National Aeronautics and Space Administration
John F. Kennedy Space Center
Facility ID No. 0090051
Brevard County

Title V Air Operation Permit Revision

Permit No. 0090051-028-AV
(Revision of Title V Air Operation Permit No. 0090051-023-AV,
incorporating 0090051-025-AC)

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Permitting Authority:

State of Florida
Department of Environmental Protection
Waste & Air Resource Programs, Central District

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DRAFT-PROPOSED PERMIT

PERMITTEE:
National Aeronautics and Space Administration
Mail Code AA-B
Kennedy Space Center, Florida 32899

Permit No. 0090051-028-AV
John F. Kennedy Space Center
Facility ID No. 0090051
Title V Air Operation Permit Revision

The primary purpose of this permit is to revise the Title V Air Operation Permit for the above referenced facility to incorporate conditions of Construction Permit 0090051-025-AC, dated 1/3/2014, and to include regulatory updates. Construction Permit 0090051-025-AC was issued to the facility to authorize construction and installation of air pollution controls on nine engines located at the facility that participate in the Florida Power & Light (FP&L) Commercial/Industrial Load Control (CILC) program. This project also incorporates regulatory updates and changes to covered emission units.

The John F. Kennedy Space Center is located in Brevard County at Kennedy Space Center, Florida. UTM Coordinates are: Zone 17, 534.2 km East and 3155.0 km North.

The Title V Air Operation Permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213. The above named permittee is hereby authorized to operate the facility in accordance with the terms and conditions of this permit.

Effective Date: DATE
Renewal Application Due Date: 10/11/2017
Expiration Date: 5/24/18

_____
F. Thomas Lubozynski, P.E.
Waste & Air Resource Programs Administrator

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Subsection A. Facility Description.

The National Aeronautics and Space Administration (NASA) operates the Kennedy Space Center (KSC) facility. The facility is categorized under Standard Industrial Classification Code No. 9661 and North American Industry Classification System Code No. 927110. The facility is located in Brevard County at Kennedy Space Center, Florida. The UTM coordinates of the existing facility are Zone 17, 534.2 km East, and 3155.0 km North. KSC is a spacecraft and payload processing and launch facility which contains the following four categories of permitted air emission units:

a) Hot Water Generators/Boilers with individual heat input of at least 10 MMBtu/hr (listed in Attachment 1-A)

b) Surface Coating Operations (listed in Attachment 2-A)

c) Internal Combustion Engines (listed in Attachments 3-A, 4-A, 5-A, 7-A and 8-A) used for both emergency and non-emergency purposes.

d) Hypergol Fueling and Servicing Activities (listed in Attachment 6-A)

The NASA-KSC facility permit also contains the following two emission units:

a) Portable Aggregate Material Crushing Operations, which provides for a portable aggregate crushing plant to be used at the facility. The portable crushing unit must have its own air permit (Rule 62-210.310 (2).

b) Fog Fluid (Theatrical Special Effects) at KSC Visitor Complex, which is neither a 'regulated emissions unit' nor an 'insignificant emissions unit'. (See Appendix U)

Subsection B. Summary of Emissions Units.

The existing facility consists of the following emissions units.

Facility ID No. 0090051	
ID No.	**Emission Unit Description (Regulated)**
001	Hot Water Generators/Boilers with an individual heat input rate of at least 10 MMBtu/hr
086	Emergency Stationary Compression Ignition (CI) Reciprocating Internal Combustion Engines (RICE)
087	Emergency Stationary Spark Ignition (SI) RICE
088	Launch Complex 39 (LC-39) Non-Emergency Stationary CI RICE (incorporated in this permit revision)
089	Hypergol Servicing Operations and Activities (two new scrubber units are currently under construction as authorized in Construction Permit 0090051-024-AC)
091	Surface Coating Operations
092	Portable Aggregate Material Crushing Operations
093	Non-Emergency Existing Stationary CI RICE with Installed Controls (incorporated in this permit revision)
094	Non-Emergency Stationary CI RICE subject to New Source Performance Standards (NSPS) (Currently under construction as authorized in Construction Permit 0090051-026-AC)
ID No.	**Emission Unit Description (Unregulated)**
090	Fog Fluid (Special Effects) at Kennedy Space Center Visitor Complex

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Subsection C. Applicable Regulations.

The facility is considered a Title V major source because the potential to emit (PTE) for the criteria pollutants oxides of nitrogen (NOx), volatile organic compounds (VOC) and carbon monoxide (CO) each exceed the 100 ton per year (tpy) Title V major source threshold. The facility is considered a minor source for particulate matter (PM) and sulfur dioxide (SO_2) emissions as the PTE is less than the 100 ton per year Title V major source threshold. Similarly, the facility is a minor source for lead (Pb) emissions.

The facility is considered a minor source (i.e., non-major) for the Prevention of Significant Deterioration (PSD) permitting program as the PTE for PSD pollutants is less than the PSD major source threshold (e.g., 250 tpy for CO and NOx,). The facility does not belong to one of the listed source categories that have a lesser PSD major source threshold.

The total combined heat input rating for fossil fuel fired boilers at the facility is approximately 150 million British Thermal Units per hour (MMBtu/hr). This total rating includes permitted (i.e., significant) and unpermitted (i.e., insignificant or exempt) units. This total rating is less than 250 MMBtu/hr, which is the threshold for one of the listed source categories that have a lesser PSD major source threshold (i.e., 100 tpy for criteria pollutants).

Based on the Title V air operation permit renewal application received December 7, 2012, this facility is not a major source of hazardous air pollutants (HAPs). The facility previously was considered a major source of HAP; however, pollution prevention initiatives taken by the facility have allowed the facility to reduce HAP emissions to less than the major source thresholds of 10 tpy for individual HAP, and 25 tpy for combined HAPs.

The Title V facility does not include the retail gasoline storage and fueling operations performed on-site.

A summary of applicable regulations is shown in the following table.

