>2</sub>. Therefore, the use of DLN to control NO<sub>x</sub> emissions to 9.0 ppmvd at 15% O<sub>2</sub> is consistent with recently issued permits for similar facilities and is BACT for the CTGs.

#### *Carbon Monoxide (CO):*

With DLN (designed to increase oxidation of CO to CO<sub>2</sub>) and operating the CTGs according to good combustion practices, CO emissions will be controlled to 9.0 ppmvd at 15% O<sub>2</sub>. Since the CTGs are restricted to the annual operating hours specified in the paragraph above for NO<sub>x</sub>, installing an oxidation catalyst would not be economically feasible. Recently issued peaking turbine permit in Texas have been issued at 9 ppmvd at 15% O<sub>2</sub>. Therefore, the use of DLN and good combustion practices to control CO emissions to 9.0 ppmvd at 15% O<sub>2</sub> is consistent with recently issued permits for similar facilities and is BACT for the CTGs.

#### *Volatile Organic Compounds (VOCs):*

Through maintenance of optimum combustion conditions and practices and firing the CTGs with pipeline-quality natural gas, VOC emissions will be controlled to 2.0 ppmvd at 15% O<sub>2</sub> during steady state operations. This meets BACT.

*Particulate Matter (PM/PM<sub>10</sub>/PM<sub>2.5</sub>):*

The CTGs will be fired with pipeline-quality natural gas. Pipeline-quality natural gas has very low ash and sulfur contents. This meets BACT.

*Sulfur Compounds (SO<sub>2</sub>/H<sub>2</sub>SO<sub>4</sub>):*

Emissions of SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> from the CTGs will occur from the oxidation of sulfur in the natural gas during combustion, with the majority of the sulfur converted to SO<sub>2</sub> and a small fraction converting to H<sub>2</sub>SO<sub>4</sub>. The CTGs will be fired with pipeline-quality natural gas with a sulfur content not exceeding 0.5 grain sulfur per 100 dry standard cubic feet, which will minimize the formation of SO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub>. This meets BACT.

*Turbine Planned Maintenance, Startup, and Shutdown (MSS):*

During periods of planned MSS, control devices and process equipment are operated outside the optimal range they were designed to work most effectively, and it is technically infeasible to meet the primary BACT emission rates.

Therefore, secondary BACT limits are necessary during these periods to minimize emissions. BACT will be achieved by minimizing the duration of the MSS events (consistent with standard operating procedures) to minimize the amount of time the equipment is outside the optimal performance mode and meeting the emission limitations on the MAERT.

Also, planned MSS activities must be performed using good air pollution control practices and safe operating practices to minimize emissions.

Emergency Engine

A firewater pump is proposed. BACT will be achieved through the installation of an engine which meets the requirements of 40 CFR 60, Subpart IIII. The engines will fire ultra low sulfur diesel fuel, containing no more than 15 parts per million (ppm) sulfur by weight. The firewater pump is limited to 100 hours per year of non-emergency operation per year. The diesel fuel tank will be submerged fill.

Fugitive Emissions

The fugitive emissions include VOC from the natural gas fuel lines (EPN NG1). Given the nature and quantity of the emissions, no control is BACT.

**VII. Air Quality Analysis**

The air quality analysis (AQA), as supplemented by the ADMT, is acceptable for all review types and pollutants. The results are summarized below.

## A. De Minimis Analysis

A De Minimis analysis was initially conducted to determine if a full impacts analysis would be required. The De Minimis analysis modeling results indicate that 1-hr NO<sub>2</sub> exceeds the interim de minimis concentration and requires a full impacts analysis. The De Minimis analysis modeling results for annual NO<sub>2</sub> and all averaging times of CO, PM<sub>10</sub>, and PM<sub>2.5</sub> indicate that the project is below the respective de minimis concentrations and no further analysis is required.

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

The applicant provided an evaluation of ambient PM<sub>2.5</sub> monitoring data, consistent with EPA guidance for PM<sub>2.5</sub><sup>2</sup>, for using the PM<sub>2.5</sub> De Minimis levels in the NAAQS analysis. If monitoring data shows that the difference between the PM<sub>2.5</sub> NAAQS and the monitored PM<sub>2.5</sub> background concentrations in the area is greater than the PM<sub>2.5</sub> De Minimis level, then the proposed project with predicted impacts below the De Minimis level would not cause or contribute to a violation of the PM<sub>2.5</sub> NAAQS and does not require a full impacts analysis. See the discussion below in the Air Quality Monitoring section for additional information on the evaluation of ambient PM<sub>2.5</sub> monitoring data.

