Florida Department of Environmental Protection

Northeast District
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Interim Secretary

PERMITTEE

JAX LNG LLC
2355 Main Street, Suite 210
Irvine, CA 92614

Air Permit No. 0310610-001-AC
Issuance Date: July 24, 2015
Expiration Date: July 24, 2016

Authorized Representative:

Mr. Jonathan Briggs

WesPac JAX LNG LLC

LNG Plant and Barge Terminal

PROJECT AND LOCATION

The construction permit authorizes the construction of a 130,000 gallon per day liquefied natural gas (LNG) plant and barge terminal. Electrical power for the facility equipment and processes will be generated on-site by four, natural gas and plant gas main generators. Only three of the four main power generator engines are needed to power the entire plant. Excess electrical power will be exported to the local utility grid. The proposed work will be conducted at the new WesPac JAX LNG LLC facility, which is categorized under Standard Industrial Classification No. 1321- Natural Gas Liquids. The facility will be located in Duval County at 9225 Dames Point Road, Jacksonville, Florida. The UTM coordinates are Zone 17: 446.5 km East; 3362.6 km North.

This final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Facility-Wide Conditions

Section 4. Emissions Unit Specific Conditions

Section 5. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.); and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Jacksonville, Florida

Richard S. Rachal III, P.G.
Permitting Program Administrator

FILING AND ACKNOWLEDGEMENT & CERTIFICATE OF SERVICE

Filed on this date pursuant to § 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged. The undersigned hereby certifies that the Final Air Permit package (including the Final Determination and Final Permit), and all copies were sent before the close of business on Month XX, 2015, to the listed persons.

Mr. Jonathan Briggs, Project Director, WesPac Midstream LLC: jbriggs@wespac.com
Mr. Don Castro, P.E., HDR, Inc.:Don.Castro@hdrinc.com

July 24, 2015
Clerk Date

FACILITY AND PROJECT DESCRIPTION

Proposed Facility

This facility will be a 130,000 gallon per day liquefied natural gas (LNG) plant and barge terminal. LNG is natural gas that has been cooled to about minus 260 degrees Fahrenheit for storage as a liquid. LNG is more compact than its gaseous equivalent which allows for the storage of a large quantity of natural gas in a relatively compact storage space.

The facility will receive pipeline quality natural gas directly from the local natural gas distributor's pipeline (Peoples Gas). The feed natural gas will be compressed and treated to remove contaminants, such as carbon dioxide, water, and odorants, which would adversely affect the liquefaction step. The treatment steps consist of an amine treating system to remove carbon dioxide, a non-regenerative molecular sieve dehydration system to remove the odorants, i.e. mercaptans, and molecular sieve beds to remove water. Liquefaction will then be achieved using a liquid nitrogen system. The LNG will be stored in a 2,000,000 gallon storage tank on-site and loaded into tanker trucks and barges for off-site shipment within the U.S.

The existing barge terminal on the adjacent St. John's River will be modified and used for docking and transferring LNG to the barge. One barge docking station will be available with a maximum design loading rate to the barge of 1,200 gallons per minute (gpm) [three pumps at 400 gpm each]. The barge capacity is 582,000 gallons and loading time is estimated at approximately 8 to 10 hours.

There will be two tanker truck loading stations with a total maximum design loading rate of 340 gallons per minute. All loading will occur by bottom filling.

The LNG storage and loading operations will be a closed-loop vapor process. The vapors will be contained and compressed for use as fuel gas for onsite process equipment and the power generators for the facility.

Electrical power for the facility equipment and processes will be generated on-site by four generators. The units will be fired with natural gas and plant fuel gas (which consists of the pipeline quality natural gas feed, compressed boil-off gas from the LNG storage tank, displaced vapors from the LNG loading operations, and gas from the LNG liquefaction bottoms vaporizer).

Each of the four generator sets will be a Caterpillar Model G3520H (or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. Each engine will be rated at 2.47 MW electrical output and 3,448 brake horsepower mechanical output at 100% load. Each of the generator sets will utilize an add-on oxidation catalyst system manufactured by DCL America, Inc. (Model DC66-20-CGS or equivalent) to reduce emissions of carbon monoxide (CO), the organic hazardous air pollutant formaldehyde (CH_2O), volatile organic compounds (VOC), and non-methane hydrocarbons (NMHC). Exhaust gases pass through a fixed catalyst bed and an oxidation reaction occurs converting the CO, VOC and formaldehyde to carbon dioxide (CO_2) and water vapor (H_2O). The oxidation catalyst will be an alternating rolled layer of flat and corrugated stainless steel with an aluminum oxide washcoat medium (a layer that increases its surface area) and onto which platinum is impregnated. The manufacturer has guaranteed the control efficiency of the oxidation catalyst at 65% for VOC emissions, 73% for Formaldehyde emissions, and 85% for CO emissions.

Engine emissions of nitrogen oxides (NO_X) will be minimized through the use of the lean burn technology.

The generator sets will operate primarily in parallel with the local utility grid and can export excess electrical power to the grid depending on the amount of load generated from the facility and the amount of gas requiring combustion to use up the boil-off gas. The four generators will be rotated in operation throughout the year and operate in an N+1 configuration meaning only three are needed to power the entire facility. During local utility power outages, the plant will operate in standby capacity powering emergency loads until such time as the utility returns.