Regulation	**EU No(s).**
40 CFR 60, Subpart A, NSPS General Provisions	-086 -087 -094
40 CFR 63, Subpart A, NESHAP General Provisions	-001 -086 -087 -088 -093
40 CFR 60, Subpart OOO, Nonmetallic Mineral Processing Plants	-092
40 CFR 60, Subpart IIII, Stationary Compression Ignition (CI) Internal Combustion Engines	-086
40 CFR 60, Subpart JJJJ, Stationary Spark Ignition (SI) Internal Combustion Engines	-087
40 CFR 63, Subpart JJJJJJ, Industrial, Commercial, and Institutional Boilers	-001
40 CFR 63, Subpart ZZZZ, NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE)	-086 -087 -088 -093
State Rule Citations: 62-4, 62-210.200, 62-213, 62-252, 62-296.320, 62-296.406 (BACT), and 62-297.310	all

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The following conditions apply facility-wide to all emission units and activities:

FW1. Appendices. The permittee shall comply with all documents identified in Section IV, Appendices, listed in the Table of Contents. Each document is an enforceable part of this permit unless otherwise indicated. [Rule 62-213.440, F.A.C.]

Emissions and Controls

FW2. Facility-Wide HAP Emissions Limitation. The maximum **facility-wide** combined HAP emissions are limited to less than 25.0 tons per any consecutive twelve months and any single HAP emission is limited to less than 10.0 tons per any consecutive twelve months, updated monthly. **These limits are accepted by the applicant to make the facility a synthetic minor for HAPs only.**
[Rule 62-210.300(2)(b)1.d., F.A.C.]

FW3. HAP Emissions Calculation. HAP emissions shall be calculated using the latest published version of appropriate EPA AP-42 emission factors, other appropriate emission factors, or material balance. [Rules 62-4.160(1); FESOP 0090021-005-AF]

FW4. Not federally Enforceable. Objectionable Odor Prohibited. No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means 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) and 62-210.200(Definitions), F.A.C.]

FW5. General Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems deemed-necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]

FW6. General Visible Emissions. Except as otherwise provided in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]

FW7. Unconfined 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.
[Rule 62-296.320(4)(c), F.A.C.]

Annual Facility-wide Reports and Fees

See Appendix RR, Facility-wide Reporting Requirements for additional details.

FW8. Electronic Annual Operating Report and Title V Annual Emissions Fees. The information required by the Annual Operating Report for Air Pollutant Emitting Facility [Including Title V Source Emissions Fee Calculation] (DEP Form No. 62-210.900(5)) shall be submitted by April 1 of each year, for the previous calendar year, to the Department of Environmental Protection's Division of Air Resource Management. Each Title V source shall submit the annual operating report using the DEP's Electronic Annual Operating Report (EAOR) software, unless the Title V source claims a technical or financial hardship by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management instead of using the reporting software. Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C. Each

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Title V source must pay between January 15 and April 1 of each year an annual emissions fee in an amount determined as set forth in subsection 62-213.205(1), F.A.C. The annual fee shall only apply to those regulated pollutants, except carbon monoxide and greenhouse gases, for which an allowable numeric emission-limiting standard is specified in the source's most recent construction permit or operation permit. Upon completing the required EAOR entries, the EAOR Title V Fee Invoice can be printed by the source showing which of the reported emissions are subject to the fee and the total Title V Annual Emissions Fee that is due. The submission of the annual Title V emissions fee payment is also due (postmarked) by April 1st of each year. A copy of the system-generated EAOR Title V Annual Emissions Fee Invoice and the indicated total fee shall be submitted to: **Major Air Pollution Source Annual Emissions Fee, P.O. Box 3070, Tallahassee, Florida 32315-3070.** Additional information is available by accessing the Title V Annual Emissions Fee On-line Information Center at the following Internet web site: http://www.dep.state.fl.us/air/emission/tvfee.htm. [Condition RR5 and RR6 and Rules 62-210.370(3), 62-210.900 & 62-213.205, F.A.C.; and, 40 CFR 403.0872(11), Florida Statutes (2013)]

{Permitting Note: Resources to help you complete your AOR are available on the electronic AOR (EAOR) website at: http://www.dep.state.fl.us/air/emission/eaor. If you have questions or need assistance after reviewing the information posted on the EAOR website, please contact the Department by phone at (850) 717-9000 or email at eaor@dep.state.fl.us.}

{Permitting Note: The Title V Annual Emissions Fee form (DEP Form No. 62-213.900(1)) has been repealed. ***A separate Annual Emissions Fee form is no longer required to be submitted by March 1st each year.****}*

FW9. Annual Statement of Compliance. The permittee shall submit an annual statement of compliance to the compliance authority at the address shown on the cover of this permit within 60 days after the end of each calendar year during which the Title V permit was effective. The submittal may be made electronically to **DEP_CD@dep.state.fl.us** [Condition RR7 and Rules 62-213.440(3)(a)2. & 3. and (3)(b), F.A.C.]

FW10. Semi-Annual Monitoring Reports. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. In addition, each submittal must include the following:

a. Updated permit attachments 1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7-A, and 8-A.

b. A list of engines that are planned to be constructed during the upcoming 12 months.

[Condition RR4 and Rule 62-213.440(1)(b)3.a., F.A.C.]

FW11. Prevention of Accidental Releases (Section 112(r) of CAA). The permittee has indicated that as of November 28, 2012, the facility is no longer subject to the Accidental Release Prevention Regulations and has de-registered the facilities' Risk Management Plan previously submitted. If and when the facility again becomes subject to 112(r), the permittee shall:

a. Submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center. Any Risk Management Plans, original submittals, revisions or updates to submittals, should be sent to: RMP Reporting Center, Post Office Box 10162, Fairfax, VA 22038, Telephone: (703) 227-7650 or by e-mail RMPRC@epacdx.net or using RMP*eSubmit.

b. Submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), F.A.C.

[40 CFR 68]

FW12. Title V Air Operation Permit Renewal. At least 225 days prior to the expiration date of this operation permit, the permittee shall submit to the Central District office, an appropriate air permit application, DEP Form No. 62-210.900(1). The Department recommends scheduling a pre-application meeting prior to the drafting and submittal of the renewal application.
[Rule 62-213.420(a)2, F.A.C.]

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Subsection A. Emission Unit 001 – Hot Water Generator / Boilers

The specific conditions in this section apply to the following emission unit:

EU No.	Brief Description
-001	Hot Water Generators / Boilers with an individual heat input rating of at least 10 MMBtu/hr. This emission unit is composed of fossil fuel fired hot water generators (HWGs) and boilers with an individual heat input rating of at least 10 MMBtu/hr. Attachment l-A in this permit contains a list of the existing fossil fuel fired boilers comprising this emission unit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10).