The applicant did not provide sufficient justification for using the PM<sub>2.5</sub> De Minimis levels for the increment analysis. However, the ADMT reviewed the TCEQ air permit database to identify potential nearby increment affecting sources. The ADMT identified one increment affecting source. Based on the air permit data, the addition of this source to the modeled emission inventory would not cause an exceedance of the PM<sub>2.5</sub> increments.

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

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<sup>1</sup> [www.epa.gov/nsr/documents/20100629no2guidance.pdf](http://www.epa.gov/nsr/documents/20100629no2guidance.pdf)

<sup>2</sup> [www.epa.gov/ttn/scram/guidance/guide/Guidance\\_for\\_PM25\\_Permit\\_Modeling.pdf](http://www.epa.gov/ttn/scram/guidance/guide/Guidance_for_PM25_Permit_Modeling.pdf)

**Table 1. Modeling Results for PSD De Minimis Analysis  
 in Micrograms Per Cubic Meter ( $\mu\text{g}/\text{m}^3$ )**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>GLCmax (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>De Minimis (<math>\mu\text{g}/\text{m}^3</math>)</b>
PM <sub>10</sub>	24-hr	1.195	5
PM <sub>10</sub>	Annual	0.02	1
PM <sub>2.5</sub> (NAAQS)	24-hr	0.9	1.2
PM <sub>2.5</sub> (NAAQS)	Annual	0.02	0.3
PM <sub>2.5</sub> (Increment)	24-hr	1.195	1.2
PM <sub>2.5</sub> (Increment)	Annual	0.02	0.3
NO <sub>2</sub>	1-hr	29	7.5
NO <sub>2</sub>	Annual	0.3	1
CO	1-hr	265	2000
CO	8-hr	141	500

The 24-hr PM<sub>2.5</sub> (NAAQS) GLCmax is the highest five-year average of the maximum predicted 24-hr concentrations determined for each receptor across five years of meteorological data. The annual PM<sub>2.5</sub> (NAAQS) GLCmax is the highest five-year average of the predicted annual concentrations determined for each receptor across five years of meteorological data. The 1-hr NO<sub>2</sub> GLCmax is the highest five-year average of the predicted daily maximum 1-hr concentrations determined for each receptor across five years of meteorological data. The GLCmax for all other pollutants and averaging times are the maximum predicted concentrations associated with five years of meteorological data.

The applicant performed an analysis on secondary PM<sub>2.5</sub> formation as part of the PSD AQA. The applicant evaluated the project emissions of PM<sub>2.5</sub> precursor emissions (NO<sub>x</sub> and SO<sub>2</sub>). The project will result in a proposed increase of NO<sub>x</sub> emissions greater than 40 tons per year (tpy) and a proposed increase of SO<sub>2</sub> emissions less than 40 tpy.

Since the project SO<sub>2</sub> emissions are less than the PM<sub>2.5</sub> precursor significant emission rate (SER) for SO<sub>2</sub>, significant secondary PM<sub>2.5</sub> formation due to the proposed SO<sub>2</sub> emissions is not expected. The applicant used the EPA interpollutant trading (offset) ratios for PM<sub>2.5</sub> to demonstrate that

secondary PM<sub>2.5</sub> formation due to the proposed NO<sub>x</sub> emissions would not be significant. Using the offset ratios, the applicant determined that the proposed NO<sub>x</sub> emissions of 252.8 tpy would be equivalent to 1.26 tpy of PM<sub>2.5</sub> emissions. The proposed direct PM<sub>2.5</sub> emissions (32.2 tpy) are more than 20 times the equivalent PM<sub>2.5</sub> emissions. Secondary PM<sub>2.5</sub> formation occurs as a result of chemical transformations that occur in the atmosphere gradually over time and only a portion of the NO<sub>x</sub> emissions would be affected. Furthermore, secondary PM<sub>2.5</sub> formation from NO<sub>x</sub> is unlikely to overlap in time or space with nearby maximum primary PM<sub>2.5</sub> impacts associated with the project sources. The applicant concluded that the impact of the secondary PM<sub>2.5</sub> emissions from the project would be much less than the impacts resulting from direct PM<sub>2.5</sub> emissions, and the total impacts would be well below the NAAQS and increments.