The facility will also operate two small process heaters (Amine Reboiler and Dryer Regeneration Gas Heater) on plant fuel gas. Based on the information provided in the submitted application, these two units meet the exemption criteria of Rule 62-210.300(3)(a)33., F.A.C.

The facility will also operate an electric process heater for a drain vessel as well as electric heaters or electric heat pumps to provide space heating.

The JAX LNG Plant will not provide any combustion equipment solely dedicated to providing electrical power or thermal energy to the barge while it is docked. The barge will either utilize electrical power generated from the LNG Plant's power generators or utilize its own on-board reciprocating internal combustion engines for providing its own power needs. Any heating needs on the barge will be accomplished by on-board heaters that are expected to be electric driven. The barge will also have some capability to liquefy its own boil-off gas.

The facility will consist of the following emissions units.

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ID No.	Emission Unit Description
001	**Main Plant Power Unit 1:** A generator set (Caterpillar Model G3520H or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. The engine is rated at 2.47 MW of electrical output and 3,448 brake horsepower mechanical output at 100 percent load. The engine is fired with pipeline natural gas and plant fuel gas.
002	**Main Plant Power Unit 2:** A generator set (Caterpillar Model G3520H or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. The engine is rated at 2.47 MW of electrical output and 3,448 brake horsepower mechanical output at 100 percent load. The engine is fired with pipeline natural gas and plant fuel gas.
003	**Main Plant Power Unit 3:** A generator set (Caterpillar Model G3520H or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. The engine is rated at 2.47 MW of electrical output and 3,448 brake horsepower mechanical output at 100 percent load. The engine is fired with pipeline natural gas and plant fuel gas.
004	**Main Plant Power Unit 4:** A generator set (Caterpillar Model G3520H or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. The engine is rated at 2.47 MW of electrical output and 3,448 brake horsepower mechanical output at 100 percent load. The engine is fired with pipeline natural gas and plant fuel gas.

Emissions Units/Activities exempt from an air construction permit

The following emissions units/activities are exempt from the requirement to obtain an air construction permit:

ID No.	Emissions unit/Activity	Rule
---	Amine Treatment Reboiler. 2.0 MMBtu/hr rated heat input capacity, plant fuel gas (inlet natural gas, boil-off gas, liquefaction bottoms vaporizer gas) fired.	62-210.300(3)(a)33., F.A.C.
---	Dryer Regeneration Gas Heater. 1.02 MMBtu/hr rated heat input capacity, plant fuel gas (inlet natural gas, boil-off gas, liquefaction bottoms vaporizer gas) fired.	62-210.300(3)(a)33., F.A.C.

---	Waste Acid Gas Vent	62-210.300(3)(b)1., F.A.C.
---	Lube Oil Tank. 3,380 gallon capacity. 3,380 gallon throughput per year.	62-210.300(3)(b)1., F.A.C.
---	Gear/Lube Oil Tank. 250 gallons capacity. 500 gallon throughput per year.	62-210.300(3)(b)1., F.A.C.
---	Waste Oil Tank. 400 gallons capacity. 800 gallon throughput per year.	62-210.300(3)(b)1., F.A.C.
---	Amine Sump Tank. 960 gallons capacity. 1,920 gallons throughput per year.	62-210.300(3)(b)1., F.A.C.
---	Drain Slop Tank. 2,400 gallon capacity. 14, 400 gallons throughput per year of which a maximum of 5,250 pounds per year of heavy hydrocarbon liquids, remainder water and low volatile amine solution.	62-210.300(3)(b)1., F.A.C.

Proposed Project

This project authorizes the construction of a 130,000 gallon per day liquefied natural gas plant and barge terminal.

The four natural gas and plant gas fired engines are subject to 40 CFR Part 60 Subpart JJJJ – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* and also 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE).*

However, 40 CFR 63.6590(c) and (1) of Subpart ZZZZ states:

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source. Therefore for this project, compliance with Subpart JJJJ satisfies Subpart ZZZZ requirements.

FACILITY REGULATORY CLASSIFICATION

- The facility **will not be** a major source of hazardous air pollutants (HAP). The facility will be a synthetic area source of HAP.
- The facility **will not** operate units subject to the acid rain provisions of the Clean Air Act.
- The facility **will be** a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility **will not be** a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.
- This facility **will have** one or more emissions units subject to NSPS (40CFR 60).
- This facility **will have** one or more emissions units subject to NESHAP (40 CFR 61 or Part 63)

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Northeast District Office, Permitting Program, of the Florida Department of Environmental Protection (Department). The Northeast District Office's mailing address is 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District Office, Permitting Program. The Permitting Authority's telephone number is (904) 256-1700.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office, Compliance Assurance at: 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256. The Compliance Authority's telephone number is (904) 256-1700.

3. Appendices: The following Appendices are attached as part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements); Appendix LR-1. JEPB Rule 2 Air Pollution Control; Appendix E. 40 CFR 63 Subpart A – General Provision; Appendix F. 40 CFR 63 Subpart ZZZZ; Appendix G. 40 CFR 60 Subpart A – General Provisions; Appendix H. 40 CFR 60 Subpart JJJJ.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the owner or operator from compliance with any applicable federal, state, or local permitting or regulations.

   [Rule 62-210.300, F.A.C., and Rule 2.301, JEPB]

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.

   [Rule 62-4.080, F.A.C., and Rule 2.1401, JEPB]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.