Essential Potential to Emit (PTE) Parameters

A.1. Methods of Operation. Each emission unit is allowed to fire No. 2 fuel oil, diesel fuel, natural gas, propane (including liquefied propane), biodiesel, jet fuel, and synthetically derived fuel (e.g., produced by the Fischer-Tropsch process) Synthetically derived fuels include coal-to-liquid (CTL), gas-to-liquid (GTL), biomass-to-liquids (BTL), and syngas (e.g., mixture of carbon monoxide and hydrogen) [Rules 62-4.160(2), 62-204.800, 62-210.200(225), Potential to Emit, F.A.C.]

A.2. Methods of Operation. Gas-fired boilers shall burn only natural gas as a primary fuel or No. 2 fuel oil as an emergency backup during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. The sulfur content of the No. 2 fuel oil shall not exceed 15 parts per million (ppm) by weight. [Rules 62-4.070(3), 62-210.200(225), Potential to Emit, and 62-213.410, F.A.C.; 40 CFR 63 Subpart JJJJJJ]

A.3. Restricted Operations. Gas-fired boilers are limited to less than 48-hours per year firing fuel oil for non-emergency purposes. [Rules 62-4.070(3) and 62-210.200(225), Potential to Emit, F.A.C.; 40 CFR 63 Subpart JJJJJJ]

A.4. Hours of Operation. These emission units may operate continuously (8,760 hours/year). [Rule 62-210.200(225), Potential to Emit, F.A.C., Permit No. 0090051-018-AV]

A.5. Emissions Unit Operating Rate Limitation After Testing. See the related testing provisions in Appendix TR, Facility-wide Testing Requirements. [Rule 62-297.310(2), F.A.C.]

Emission Limitations and Standards

A.6. Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). [Rule 62-296.320(b)1.]

Monitoring of Operations

A.7. Determination of Process Variables.

a. Required Equipment. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

b. Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

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Test Methods and Procedures

A.8. Emissions of PM, SO2, NOx, and CO shall be estimated utilizing either:

a. EPA's AP-42 emission factors;
b. Manufacturer supplied emission factors;
c. Test data measured through the use of EPA Reference Test Methods (RTM); or,
d. An alternate method using generally accepted engineering techniques that is submitted to the FDEP for review.

[Rule 62-4.070(1), F.A.C.]

Recordkeeping and Reporting Requirements

A.9. Monthly Recordkeeping Requirement. In order to demonstrate compliance with Specific Conditions No. **A.1.** and **A.2,** the permittee shall maintain a log at the facility for a period of at least five (5) years from the date the data are recorded. The log, at a minimum, shall contain the following:

Monthly

a. Date (month/year);
b. Type of fuel used; and,
c. Consecutive twelve-month total of the quantity of each type of fuel combusted.

The monthly logs shall be completed by the end of the following month.

Note: A consecutive 12-month total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-month total treats each month of the year as the end of a 12-month period. A 12-month total is not a year-to-date total. Facilities or emission units that have not been operating for 12 months should retain 12-month totals using whatever number of months of data are available until such a time as a consecutive 12-month total can be maintained each month. [Rule 62-4.070(3), F.A.C.]

A.10. Fuel Certification Requirement. The fuel certifications shall include the following information for distillate oil (i.e., No. 2 fuel oil):

a. The name of the oil supplier and either (b) and (c), or (d) following.
b. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c of 40 CFR 60, Subpart Dc; or
c. The sulfur content or maximum sulfur content of the oil; or
d. Documentation that the fuel is ultra-low sulfur diesel (e.g., fuel delivery receipt).

The records of the fuel supplier certifications that are maintained shall represent all of the fuel oil combusted in Emission Unit 001.
[Rule 62-210.200(247), Potential to Emit, F.A.C.]

A.11. The permittee shall maintain a current copy of Attachment l-A at the facility. The facility shall update the inventory with each submittal of the Semi-Annual Monitoring Report (Condition FW10). This updated copy shall include the following information for equipment meeting this heat input capacity criterion (i.e., at least 10 MMBtu/hr):

a. The current inventory of operational HWGs and boilers;
b. Listing of HWGs and boilers removed during the prior five years;
c. For each HWG and boiler, the;

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1. Unique identifier (e.g., identification/asset number);
2. Source location (e.g., building number);
3. Source description (e.g., manufacturer and model number);
4. Maximum heat input rating in units of MMBtu/hr;
5. Fuels the boiler is capable of firing;
6. Date of installation; and
7. Date of removal (if applicable).

A.12. Other Reporting Requirements. See Appendix RR, Facility-Wide Reporting Requirements, for additional reporting requirements.

Other Requirements

A.13. If a new HWG or boiler is installed at the facility that meets the criteria of units comprising EU 001 (i.e., at least 10 MMBtu/hr heat input capacity), the permittee shall:

a. Submit to the Permitting Authority one paper and one electronic copy of a construction permit application for the unit on the appropriate Department permit application forms.
b. Obtain a permit to construct the unit prior to the installation and operation of the unit.
c. After completion of construction of a new unit that is part of EU 001, the permittee shall submit a copy of the updated Attachment 1-A.
d. A Title V operating permit revision is not required upon completion of construction.

A.14. The permittee shall submit an updated version of Attachment l-A with Title V operating permit revision applications that address Emission Unit 001.

A.15. The permittee shall submit an updated version of Attachment l-A with each Title V operating permit renewal application.

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The specific conditions in this section apply to the following emission unit:

EU No.	Brief Description
-086	Emergency Stationary Compression Ignition (CI) Reciprocating Internal Combustion Engines (RICE) located throughout the site. All of these emergency stationary engines are considered to be regulated; they are not insignificant, exempt, or non-regulated. For inventory tracking purposes, the emergency stationary CI RICE engines are divided into two categories. The first category is for emergency stationary CI RICE engines that individually have the potential to emit at least 5 tons per year of any criteria pollutant based on 500 hours per year of total engine operating hours. This threshold corresponds to approximately 480 kilowatts (kW) for a pre-New Source Performance Standard (NSPS) engine. For NSPS subject engines, this threshold will vary based on the size and the NSPS Tier level of the engine. These emergency stationary CI RICE engines are listed in the first section of Attachment 3-A. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10). The second category is for all other emergency stationary CI RICE engines at the site that are not included in the first category of EU 086 or separately permitted as a separate emission unit (e.g., E.U. 088, 093, or 094). These emergency stationary CI RICE engines are listed in the second section of Attachment 3-A in this permit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10). These emergency stationary CI RICE <u>are not</u> subject to the RICE NESHAP requirements as NASA qualifies for an institutional exemption as provided in 40 CFR 63, Subpart ZZZZ, § 63.6585(f)(3). As indicated on Attachment 3-A, individual emergency stationary CI RICE manufactured after April 1, 2006 (July 1, 2006 for fire pumps), or modified or reconstructed after July 11, 2005, are subject to the requirements of the New Source Performance Standard (NSPS) contained at 40 CFR Part 60, Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*.