## B. Air Quality Monitoring

The De Minimis analysis modeling results indicate that NO<sub>2</sub>, CO, and PM<sub>10</sub> are below their respective monitoring significance levels.

**Table 2. Modeling Results for PSD Monitoring Significance Levels**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Significance (µg/m <sup>3</sup> )
PM <sub>10</sub>	24-hr	1.195	10
NO <sub>2</sub>	Annual	0.3	14
CO	8-hr	141	575

The GLCmax are the maximum predicted concentrations associated with five years of meteorological data.

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

Background concentrations for PM<sub>2.5</sub> were obtained from the EPA AIRS monitor 484391002 located at 3317 Ross Ave., Fort Worth, Tarrant County. The three-year average (2011-2013) of the 98<sup>th</sup> percentile of the annual distribution of the 24-hr concentrations was used for the 24-hr value (23.3 µg/m<sup>3</sup>). The three-year average (2011-2013) of the annual concentrations was used for the annual value (10.5 µg/m<sup>3</sup>). The use of this monitor is reasonable based on the applicant's review of countywide emissions and population and a qualitative review of emissions sources in the surrounding area of the monitor site relative to the project site. In addition, the applicant

reviewed data from other PM<sub>2.5</sub> monitors in the area and found that the concentrations were comparable.

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

The De Minimis analysis modeling results indicate that 1-hr NO<sub>2</sub> exceeds the interim de minimis concentration and requires a full impacts analysis. The full NAAQS modeling results indicate the total predicted concentrations will not result in an exceedance of the NAAQS.

**Table 3. Total Concentrations for PSD NAAQS (Concentrations > De Minimis)**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Background (µg/m <sup>3</sup> )	Total Conc. = [Background + GLCmax] (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
NO <sub>2</sub>	1-hr	13.6	57.1	70.7	188

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

A background concentration for NO<sub>2</sub> was obtained from the EPA AIRS monitor 482311006 located at 824 Sayle St., Greenville, Hunt County. The three-year average (2011-2013) of the 98<sup>th</sup> percentile of the annual distribution of the maximum daily 1-hr concentrations was used for the 1-hr value. The use of this monitor is reasonable based on the applicant's review of countywide emissions and population and a qualitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

**Table 4. PSD Ambient Air Quality Analysis for Ozone**

Pollutant	Monitor	Averaging Time	Background (ppb)	Standard (ppb)
O <sub>3</sub>	482311006	8-hr	69	75

A background concentration for O<sub>3</sub> was obtained from the EPA AIRS monitor 482311006 located at 824 Sayle St., Greenville, Hunt County. A three-year average (2012-2014) of the annual fourth highest daily maximum 8-hr concentrations was used in the analysis. The use of this monitor is reasonable based on the applicant's review of countywide emissions and population and a qualitative review of emissions sources in the surrounding area of the monitor site relative to the project site.

EPA Region 6 has previously recommended a conservative analysis based on the NO<sub>2</sub> modeling to estimate the potential impacts on ozone levels. Considering that it takes time for the NO<sub>2</sub> emissions to react to generate ozone, an evaluation of maximum estimated NO<sub>2</sub> concentrations at a distance of 10-to-11 kilometers (km) downwind from the project source could be used to estimate the potential ozone impacts. EPA Region 6 has recommended that emission sources would have an average ozone yield of up to 2-3 ozone molecules per NO<sub>2</sub> molecule. The applicant used AERMOD to calculate a maximum 8-hr NO<sub>x</sub> concentration of 0.84 parts per billion (ppb) at a distance of 10 km. Assuming 90% conversion of NO<sub>x</sub> to NO<sub>2</sub> and an ozone yield of three ozone molecules per molecule of NO<sub>2</sub>, the 8-hr maximum predicted increase of ozone would be 2.3 ppb. Adding 2.3 ppb to the 8-hr ozone background of 69 ppb will result in a total 8-hr ozone concentration less than the 8-hr ozone NAAQS of 75 ppb.