   [Rules 62-210.300(1) and 62-212.300(1) (a), F.A.C., and Rules 2.301 and 2.401, JEPB]

7. Construction and Expiration. The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires.

   [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C., and Rules 2.1401 and 2.301, JEPB]

8. Source Obligation:

   a. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C., and Rule 2.401, JEPB]

9. Application for Operation Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority.

   [Rules 62-4.030, 62-4.050, and Chapter 62-213, F.A.C., and Rule 2.1401 and Rule 2.501, JEPB]

1. Unconfined Emissions of Particulate Matter: No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction; alteration; demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Reasonable precautions to prevent emissions of unconfined particulate matter at this facility include:
   a. Paving and maintenance of roads, parking areas and yards;
   b. Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing;
   c. Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.

   In determining what constitutes reasonable precautions for a particular facility, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice and the degree of reduction of emissions expected from a particular technique or practice.

   [Rule 62-296.320(4)(c), F.A.C.; Rule 2.1101, JEPB; Application No. 0310610-001-AC]

2. Objectionable Odors Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

   {Note: An objectionable odor is defined in Rule 62-210.200(Definitions), F.A.C., as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.}

   [Rule 62-296.320(2), F.A.C.; Rule 2.1101, JEPB]

3. Excess Emissions: Except as required by specific conditions of this permit dealing with excess emissions with regard to individual emission units, the following conditions apply to excess emissions.
   a. Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.

      Permitting Note: *The Permittee has estimated the routine startup period as 4 minutes for each EU 001-004 with 52 routine startups for all EUs totalled per rolling 12-month period*.

   b. Malfunction: Excess emissions which are caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure which may reasonably be prevented during startup, shutdown or malfunction shall be prohibited.
   c. Department Discretion: Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.
   d. Department Notification: In case of excess emissions resulting from malfunctions, each owner or operator shall notify the Department in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department.

   [Rule 62-210.700, F.A.C., Rule 2.301, JEPB]

4. The facility shall be subject to the City of Jacksonville Ordinance Code, Title X, Chapter 360 [Environmental Regulation], Chapter 362 [Air and Water Pollution], Chapter 376 [Odor Control], and JEPB Rule 1 [Final Rules with Respect to Organization, Procedure, and Practice].

5. The facility shall be subject to JEPB Rule 2, Parts I through V, and Parts IX through XIII.

6. Commencement/Completion of Construction and Initial Startup Records: The Permittee shall maintain a record of the commencement and completion of construction, and the initial startup dates for installation of the emission units and points of the WesPac JAX LNG LLC facility.

   [Rule 62-4.070, F.A.C., Rule 2.1401, JEPB]

7. Commencement/Completion of Construction Reporting: The Permittee shall submit to the Compliance Authority within a reasonable time (not to exceed 30 days following) the completion date of each recorded item in **Facility-Wide Condition No. 6**. Submission may be in writing or sent electronically to the Compliance Authority: Christopher.Kirts@dep.state.fl.us.

   [Rule 62-4.070, F.A.C., Rule 2.1401, JEPB, 40 CFR 60.7]

8. Initial Startup Date Reporting. The Permittee shall notify the Compliance Authority of the actual date of initial startup of the facility. The notification may be in writing or sent electronically within 15 days after such date: Christopher.Kirts@dep.state.fl.us.

   [Rule 62-4.070, F.A.C., Rule 2.1401, JEPB]

9. Annual Operating Report. The Permittee shall submit an annual report, as specified in Appendix C – Common Conditions of this permit, which summarizes the actual operating rates and emissions from this facility. The Annual Operating Report for Air Pollutant Emitting Facility (DEP form number 62-210.900(5)) shall be completed each year and shall be submitted to the Compliance Authority by April 1 of the following year.

   [Rule 62-210.370(3), F.A.C., and Rule 2.301, JEPB]