<u>Essential Potential to Emit (PTE) Parameters</u>

B.1. <u>Capacity.</u> The annual (consecutive 12-month) fuel usage rates for E.U. 086 and E.U. 093 combined shall not exceed 305,000 gallons (based on diesel fuel). If an engine uses fuels other than diesel fuel (refer to Condition **B.3**), the total annual usage rates shall be calculated on a pro-rated basis that is based on the relative fuel heat content value of the alternate fuel.
[Rule 62-210.200(225), Potential to Emit, F.A.C. and Construction Permit Nos. 0090051-010-AC, 0090051-017-AC and 0090051-025-AC]

{*Permitting Note: This fuel limit is based on normal operations. Engine operation (including fuel use) is not limited in the event of an extended emergency (e.g., hurricane response)*}.

B.2. <u>Potential to Emit.</u> Potential to emit calculations for this emission unit was based on 500 hours per year of engine operating hours. [Rule 62-210.200(225), Potential to Emit, F. A.C.]

{*Permitting Note: Engine operation (including operating hour use) is not limited in the event of an extended emergency (e.g., hurricane response)*}.

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B.3. Methods of Operation. Except as provided in Condition **B.8**, each engine is allowed to fire No. 2 fuel oil, diesel fuel, biodiesel, jet fuel, and synthetically derived fuel (e.g. produced by the Fischer-Tropsch process) Synthetically derived fuels include coal-to-liquids (CTL), gas-to-liquids (GTL), biomass-to-liquids (BTL), and syngas (e.g. mixture of carbon monoxide and hydrogen). [Rule 62-210.200(225), Potential to Emit, F.A.C. and Construction Permit Nos. 0090051-010-AC and 0090051-017-AC].

Emission Limitations and Standards

B.4. Restricted Hours of Operation These CI RICE are limited to 100 hours per year of operation. This 100 hour per year limit does not include the use of the engine in emergency situations.[40 CFR 63.6640(f)(1) and 40 CFR 60.4211(f)(2)]

B.5. Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). [Rule 62-296.320(b)1., F.A.C.]

The following Conditions **B.6** through **B.14** apply to CI RICE engines manufactured after April 1, 2006 (July 1, 2006 for fire pumps), or modified or reconstructed after July 11, 2005, which are subject to the requirements of the New Source Performance Standard (NSPS) contained at 40 CFR Part 60, Subpart IIII – *Standards of Performance for Stationary Compression Internal Combustion Engines*:

B.6. Hours of Operation. The permittee may request from the Department an additional 100 hours for a specific engine for other operation. This request will be made in accordance with the provisions of 40 CFR Part 60, Subpart IIII.

B.7. Emission Standards. Each CI RICE shall meet the NO_X plus non-methane hydrocarbons, CO, and PM emissions limitations as stated in the appropriate NSPS Tier limitations which are applicable to the engine. Compliance with this requirement can be through any one of the following methods. Any of these methods are presumed effective for the life of the engine (i.e., one-time requirements).

a. Be certified by the engine manufacturer as meeting the standards;
b. Based on manufacturer supplied emission test results or emission factors; or,
c. Based on emission testing performed by the permittee.

{*Permitting Note: The Permittee has indicated that compliance for these engines subject to 40 CFR Part 60, Subpart IIII is demonstrated by the engines being certified according to 40 CFR Part 89 or Part 94, as applicable, for the same model year and maximum engine power.*}

B.8. Fuel Sulfur Content. If diesel fuel is used, it must meet the following conditions:

a. *Sulfur Content*. The sulfur content shall not exceed 15 ppm = 0.0015% by weight (ultra low sulfur) for non-road fuel.
b. *Cetane and Aromatic*. The fuel must have a minimum cetane index of 40 or must have a maximum aromatic content of 35 volume percent.

Any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted for these engines. [40 CFR 60.4207(b), 80.510(c), 80.510(f)(2) & 80.510(f)(7)]

B.9. Backpressure Monitor. For engines equipped with a diesel particulate filter, the permittee shall install and operate a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.[40 CFR 60.4209(b)]

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B.10. Hour Meter. Each engine must have a non-resettable hour meter. [40 CFR 60.4209(a)]

B.11. Compliance Requirements Due to Loss of Certification. If the permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:

a. For engines rates at less than 100 HP; keep a maintenance plan and records of maintenance conducted to demonstrate compliance and maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. Emissions testing is not required unless:
   1. The permittee does not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or
   2. The permittee changes the emission-related settings in a way that is not permitted by the manufacturer.

   If testing is required, the permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action. No subsequent performance testing is required.

b. For engines rated greater than or equal to 100 HP and less than or equal to 500 HP; keep a maintenance plan and records of conducted maintenance and maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions.

   Initial performance testing is required within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after emission-related settings are changed in a way that is not permitted by the manufacturer.

c. For engines rated at greater than 500 HP; keep a maintenance plan and records of conducted maintenance and maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. Initial performance testing is required within 1 year of startup within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer. Periodic performance testing is required every 8,760 hours of engine operation or 3 years, whichever comes first. [40 CFR 60.4211(g)

B.12. Operation and Maintenance. For the engines subject to 40 CFR 60, Subpart IIII, the owner or operator must operate and maintain the stationary CI RICE according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to the owner or operator. [40 CFR 60.4211(a)]

B.13. Fuel Certification Requirements. The fuel certifications shall include the following information for distillate oil (i.e., No. 2 fuel oil):

a. The name of the oil supplier and either (b) and (c), or (d) following.
b. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c of 40 CFR 60, Subpart Dc; or
c. The sulfur content or maximum sulfur content of the oil; or

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d. Documentation that the fuel is ultra-low sulfur diesel (e.g., fuel delivery receipt).

The records of the fuel supplier certifications that are maintained shall represent all of the fuel oil combusted in Emission Unit 086.

[Rules 62-210.200(225), Potential to Emit and 62-4.070(3), F.A.C.]