#### **D. Increment Analysis**

The De Minimis analysis modeling results indicate that annual NO<sub>2</sub> and all averaging times of PM<sub>10</sub> and PM<sub>2.5</sub> are below the respective de minimis concentrations and do not require a PSD increment analysis. PSD increments do not exist for CO and 1-hr NO<sub>2</sub>.

Please refer to the De Minimis Analysis section above for a discussion on the justification of the PM<sub>2.5</sub> increment de minimis levels.

#### **E. Additional Impacts Analysis**

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

The ADMT evaluated predicted concentrations from the proposed site to determine if emissions could adversely affect a Class I area. The nearest Class I area, Caney Creek Wilderness, is located approximately 240 km from the proposed site.

The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration of 0.1 µg/m<sup>3</sup> occurred approximately 50 meters from the property line towards the south. The H<sub>2</sub>SO<sub>4</sub> 24-hr maximum predicted concentration occurring at the edge of the



receptor grid, 50 km from the proposed sources, in the direction of the Caney Creek Wilderness Class I area is 0.0003 µg/m<sup>3</sup>. The Caney Creek Wilderness Class I area is an additional 190 km from the edge of the receptor grid. Therefore, emissions of H<sub>2</sub>SO<sub>4</sub> from the proposed project are not expected to adversely affect the Caney Creek Wilderness Class I area.

The predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times, are all less than de minimis levels at a distance of two km from the proposed sources in the direction of Caney Creek Wilderness Class I area. The Caney Creek Wilderness Class I area is an additional 238 km from the location where the predicted concentrations of PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, and SO<sub>2</sub> for all averaging times are less than de minimis. Therefore, emissions from the proposed project are not expected to adversely affect the Caney Creek Wilderness Class I area.

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

**Table 5. Site-wide Modeling Results for State Property Line**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	Standard (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	1	1021
H <sub>2</sub> SO <sub>4</sub>	1-hr	0.5	50
H <sub>2</sub> SO <sub>4</sub>	24-hr	0.1	15

The justification for selecting the EPA's interim 1-hr SO<sub>2</sub> De Minimis level was based on the assumptions underlying EPA's development of the 1-hr SO<sub>2</sub> De Minimis level. As explained in EPA guidance memoranda<sup>3</sup>, the EPA believes it is reasonable as an interim approach to use a De Minimis level that represents 4% of the 1-hr SO<sub>2</sub> NAAQS.

**Table 6. Modeling Results for Minor NSR De Minimis**

Pollutant	Averaging Time	GLCmax (µg/m <sup>3</sup> )	De Minimis (µg/m <sup>3</sup> )
SO <sub>2</sub>	1-hr	1	7.8
SO <sub>2</sub>	3-hr	1	25
SO <sub>2</sub>	24-hr	1	5

<sup>3</sup> [www.epa.gov/region07/air/nsr/nsrmemos/appwso2.pdf](http://www.epa.gov/region07/air/nsr/nsrmemos/appwso2.pdf)

<b>Pollutant</b>	<b>Averaging Time</b>	<b>GLCmax (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>De Minimis (<math>\mu\text{g}/\text{m}^3</math>)</b>
SO <sub>2</sub>	Annual	0.2	1

The GLCmax are the maximum predicted concentrations associated with one year of meteorological data. The applicant used the maximum predicted 1-hr concentration to compare to the 3-hr and 24-hr De Minimis levels. The ADMT used the maximum predicted 24-hr concentration to compare to the annual De Minimis level.

### **VIII. Conclusion**

Navasota North Country Peakers Operating Company I, L.L.C. has demonstrated that this project meets all applicable rules, regulations and requirements of the Texas and Federal Clean Air Acts. The proposed facilities and controls represent BACT. The modeling analysis indicates that the proposed project will not violate the NAAQS, cause an exceedance of the increment, or have any adverse impacts on soils, vegetation, or Class I Areas. In addition, the modeling predicted no exceedance of ESLs at all receptors for non-criteria contaminants evaluated.

The Executive Director of the TCEQ proposes a preliminary determination of issuance of this permit for Navasota North Country Peakers Operating Company I, L.L.C. to construct the Van Alstyne Energy Center as proposed.