Subsection A: Main Plant Power Generator Unit Nos. 1, 2, 3, and 4

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
001	**Main Plant Power Unit 1:** A generator set (Caterpillar Model G3520H or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. The engine is rated at 2.47 MW of electrical output and 3,448 brake horsepower mechanical output at 100 percent load. The engine will be fired with pipeline natural gas (maximum sulfur content of 0.575 gr/100 SCF) and plant fuel gas. Exhaust gas exits at approximately 650°F with a volumetric flow rate of 15,874 acfm through a stack that is approximately 1.67 feet in diameter and 20 feet above ground level. The generator set will operate primarily in parallel with the local utility grid. Only three of the four main power generators are needed to power the entire plant. During local utility power outages, the plant will operate in standby capacity powering emergency loads until such time as the utility returns. Periodically, the facility will generate excess electrical power to supply the local utility grid during utility outages. Nitrogen Oxides (NO_X) emissions will be minimized through the use of the lean burn technology. Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), and Formaldehyde (HAP) emissions will be controlled through the use of an oxidation catalyst system manufactured by DCL America, Inc. (Model DC66-20-CGS or equivalent). Exhaust gases passes through a fixed catalyst bed and an oxidation reaction occurs converting the CO, VOC and formaldehyde to carbon dioxide (CO_2) and water vapor (H_2O). The oxidation catalyst will be an alternating rolled layer of flat and corrugated stainless steel with an aluminum oxide washcoat medium (a layer that increases its surface area) and onto which platinum is impregnated. The manufacturer has guaranteed the control efficiency of the oxidation catalyst at 65% for VOC emissions, 73% for Formaldehyde emissions, and 85% for CO emissions.
002	**Main Plant Power Unit 2:** A generator set (Caterpillar Model G3520H or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. The engine is rated at 2.47 MW of electrical output and 3,448 brake horsepower mechanical output at 100 percent load. The engine will be fired with pipeline natural gas (maximum sulfur content of 0.575 gr/100 SCF) and plant fuel gas. Exhaust gas exits at approximately 650°F with a volumetric flow rate of 15,874 acfm through a stack that is approximately 1.67 feet in diameter and 20 feet above ground level. The generator set will operate primarily in parallel with the local utility grid. Only three of the four main power generators are needed to power the entire plant. During local utility power outages, the plant will operate in standby capacity powering emergency loads until such time as the utility returns. Periodically, the facility will generate excess electrical power to supply the local utility grid during utility outages. Nitrogen Oxides (NO_X) emissions will be minimized through the use of the lean burn technology. Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), and Formaldehyde (HAP) emissions will be controlled through the use of an oxidation catalyst system manufactured by DCL America, Inc. (Model DC66-20-CGS or equivalent). Exhaust gases passes through a fixed catalyst bed and an oxidation reaction occurs converting the CO, VOC and formaldehyde to carbon dioxide (CO_2) and water vapor (H_2O). The oxidation catalyst will be an alternating rolled layer of flat and corrugated stainless steel with an aluminum oxide washcoat medium (a layer that increases its surface area) and onto which platinum is impregnated. The manufacturer has guaranteed the control efficiency of the oxidation catalyst at 65% for VOC emissions, 73% for Formaldehyde emissions, and 85% for CO emissions.

003	**Main Plant Power Unit 3:** A generator set (Caterpillar Model G3520H or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. The engine is rated at 2.47 MW of electrical output and 3,448 brake horsepower mechanical output at 100 percent load. The engine will be fired with pipeline natural gas (maximum sulfur content of 0.575 gr/100 SCF) and plant fuel gas. Exhaust gas exits at approximately 650°F with a volumetric flow rate of 15,874 acfm through a stack that is approximately 1.67 feet in diameter and 20 feet above ground level. The generator set will operate primarily in parallel with the local utility grid. Only three of the four main power generators are needed to power the entire plant. During local utility power outages, the plant will operate in standby capacity powering emergency loads until such time as the utility returns. Periodically, the facility will generate excess electrical power to supply the local utility grid during utility outages. Nitrogen Oxides (NO_X) emissions will be minimized through the use of the lean burn technology. Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), and Formaldehyde (HAP) emissions will be controlled through the use of an oxidation catalyst system manufactured by DCL America, Inc. (Model DC66-20-CGS or equivalent). Exhaust gases passes through a fixed catalyst bed and an oxidation reaction occurs converting the CO, VOC and formaldehyde to carbon dioxide (CO_2) and water vapor (H_2O). The oxidation catalyst will be an alternating rolled layer of flat and corrugated stainless steel with an aluminum oxide washcoat medium (a layer that increases its surface area) and onto which platinum is impregnated. The manufacturer has guaranteed the control efficiency of the oxidation catalyst at 65% for VOC emissions, 73% for Formaldehyde emissions, and 85% for CO emissions.
004	**Main Plant Power Unit 4:** A generator set (Caterpillar Model G3520H or equivalent) comprised of a spark-ignition, four-stroke, lean-burn internal combustion engine. The engine is rated at 2.47 MW of electrical output and 3,448 brake horsepower mechanical output at 100 percent load. The engine will be fired with pipeline natural gas (maximum sulfur content of 0.575 gr/100 SCF) and plant fuel gas. Exhaust gas exits at approximately 650°F with a volumetric flow rate of 15,874 acfm through a stack that is approximately 1.67 feet in diameter and 20 feet above ground level. The generator set will operate primarily in parallel with the local utility grid. Only three of the four main power generators are needed to power the entire plant. During local utility power outages, the plant will operate in standby capacity powering emergency loads until such time as the utility returns. Periodically, the facility will generate excess electrical power to supply the local utility grid during utility outages. Nitrogen Oxides (NO_X) emissions will be minimized through the use of the lean burn technology. Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), and Formaldehyde (HAP) emissions will be controlled through the use of an oxidation catalyst system manufactured by DCL America, Inc. (Model DC66-20-CGS or equivalent). Exhaust gases passes through a fixed catalyst bed and an oxidation reaction occurs converting the CO, VOC and formaldehyde to carbon dioxide (CO_2) and water vapor (H_2O). The oxidation catalyst will be an alternating rolled layer of flat and corrugated stainless steel with an aluminum oxide washcoat medium (a layer that increases its surface area) and onto which platinum is impregnated. The manufacturer has guaranteed the control efficiency of the oxidation catalyst at 65% for VOC emissions, 73% for Formaldehyde emissions, and 85% for CO emissions.