{Permitting Note: Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975.}

Test Methods and Procedures

B.14. For the engines not subject to 40 CFR 60, Subpart IIII, emissions of PM, SO2, NOx, and CO shall be estimated utilizing either:

a. EPA's AP-42 emission factors;
b. Manufacturer supplied emission factors;
c. Test data measured through the use of EPA Reference Test Methods (RTM); or,
d. An alternate method using generally accepted engineering techniques that is submitted to the FDEP for review.

[Rule 62-4.070(1), F.A.C.]

For the engines subject to 40 CFR 60, Subpart IIII, emissions of PM, SO_2, NO_x, and CO shall be estimated utilizing either:

a. Certifications (e.g., Tier II);
b. Manufacturer supplied emission factors (maximum factors, if available);
c. Performance Tests (40 CFR 60, Subpart IIII),
d. EPA's AP-42 emission factors if the emission factor is not available in the above items a – c; or,
e. An alternate method using generally accepted engineering techniques that is submitted to the FDEP for review.

[Rules 62-297.40 1 (9)(c), 62-297.3 10(4)(a)2., 62-297.3 10(7)(a)4 .a,, F.A.C .]

Recordkeeping Requirements

B.15. Monthly Recordkeeping Requirement. In order to demonstrate compliance with Specific Conditions No. **B.1.** and **B.3,** the permittee shall maintain a log at the facility for a period of at least five (5) years from the date the data are recorded. The log, at a minimum, shall contain the following:

Monthly

a. Date (month/year);
b. Amount of each type of fuel used for E.U. 086 and E.U. 093 combined;
c. Consecutive 12-month total of the quantity of each fuel type combusted for E.U. 086 and E.U. 093 combined. Should fuels other than diesel fuel be used in these engines, the consecutive 12-month usage rates shall be calculated on a pro-rated basis that is based on the relative fuel heat content value of the alternate fuel(s) expressed as gallons of diesel fuel.

The monthly logs shall be completed by the end of the following month.

Note: A consecutive 12-month total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-month total treats each month of the

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year as the end of a 12-month period. A 12-month total is not a year-to-date total. Facilities or emission units that have not been operating for 12 months should retain 12-month totals using whatever number of months of data are available until such a time as a consecutive 12-month total can be maintained each month. [Rule 62-4.070(3), F.A.C.]

B.16. The permittee shall maintain a current copy of Attachment 3-A at the facility. The facility shall submit an updated Attachment 3-A inventory semi-annually in conjunction with the submittal of the Semi-Annual Monitoring Report (Condition FW10).

B.17. Record Retention.

a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.
b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

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B.18. For each new emergency stationary CI RICE installed at the facility that individually has a potential to emit greater than 5 tons per year of a criteria pollutant, the Permittee shall obtain a permit to construct the engine prior to the installation and operation of the engine. The Permittee shall submit to the Permitting Authority one hard copy and one electronic copy of a construction permit application for the engine on the appropriate FDEP permit application forms (e .g., FDEP Form No. 62-2 10.900(1)).

B.19. The permittee shall submit an updated version of Attachment 3-A with any Title V operating permit revision applications that address Emission Unit 086.

B.20. The permittee shall submit updated versions of Attachment 3-A with each Title V operating permit renewal application

{Permitting Note: The Department recommends having a pre-application meeting to discuss any possible permit application.}

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The specific conditions in this section apply to the following emission unit:

EU No.	Brief Description
-087	Emergency Stationary Spark Ignition (SI) Reciprocating Internal Combustion Engines (RICE) located throughout the site. All of these engines are considered to be regulated; they are not insignificant, exempt, or non-regulated. For inventory tracking purposes, the emergency stationary SI RICE engines are divided into two categories: The first category includes emergency stationary SI RICE engines that individually have the potential to emit at least 5 tons per year of any criteria pollutant based on 500 hours per year of total engine operating hours. This threshold corresponds to approximately 690 kilowatts (kW) for a pre-New Source Performance Standard (NSPS) engine. For NSPS subject engines, this threshold will vary based on the size and the NSPS Tier level of the engine. At the time of this permit revision (late 2014), there are no emergency stationary SI RICE engines that are included in the first category of this emission unit. These emergency stationary SI RICE engines will be listed in the first section of Attachment 4-A in this permit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10). The second category includes all other emergency stationary SI RICE engines at the site. At the time of this permit revision (late 2014), there are no emergency stationary SI RICE engines that are included in the second category of this emission unit. These emergency stationary SI RICE engines will be listed in the second section of Attachment 4-A in this permit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10). These emergency stationary SI RICE <u>are not</u> subject to the RICE NESHAP requirements as NASA qualifies for an institutional exemption as provided in 40 CFR 63, Subpart ZZZZ, § 63.6585(f)(3). Individual emergency stationary SI RICE manufactured after January 1, 2009, or modified or reconstructed after June 12, 2006, are subject to the requirements of the New Source Performance Standard (NSPS) contained at 40 CFR Part 60, Subpart JJJJ – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*.

<u>Essential Potential to Emit (PTE) Parameters</u>

C.1. <u>Capacity</u>. The annual (consecutive 12-month) fuel usage rates for E.U. 087 shall not exceed 38,000 gallons (based on gasoline). Should fuels other than gasoline fuel be used in this E.U., the total annual usage rates shall be based on a pro-rated basis that is based on the relative fuel heat content value of the alternate fuel. [Rule 62-210.200(225), Potential to Emit, F.A.C. and Construction Permit Nos. 0090051-010-AC and 0090051-017-AC]

{*Permitting Note: This fuel limit is based on normal operations. Engine operation (including fuel use) is not limited in the event of an extended emergency (e.g., hurricane response)*}

C.2. <u>Potential to Emit</u>. Potential to emit calculations for this emission unit shall be was based on 500 hours per year of engine operating hours. [Rule 62-210.200(225), Potential to Emit, F. A.C.]

{Permitting Note: Engine operation (including operating hour use) is not limited in the event of an extended emergency (e.g., hurricane response)}.

C.3. <u>Methods of Operation</u>. Except as provided in Condition **C.8**, each engine is allowed to fire gasoline, gasoline / alcohol blends (e.g., E-10 and E-85), natural gas, propane, liquefied petroleum gas (LPG), and

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synthetically derived fuel (e.g. produced by the Fischer-Tropsch process). Synthetically derived fuels include coal-to-liquids (CTL), gas-to-liquids (GTL), biomass-to-liquids (BTL), and syngas (e.g. mixture of carbon monoxide and hydrogen). [Rule 62-210.200(225), Potential to Emit, F.A.C. and Construction Permit Nos. 0090051-010-AC and 0090051-017-AC]

Emission Limitations and Standards

C.4. Restricted Hours of Operation These SI RICE are limited to 100 hours per year of operation. This 100 hour per year limit does not include the use of the engine in emergency situations.[40 CFR 63.6640(f)(1) and 40 CFR 60.4243(d)]

C.5. Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity). [Rule 62-296.320(b)1. F.A.C.)]