{Permitting note: Each emissions unit is regulated under: NSPS - 40 CFR 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines**,** *NESHAP – 40 CFR 63, Subpart ZZZZ***,** *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines adopted and incorporated by reference in Rule 62-204.800, F.A.C. Compliance with the requirements of 40 CFR 63, Subpart ZZZZ is met by meeting the requirements of 40 CFR 60, Subpart JJJJ. No further requirements of 40 CFR 63, Subpart ZZZZ apply for any of the engines.*

The following table provides important details for these emissions units:

Engine ID	Engine Brake HP	Date of Construction	Model Year	Primary Fuel	Type of Engine	Displacement liters/cylinder (l/c)	Serial #	Date of last mod. or reconst.
Unit 1	2.47 MW 3,448 HP	2015	2014	Natural Gas and Plant fuel gas	Non-Emergency	4.48	---	N/A
Unit 2	2.47 MW 3,448 HP	2015	2014	Natural Gas and Plant fuel gas	Non-Emergency	4.48	---	N/A
Unit 3	2.47 MW 3,448 HP	2015	2014	Natural Gas and Plant fuel gas	Non-Emergency	4.48	---	N/A
Unit 4	2.47 MW 3,448 HP	2015	2014	Natural Gas and Plant fuel gas	Non-Emergency	4.48	---	N/A

EQUIPMENT

A.1. a. Reciprocating Internal Combustion Engines: The permittee is authorized to construct and install four, 3,448 brake horsepower (mechanical output at 100 percent load) engine driven generator units (each are Caterpillar, Model No. G3520H or equivalent). The generator units generally consist of the following components: generator, engine, oxidation catalyst, automatic air/fuel ratio controller.

b. Oxidation Catalyst Systems: The permittee is authorized to install an oxidation catalyst system manufactured by DCL America, Inc. (Model DC66-20-CGS or equivalent) for the control of VOC, CO, and Formaldehyde emissions on each of the main engine driven generator units. It is estimated that the control efficiency of each of the oxidation catalysts is 65% for VOC, 73% for Formaldehyde emissions, and 85% for CO emissions.

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A.2. Engine Use /Operating Hours of each Emissions Unit (EU 001- EU 004): The permittee shall install and maintain a non-resettable elapsed operating hour meter to accurately indicate the elapsed operation of each engine, EU 001- EU004

[Rule 62-4.070, F.A.C., Rule 2.1401, JEPB]

PERFORMANCE RESTRICTIONS

Essential Potential to Emit (PTE) Parameters

A.3. Permitted Capacity of each Emissions Unit (EU 001- EU 004). Each of the engines shall have a maximum 3,448 brake horsepower mechanical output at 100 percent load (approximate design heat input rate is 21.7 MMBtu/hour equivalent to 22,220 cubic feet of natural/plant fuel gas per hour).

[Rules 62-4.070(3), 62-204.800, 62-210.200(PTE), F.A.C., and Rules 2.1401, 2.201, 2.301, JEPB, Application No. 0310610-001-AC]

A.4. Restricted Operation of each Emissions Unit (EU 001- EU 004). The hours of operation of each emissions unit are not limited (8,760 hours per year).

[Rules 62-4.070(3), 62-210.200(PTE), F.A.C.; Rules 2.1401, 2.301, JEPB, Application No. 0310610-001-AC]

A.5. Authorized Fuel of each Emissions Unit (EU 001- EU 004). Each engine shall be fired with pipeline natural gas (maximum sulfur content of 0.575 gr/100 SCF) and plant fuel gas (boil-off compressor gas and liquefaction bottoms vaporizer gas) only.

[Application No. 0310610-001-AC; Rule 62-210.200(PTE), F.A.C., Rule 2.301, JEPB]

A.6. Control Equipment of each Emissions Unit (EU 001- EU 004).

a. Nitrogen Oxides. To control nitrogen oxides, the permittee shall use lean burn technology to achieve at least the NO_x emissions standards specified in this permit.

b. Carbon Monoxide, VOC & Formaldehyde. To control Carbon Monoxide, Volatile Organic Compounds, and Formaldehyde emissions, the permittee shall continuously operate the oxidation catalyst system to achieve at least the CO, Formaldehyde, and VOC emissions standards specified in this permit. The oxidation catalyst shall be on line and functioning properly whenever an engine is in operation, including during engine startup and shutdown.

c. Any vapors from the LNG storage tank (boil-off gas), displaced vapors from the LNG loading operations, gases from the LNG liquefaction bottoms vaporizer shall be contained and compressed for use as fuel gas for onsite process equipment and the main plant power generators (EU001-EU004).

[Rule 62-4.070, F.A.C., Rule 2.1401, JEPB, Application No. 0310610-001-AC]

A.7. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly.

[Rule 62-210.650, F.A.C.]

EMISSIONS STANDARDS

{Permitting Note: Unless otherwise specified, the averaging times for these Conditions A.11. and/thru A.14. are based on the specified averaging time of the applicable test method.}

A.8. NESHAP, 40 CFR 63 Subpart ZZZZ Applicability (EU 001- EU 004): Each engine is classified as a new stationary Reciprocating Internal Combustion Engines (RICE) located at an area source of HAP. In accordance with 40 CFR 63.6590(c)(1), the units must meet the requirements of 40 CFR 63 Subpart ZZZZ by complying with the 40 CFR 60 Subpart JJJJ standards. No further 40 CFR 63 Subpart ZZZZ standards shall apply to these engines.

[40 CFR 63.6675(def); 40 CFR 63.6585(a) & (c); 40 CFR 63.6590(a)(2)(iii); 40 CFR 63.6590(c)(1), Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.9. NSPS, 40 CFR 60, Subpart JJJJ Applicability (EU 001- EU 004): These engines are classified as non-emergency spark ignition (SI) four-stroke lean burn (4SLB) engines and are subject to the standards of 40 CFR 60 Subpart JJJJ.

[40 CFR 60.4230(a)(4)(i), Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.10. 40 CFR 60, Subpart A-General Provision: Table 3 to 40 CFR 60 Subpart JJJJ shows which parts of the General Provisions in §§ 60.1 through 60.19 are applicable. *Refer to Appendix*.

[40 CFR 60.4246, Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.11. Nitrogen Oxides (NO_x) Emissions of each Emissions Unit (EU 001- EU 004): NO_x emissions of each emissions unit shall not exceed 1.0 grams per horsepower hour (g/HP-hr) or 82 parts per million by volume dry (ppmvd) @15%O_2. Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.

[40 CFR 60.4233(e); Table 1 of Subpart JJJJ of Part 60 CFR, Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.12. Carbon Monoxide (CO) Emissions of each Emissions Unit (EU 001- EU 004).

a. CO emissions of each emissions unit shall not exceed 2.0 g/HP-hr or 270 ppmvd @ 15%O_2. Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.

   [40 CFR 60.4233(e); Table 1 of Subpart JJJJ of Part 60 CFR, Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

b. CO emissions of each emissions unit shall not exceed 0.50 g/HP-hr at the outlet of the oxidation catalyst system.

   [Application No. 0310610-001-AC; Rule 62-4.070, F.A.C.; PSD Major Source Applicability Avoidance, Rule 62-210.200(PTE), F.A.C., Rules 2.1401 and 2.301, JEPB]

A.13. Volatile Organic Compounds (VOC) Emissions of each Emissions Unit (EU 001- EU 004).

a. VOC emissions of each emissions unit shall not exceed 0.7 g/HP-hr or 60 ppmvd @ 15%O_2 at the outlet of the oxidation catalyst system. Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.

[40 CFR 60.4233(e); Table 1 of Subpart JJJJ of Part 60 CFR, Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

b. For purposes of 40 CFR 60 Subpart JJJJ, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included

[40 CFR 60 Subpart JJJJ, Table 1 of Subpart JJJJ of Part 60 CFR, Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.14. Formaldehyde Emissions of each Emissions Unit. The maximum Formaldehyde emissions from each emissions unit shall not exceed 0.06 g/HP-hr at the outlet of the oxidation catalyst system.

[Application No. 0310610-001-AC; Rule 62-4.070, F.A.C.; Rule 62-210.200(PTE), F.A.C., Title V Major HAP Applicability Avoidance, Rules 2.1401 and 2.301, JEPB]

NSPS 40 CFR 60 SUBPART JJJJ COMPLIANCE REQUIREMENTS

A.15. Each Emissions Unit- EU 001- EU 004. Each engine shall be operated and maintained such that it achieves the emission standards as required in 40 CFR 60.4233 [**Conditions A.11., A.12., and A.13.**] over the entire life of the engine.

[40 CFR 60.4234, Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.16. Each Emissions Unit- EU 001- EU 004. The permittee shall demonstrate compliance according to one of the methods specified in paragraphs (1) and (2) of this Condition:

(1) Purchasing an engine certified according to procedures specified in 40 CFR 60 Subpart JJJJ, for the same model year and demonstrating compliance according to one of the methods specified in **Condition A.18.**

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(e) [**Conditions A.11., A.12.a., and A.13.a.**] and according to the requirements specified in 40 CFR 60.4244 [**Condition A.22.]**, as applicable, and according to **Condition A.17.**

[40 CFR 60.4243(b), Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.17. Non-Certified Engines (Each Emissions Unit- EU 001- EU 004): For a non-certified engine the permittee shall demonstrate compliance according to paragraphs a. and b. of this Condition:

a. Maintenance Plan: The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

b. Performance Tests.

i. Initial. The permittee shall conduct initial performance tests for each pollutant specified in **Conditions A.11., A.12., and A.13.,** within 60 days after achieving the maximum production rate at which the engine will be operated, but not later than 180 days after its initial startup.

ii. Subsequent. The permittee must conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

[40 CFR 60.4243(b)(2)(ii); 40 CFR 60.8(a), Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.18. Certified Engines (Each Emissions Unit- EU 001- EU 004): As specified in **Condition A.16.(1),** one of the requirements specified in paragraphs (1) and (2) of this Condition shall be met.

(1) If the certified stationary SI internal combustion engine and control device is operated and maintained according to the manufacturer's emission-related written instructions, records of conducted maintenance must be kept to demonstrate compliance, but no performance testing is required for an owner or operator. The requirements as specified in 40 CFR part 1068, Subparts A through D, as applicable, shall also be met. If engine settings are adjusted according to and consistent with the manufacturer's instructions, the stationary SI internal combustion engine will not be considered out of compliance.