The following Conditions **C.6** through **C.9** apply to SI RICE engines manufactured after January 1, 2009, or modified or reconstructed after June 12, 2006, which are subject to the requirements of the New Source Performance Standard (NSPS) contained at 40 CFR Part 60, Subpart JJJJ – *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*.

C.6. Hours of Operation. The permittee may request from the Department an additional 100 hours for a specific engine for other operations. This request will be made in accordance with the provisions of 40 CFR Part 60, Subpart JJJJ.

C.7. Emission Standards. Each subject SI RICE shall meet the emissions criteria as stated in 40 CFR 60, Subpart JJJJ. Compliance with this requirement can be through any one of the following methods. Any of these three methods are presumed effective for the life of the engine.

a. Be certified by the engine manufacturer; or,
b. Based on the manufacturer supplied emission test results or emission factors; or,
c. Based on the following performed by the permittee for engines that are not operated and maintained per the manufacturer's emission related instructions or approved site specific maintenance plan, or are otherwise considered non-certified engines:

1) For engines rated at less than 100 hp; keep a maintenance plan and records of conducted maintenance and maintain the engine in a manner consistent with good air pollution control practice for minimizing emissions. No emissions testing is required.
2) For engines rated at least 100 hp and less than or equal to 500 hp, keep a maintenance plan and records of conducted maintenance, maintain the engine in a manner consistent with good air pollution control practice for minimizing emissions, and perform one-time initial performance test within one year or either initial startup or deviation from the manufacturer's written maintenance instructions.
3) For engines rated at greater than 500 hp, keep a maintenance plan and records of conducted maintenance, maintain the engine in a manner consistent with good air pollution control practice for minimizing emissions, and perform one-time initial performance test within one year or either initial startup or deviation from the manufacturer's written maintenance instructions. Periodic performance testing is required every 8,760 hours of operation or every three years, whichever comes first.

[40 CFR 60.4231]

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{Permitting Note: the permittee has indicated that compliance for these SI RICE subject to 40 CFR 60, Subpart JJJJ is demonstrated by the engines being certified according to 40 CFR Part 89 or Part 94, as applicable, for the same model year and maximum engine power.}

C.8. Fuel Sulfur Content (gasoline engines). Subject emergency stationary SI RICE using gasoline fuel shall use fuel meeting the fuel sulfur limit contained in 40 CFR §80.195(a), that is, contain less than 80 ppm of sulfur.

C.9. Hour Meter. For the following subject engines; the permittee shall install a non-resettable hour meter.

a. Greater than 500 hp and built on or after July 1, 2010;
b. Greater than or equal to 130 hp and less than 500 hp, and built on or after January 1, 2011; and
c. Less than 130 hp and built on or after July 1, 2008.

C.10. Compliance Requirements. The permittee shall demonstrate compliance according to one of the following methods:

a. If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. [40 CFR 60.4243(b)(1) and 40 CFR 60.4243(a)(1)]
b. If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you 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. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of engine startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer].[Rule 62-213.440, F.A.C.; and 40 CFR 60.4243(b)(1) and 40 CFR 60.4243(a)(2)]

Test Methods and Procedures

C.11. For the engines not subject to 40 CFR 60 Subpart JJJJ, emissions of PM, SO_2, NO_x, and CO shall be estimated utilizing either:

a. EPA's AP-42 emission factors;
b. Manufacturer supplied emission factors;
c. Test data measured through the use of EPA Reference Test Methods (RTM); or,
d. An alternate method using generally accepted engineering techniques that is submitted to the FDEP for review.

[Rule 62-4.070(1), F.A.C.]

For the engines subject to 40 CFR 60 Subpart JJJJ, emissions of PM, SO_2, NO_x, and CO shall be estimated utilizing either:

a. Certifications (e.g., Tier II);
b. Manufacturer supplied emission factors (maximum factors, if available);
c. Performance Tests (40 CFR 60, Subpart JJJJ);
d. EPA's AP-42 emission factors if the emission factor is not available in the above items a – c; or,

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e. An alternate method using generally accepted engineering techniques that is submitted to the FDEP for review.

[Rules 62-297.40 1 (9)(c), 62-297.3 10(4)(a)2., 62-297.3 10(7)(a)4 .a,, F.A.C .]

Recordkeeping Requirements

C.12. Monthly Recordkeeping Requirement. In order to demonstrate compliance with Specific Conditions No. **C.1.** and **C.3.,** the permittee shall maintain a log at the facility for a period of at least five (5) years from the date the data are recorded. The log, at a minimum, shall contain the following:

Monthly

a. Date (month/year);
b. Amount of each type of fuel used;
c. Consecutive 12-month total of the quantity of each fuel type combusted for Emission Unit 087. Should fuels other than gasoline be used in these engines, the consecutive 12-month usage rates shall be calculated on a pro-rated basis that is based on the relative fuel heat content value of the alternate fuel(s) expressed as gallons of gasoline.

The monthly logs shall be completed by the end of the following month.

Note: A consecutive 12-month total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-month total treats each month of the year as the end of a 12-month period. A 12-month total is not a year-to-date total. Facilities or emission units that have not been operating for 12 months should retain 12-month totals using whatever number of months of data are available until such a time as a consecutive 12-month total can be maintained each month. [Rule 62-4.070(3), F.A.C.]

C.13. The permittee shall maintain a current copy of Attachment 4-A at the facility. The facility shall submit an updated Attachment 4-A inventory semi-annually in conjunction with the submittal of the Semi-Annual Monitoring Report (Condition FW 10).

C.14. Record Retention.

a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.
b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

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C.15. For each new emergency stationary SI RICE installed at the facility that individually has a potential to emit greater than 5 tons per year of a criteria pollutant, the Permittee shall obtain a permit to construct the engine prior to the installation and operation of the engine. The Permittee shall submit to the Permitting Authority one hard copy and one electronic copy of a construction permit application for the engine on the appropriate FDEP permit application forms (e .g., FDEP Form No. 62-2 10.900(1)).

C.16. The permittee shall submit an updated version of Attachment 4-A with any Title V operating permit revision applications that address Emission Unit 087.