(2) If the certified stationary SI internal combustion engine and control device are not operated and maintained according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and compliance shall be demonstrated according to paragraphs a. and b. below:

a. Maintenance Plan: The permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

b. Performance Tests.

i. Initial. The permittee shall conduct initial performance tests for each pollutant specified in **Conditions A.11., A.12., and A.13.,** within 1 year of engine startup.

ii. Subsequent. The permittee must conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

[40 CFR 60.4243(a)(1),(2),(2)(iii), Rule 62-204.800(8), F.A.C. and Rule 2.201, JEPB]

A.19. Air-to-Fuel Ratio Controllers (EU 001- EU 004). It is expected that air-to-fuel ratio controllers will be used with the operation of oxidation catalysts. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

[Application No. 0310610-001-AC, Rule 62-4.070, F.A.C., Rule 2.301, JEPB]

SYNTHETIC MINOR LIMITATIONS COMPLIANCE REQUIREMENTS

A.20. CO Emissions- Certified and Non-Certified Engines (Each Emissions Unit – EU001- EU004): The permittee shall demonstrate compliance with the CO emission standard specified in **Condition A.12.b.** by conducting a performance test as specified below using the compliance test procedures specified in **Condition A.22.** and the Performance Test Requirements specified in **Condition A.23.**

For Non-Certified Engines or Certified Engines operating in a non-certified manner, the permittee may use the results of the performance testing required by **Condition A.17.b.** or if applicable, the results of the performance testing required by **Condition A.18.(2)b.** to demonstrate compliance with the performance testing required by this permit condition provided the testing frequency of such performance tests meet the requirements of permit condition.

Performance Tests.

i. Initial. The permittee shall conduct an initial performance test for CO specified in **Condition A.12.b.** within 60 days after achieving the maximum production rate at which the engine will be operated, but not later than 180 days after its initial startup.

ii. Subsequent. The permittee shall conduct subsequent performance testing annually thereafter (i.e. no less frequently than once every calendar year (January 1- December 31)).

[Rule 62-4.070, F.A.C., Rule 62-297.310(8)(a)1., F.A.C., Rule 2.1401, JEPB, Rule 2.1201, JEBP, PSD Major Source Applicability Avoidance]

A.21. Formaldehyde Emissions - Certified and Non-Certified Engines (Each Emissions Unit – EU001- EU004): The permittee shall demonstrate compliance with the Formaldehyde emission standard specified in **Condition A.14.** by conducting a performance test as specified below using EPA Test Method 320 or 323 of 40 CFR Part 63, Appendix A or ASTM D6348-03 provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R shall be greater than or equal to 70 and less than or equal to 130**.** The results of this test consist of the average of the three 1-hour or longer runs.

Performance Tests.

i. Initial. The permittee shall conduct an initial performance test for Formaldehyde specified in **Condition A.14.** within 60 days after achieving the maximum production rate at which the engine will be operated, but not later than 180 days after its initial startup.

ii. Subsequent. Subsequent performance testing shall not be required provided the CO performance testing required by this permit demonstrates compliance with the CO emissions standard specified in **Condition A.12.b.** In the event the results of the CO performance testing required by this permit do not demonstrate compliance with the CO emissions standard specified in **Condition A.12.b.,** the permittee shall conduct a subsequent Formaldehyde performance test to verify the Formaldehyde emissions specified in **Condition A.14.** no later than 60 days from the date of the CO performance test.

Permitting Note: *No other test methods may be used for performance testing unless prior written approval is received from the Department's Office of Permitting and Compliance.*

[Rule 62-4.070, F.A.C., Rule 2.1401, JEPB, Title V Major HAP Applicability Avoidance]

TESTING REQUIREMENTS

A.22. Compliance Test Procedures (EU 001- EU 004): The performance tests must follow the procedures below.

a. Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in 40 CFR 60.8 and under the specific conditions that are specified by Table 2 of 40 CFR 60 Subpart JJJJ.

b. Performance tests during periods of startup, shutdown, or malfunction are not allowed, as specified in 40 CFR 60.8(c). If the stationary SI internal combustion engine is non-operational, it is not necessary to startup the engine solely to conduct a performance test; however, the performance test must be conducted immediately upon startup of the engine.

c. Three separate test runs must be conducted for each performance test required, as specified in 40 CFR 60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

d. To determine compliance with the NO_x mass per unit output emission limitation, the concentration of NO_x in the engine exhaust should be converted using Equation 1, below:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 1)}$$

Where:

ER = Emission rate of NO_X in g/HP-hr.

C_d = Measured NO_X concentration in parts per million by volume (ppmv).

1.912×10^{-3} = Conversion constant for ppm NO_X to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

e. To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 2)}$$

Where:

ER = Emission rate of CO in g/HP-hr.

C_d = Measured CO concentration in ppmv.

1.164×10^{-3} = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

f. For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \qquad \text{(Eq. 3)}$$

Where:

ER = Emission rate of VOC in g/HP-hr.

C_d = VOC concentration measured as propane in ppmv.

1.833×10^{-3} = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

g. If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C_m}{C_{Ai}} \qquad \text{(Eq. 4)}$$

Where:

RF_i = Response factor of compound i when measured with EPA Method 25A.

$C_{M\ i}$ = Measured concentration of compound i in ppmv as carbon.

$C_{A\ i}$ = True concentration of compound i in ppmv as carbon.

$$C_{i\ corr} = RF_i \times C_{i\ meas} \qquad \text{(Eq. 5)}$$

Where:

$C_{i\ corr}$ = Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

$C_{i\ meas}$ = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{i\ corr} \qquad \text{(Eq. 6)}$$

Where:

C_{Peq} = Concentration of compound i in mg of propane equivalent per DSCM.

Permitting Note: *No other methods may be used for performance testing unless prior written approval is received from the Department's Office of Permitting and Compliance in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C.*

[40 CFR 60.4244, Rule 62-204.800(8), FAC and Rule 2.201, JEPB]

A.23. Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests:

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NO_X in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line').