C.17. The permittee shall submit an updated version of Attachment 4-A with each Title V operating permit renewal application.
{Permitting Note: The Department recommends having a pre-application meeting to discuss any possible permit application.}

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The specific conditions in this section apply to the following emission unit:

EU No.	Brief Description
-088	Launch Complex 39 (LC-39) Non-Emergency Stationary Compression Ignition (CI) Reciprocating Internal Combustion Engines (RICE). This emission unit includes engines involved in an electric utility demand response program. For inventory tracking purposes, the engines that comprise Emission Unit 088 are listed in Attachment 5-A in this permit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10). These non-emergency stationary CI RICE are subject to the non-emergency provisions of the RICE NESHAP 40 CFR 63, Subpart ZZZZ.

Essential Potential to Emit (PTE) Parameters

D.1. Capacity. The annual (consecutive 12-month) fuel usage rate for E.U. 088 shall not exceed 170,000 gallons (based on diesel fuel). [Rule 62-210.200(225), Potential to Emit, F.A.C. and Construction Permit Nos. 0090051-010-AC and 0090051-017-AC]

{*Permitting Note: This fuel limit is based on normal operations. Engine operation (including fuel use) is not limited in the event of an extended emergency (e.g., hurricane response)*}.

D.2. Potential to Emit. Potential to emit calculations for this emission unit was based on 1,250 hours per consecutive 12-month period for all engines in this emission unit. Rule 62-210.200(225), Potential to Emit, F.A.C. and Construction Permit No. 0090051-010-AC and 0090051-017-AC]

{*Permitting Note: Engine operation (including hour use) is not limited in the event of an extended emergency (e.g., hurricane response)*}

D.3. Authorized Fuel. These non-emergency stationary CI RICE must use diesel fuel that meets the following requirements for non-road diesel fuel:

a. *Sulfur Content*. The sulfur content shall not exceed 15 ppm or 0.0015% by weight (i.e., ultra low sulfur diesel specifications for non-road fuel).
b. *Cetane and Aromatic*. The fuel must have a minimum cetane index of 40 or a maximum aromatic content of 35% by volume.

[40 CFR 63.6604(a) and 40 CFR 80.510(b) and Construction Permit No. 0090051-025-AC]

Emission Limitations and Standards

D.4. Carbon Monoxide (CO) Emissions. The owner or operator must comply with either of the following CO limitations:

a. Limit concentration of CO in the stationary RICE exhaust to 23 parts per million by volume, dry basis at 15 % O_2; or
b. Reduce CO emissions by at least 70% or more

[40 CFR 63.6640 Table 2d and Construction Permit No. 0090051-025-AC]

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Operation and Monitoring Requirements

D.5. Oxidation Catalyst Use. Because an oxidation catalyst is used to comply with the CO limitation contained in Condition **D.4.** the permittee must:

a. Maintain each catalyst so that the pressure drop across the catalyst is within the established operating range developed for each engine; and,

b. Maintain the temperature of each stationary RICE exhaust so that the catalyst inlet temperature (4-hour rolling average) is greater than or equal to 450°F and less than or equal to 1,350°F during normal operation.

[40 CFR 63.6640 Table 2b, Construction Permit No. 0090051-025-AC, NASA KSC Site Specific RICE NESHAP Oxidation Catalyst Pressure Drop Monitoring Plan (July 30, 2014)]

D.6. Continuous Parameter Monitoring System (CPMS). The permittee has installed a continuous parameter monitoring system (CPMS) as specified in Table 5 of 40 CFR 63, Subpart ZZZZ. Each CPMS must be installed, operated, and maintained according to the requirements in 40 CFR 63.6625(b)(1) through (6) and as specified below.

a. The owner or operator must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (1) through (5) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (1) through (5) of this section in your site-specific monitoring plan.

1) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

2) Sampling interface (*e.g.*, thermocouple) location such that the monitoring system will provide representative measurements;

3) Equipment performance evaluations, system accuracy audits, or other audit procedures;

4) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

5) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

b. Each CPMS must be installed, operated, and maintained in continuous operation according to the procedures in the site-specific monitoring plan.

c. The CPMS must collect data at least once every 15 minutes (see also §63.6635).

d. For a CPMS used for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 % of the measurement range, whichever is larger.

e. The CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan must be conducted at least annually.

f. A performance evaluation of each CPMS must be conducted in accordance with your site-specific monitoring plan.

[40 CFR 63.6625(b) and Construction Permit No. 0090051-025-AC]

{Permitting Note: The permittee submitted a CPMS site-specific monitoring plan dated November 13, 2013.}

D.7. Continuous Monitoring and Data Collection. In order to comply with the emission and operating limitations, the owner or operator must monitor and collect data in accordance with the following:

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a. Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
b. You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[40 CFR 63.6635 and Construction Permit No. 0090051-025-AC]

D.8. Continuous Compliance Demonstration. The owner or operator must demonstrate continuous compliance with the emission limitation contained in Condition **D.4.** and the operation limitation contained in Condition **D.5**. by

a. Collecting the catalyst inlet temperature data according to Condition **D.6.(c)**(every 15-minutes)
b. Reducing these data to 4-hour rolling averages for normal operation times;
c. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
d. Measuring the pressure drop across the catalyst once per month (if the engine is operated) and demonstrating that the pressure drop across the catalyst is within the operating limitation established for the specific engine per the site-specific oxidation catalyst pressure drop monitoring plan.

[40 CFR 63.6640 Table 6, Construction Permit No. 0090051-025-AC and NASA KSC Site Specific RICE NESHAP Oxidation Catalyst Pressure Drop Monitoring Plan (July 30, 2014)]

D.9. Closed Crankcase Ventilation System. The owner and operator must follow the manufacturer's specified maintenance requirements for operating and maintaining the closed crankcase ventilation systems and replacing the crankcase ventilation filters.
[40CFR 63.6625(g)(1) and Construction Permit No. 0090051-025-AC]

D.10. Operation and Maintenance of Equipment. At all times the owner or operator must operate and maintain, any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the compliance authority which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[40 CFR 63.6605(b) and Construction Permit No. 0090051-025-AC]

D.11. Operation at Idle and Startup Conditions. During periods of startup the owner or operator must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup (i.e., normal operation) emission limitations contained in Condition **D.4.** apply.
[40 CFR 63.6640 Table 2d and Construction Permit No. 0090051-025-AC]