				If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ae]	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e]	(c) Measurements to determine moisture must be made at the same time as the measurement for NO_X concentration.
		v. Measure NO_X at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Method 7E of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (Reapproved 2005)[ae], Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e]	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the

				measurement line ('3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ae]	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e]	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.
		v. Measure CO at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Method 10 of 40 CFR part 60, appendix A4, ASTM Method D6522-00 (Reapproved 2005)[ae], Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e]	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	c. limit the concentration of VOC in the stationary SI internal	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for VOC, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points

	combustion engine exhaust	internal combustion engine;		located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, Appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, Appendix A.
		ii. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ae]	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e]	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.
		v. Measure VOC at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(5) Methods 25A and 18 of 40 CFR part 60, appendices A-6 and A-7, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 of 40 CFR part 60, appendix A-6[cd], Method 320 of 40 CFR part 63, appendix A, or ASTM Method D 6348-03[e]	(d) Results of this test consist of the average of the three 1-hour or longer runs.

[a] Also, you may petition the Administrator for approval to use alternative methods for portable analyzer.

[b] You may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O_2 content of the exhaust gas as an alternative to EPA Method 3B. AMSE PTC 19.10-1981 incorporated by reference, see 40 CFR 60.17

[c] You may use EPA Method 18 of 40 CFR part 60, appendix A-6, provided that you conduct an adequate pre-survey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (*http://www.epa.gov/ttn/emc/prelim/otm11.pdf*).

[d] You may use ASTM D6420-99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic hydrocarbons. ASTM D6420-99(2004) incorporated by reference; see 40 CFR 60.17.

[e] Incorporated by reference; see 40 CFR 60.17.

A.24. Compliance Test Notification: The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance test and at least 15 days prior to any other required test. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(9), F.A.C., Rule 2.1201, JEPB; 40 CFR 60.7, 60.8]

MONITORING REQUIREMENTS

A.25. Oxidation Catalyst for Each Engine (EU 001- EU 004)

a. Inlet Temperature Monitoring: In accordance with the manufacturer's specifications, the permittee shall install, calibrate, operate and maintain a device (e.g. an in-line thermocouple) to accurately and continuously measure and record the temperature of the engine exhaust gas at the inlet of the oxidation catalyst system.

   (i) The temperature device shall collect data at least once every 15 minutes.

   (ii) The temperature sensor shall have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

   (iii) The temperature of the engine exhaust shall be maintained so that the catalyst inlet temperature is greater than or equal to 680 °F or the minimum inlet temperature as determined by the catalyst manufacturer, 3-hour block average.

   (iv) Calibration of the temperature monitoring device shall be in accordance with the manufacturer's recommendations, but shall occur at least on an annual basis.

b. Pressure Drop Monitoring: The permittee shall install, calibrate, operate, and maintain a CPMS to accurately and continuously measure and record the pressure drop of the exhaust across the catalysts in the oxidation catalyst system.

   (i) The pressure drop measurement device shall collect data at least once every 15 minutes.

   (ii) The catalyst shall be maintained so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test.

   (iii) The permittee shall determine a site-specific pressure drop range based on the pressure drop monitored during the initial performance tests, supplemented by engineering assessments and the manufacturer's recommendations.

(iv) Calibration of the monitor shall be in accordance with the manufacturer's recommendations, but shall occur at least on an annual basis.

c. Oxidation Catalyst Cleaning and Replacement: The permittee shall follow the manufacturer's recommendations, including the operations and maintenance manual, for the frequency of cleaning and replacement of the oxidation catalyst.

[Rule 62-4.070(3) F.A.C.; Rule 2.1401, JEPB]

NOTIFICATION REQUIREMENTS

A.26. Initial Notification (EU 001- EU 004). An initial notification as required in 40 CFR 60.7(a)(1) shall be submitted to the Permitting and Compliance Authorities. The notification must include the information in paragraphs (1) through (5) of this condition.

(1) Name and address of the owner or operator;

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

[40 CFR 60.4245(c), Rule 62-204.800(8), F.A.C., Rule 62-4.070(3) F.A.C.; Rule 2.201, JEPB, Rule 2.1401, JEPB]

A.27. Monitoring Notification (EU 001- EU 004): The permittee shall submit to the Compliance Authority a summary of the instances in which a CPMS is not maintained within the operating value as specified in **Condition A.25.** within a reasonable time (not to exceed 30 days of such instance).

[Rule 62-4.070, F.A.C., Rule 2.1401, JEPB]

RECORDKEEPING REQUIREMENTS

A.28. The following records shall be kept for each engine (EU 001- EU 004):

a. All notifications submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification.

b. Maintenance conducted on the engine.

c. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

d. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

e. Monitoring data in relation to the oxidation catalyst as specified in **Condition A.25.**

f. The date of last change of the catalyst of the oxidation catalyst system.

g. The hours of operation of the engine that are recorded through the non-resettable hour meter, monthly.

h. The occurrence and duration of any routine startup event, routine shutdown event, breakdown condition or emergency situation.

[40 CFR 60.4245(a); Rule 62-4.070, F.A.C.; Rule 2.1401, JEPB, Application No. 0310610-001-AC]

REPORTING REQUIREMENTS

A.29. Performance Test Report. A copy of each performance test as conducted in **Condition A.20., Condition A.21.,** and **Condition A.22.** [40 CFR 60.4244] shall be submitted to the Compliance Authority within 45 days after the test has been completed.

[40 CFR 60.4245(d); Rule 62-297.310(10), F.A.C, Rule 2.1201, JEPB]