D.12. Hour Meter. Each engine must have a non-resettable hour meter.
[40 CFR 63.6625(f) and Construction Permit No. 0090051-025-AC]

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Test Methods and Procedures

D.13. Compliance Tests. The permittee must conduct performance tests according to Conditions **D.15** thru **D.19** for each non-emergency CI RICE engine within 8,760 hours of operation from the last test or within 3 years of the date of the last test, whichever comes first.
[40 CFR 63.6612 Table 3 and Construction Permit No. 0090051-025-AC]

{*Permitting Note: The permittee conducted the initial performance test on these engines in March 2014.*}

D.14. Compliance Tests after Catalyst Maintenance or Change.

a. When catalyst maintenance is performed, the following must be demonstrated within 60 days. Catalyst maintenance includes cleaning (i.e., the same catalyst bed is removed, cleaned and then reinstalled):
   1) Operating Temperature. Demonstrate operating temperature between 450°F and 1,350°F.
   2) Operating Pressure. The permittee shall either:
      a) Demonstrate the differential pressure during an engine run is within the established operating pressure curve for the engine; or,
      b) Reestablish the acceptable operating pressure drop range for the engine by:
         i. Developing a revised operating curve; or
         ii. Identifying the rationale for the revised curve; and,
         iii. Providing this curve and rationale to the FDEP for review and comment.
b. When the catalyst is changed, the permittee must reestablish the pressure operating curve during the compliance demonstration testing according to Conditions **D.15**. thru **D.19**. within 60 days of changing the catalyst.

[40 CFR 63.6612(a), Table 4 and Table 5; 40 CFR 63.6640(b); and Rule 62-297.310(7), F.A.C. and Construction Permit No. 0090051-025-AC]

D.15. Test Requirements. The permittee must conduct three separate test runs for each performance test required in this section. Unless otherwise approved by the FDEP, each test run must last at least 1 hour. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. The permittee may suggest an alternate testing procedure to provide a balance of:

a. A reasonable number of test runs;
b. Reasonable duration of each run;
c. Allowance for abbreviated tests for engines of the same make and model; and;
d. Establishing or re-establishing an operating pressure range for a range of engine loads.

[40 CFR 63.6620(d) and Rule 62-297.310, F.A.C., Construction Permit No. 0090051-025-AC and NASA KSC Site Specific RICE NESHAP Oxidation Catalyst Pressure Drop Monitoring Plan (July 30, 2014)]

D.16. Measurements to Determine O_2 and CO.

a. *Measurements to determine O_2:* The owner or operator must measure the O_2 at the inlet and outlet of the control device in accordance with Method 3, 3A or 3B of 40 CFR Part 60 Appendix A, or using a portable CO and O_2 analyzer according to the ASTM D6522–00 (2005) (incorporated by reference, see 40 CFR 63.14) requirements. Measurements to determine O_2 must be made at the same time as the measurements for CO concentration. Methods 3A and 10 may also be used as options to ASTM–D6522–00 (2005).
b. *Measurements to determine CO:* The owner or operator must measure the CO at the inlet and the outlet of the control device using a portable CO and O_2 analyzer according to the ASTM D6522–00 (2005) (incorporated by reference, see 40 CFR 63.14) or Method 10 of 40 CFR Part 60 Appendix A requirements. The CO concentration must be at 15% O_2, dry basis. Methods 3A and

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10 may also be used as options to ASTM–D6522–00 (2005). Method 320 of 40 CFR Part 63, Appendix A, or ASTM D6348–03 may also be used.

c. *Sample port location and number of traverse points:* The owner or operator must select sample port locations and the number of traverse points in accordance with Method 1 or 1A of 40 CFR Part 60 Appendix A. The sampling site must be located at the outlet of the oxidation catalyst device.

d. *Measurements to determine moisture content*: The owner or operator must measure the moisture content of each stationary RICE exhaust at the sample port location in accordance with Method 4 of 40 CFR Part 60 Appendix A, or Test Method 320 of 40 CFR Part 63 Appendix A according to the ASTM D6348–03 (incorporated by reference, see 40 CFR 63.14) requirements.

[40 CFR 63.6620 Table 4(1.) and (3.) and Construction Permit No. 0090051-025-AC]

D.17. Percent Reduction of CO Determination. Percent reduction of CO must be determined using the following equation:

Where:

Ci = concentration of carbon monoxide (CO), at the control device inlet,

Co = concentration of CO, at the control device outlet, and

R = percent reduction of CO emissions

[40 CFR 63.6620(e) (1) and Construction Permit No. 0090051-025-AC]

D.18. Inlet and Outlet Normalization of CO Concentrations. The CO concentrations at the inlet and outlet of the control device must be normalized to a dry basis and to 15% oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15% oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in the following equations:

a. Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero % excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu)

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu)

b. Calculate the CO_2 correction factor for correcting measurement data to 15% O_2, using the following equation:

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Where:

= CO_2 concentration correction factor, percent.

5.9 = 20.9% O_2 – 15% O_2, the defined O_2 correction value, percent.

c. Calculate the CO gas concentrations adjusted to 15% O_2 correction value, using the following equation:

Where:

= calculated concentration of CO adjusted to 15% O_2.

C_d = measured concentration of CO uncorrected.

= CO_2 correction factor, percent.

= Measured CO_2 concentration measured, dry basis, percent.

[40 CFR 63.6620(e)(2) and Construction Permit No. 0090051-025-AC]

D.19. Determination of Engine Load. The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, and strain gauges are used, the model number of the measurement device, and an estimate of its accuracy in percentage of true value must be provided.
[40 CFR 63.6620(i) and Construction Permit No. 0090051-025-AC]

Notification Requirements

D.20. Notification about the Catalyst.

a. You must notify the Department at least 30 days before performing routine maintenance on the catalyst, or, as soon as possible, when it is emergency maintenance. Catalyst maintenance includes cleaning (removed, cleaned and then reinstalled).
b. You must notify the Department at least 30 days before replacing the catalyst, or, as soon as possible, when the replacement is an emergency.

See Condition **D.14** regarding required testing.
[40 CFR 63.6640(b) and 63.6650 and Construction Permit No. 0090051-025-AC]

D.21. Notification of Deviations from Limitations. The owner or operator must report each instance when an emission limitation or operating limitation contained in this permit was not met. These instances are deviations from the emission and operating limitations in this permit. These deviations must be reported according to the requirements in Condition **D.29**.
[40 CFR 63.6650 and Construction Permit No. 0090051-025-AC]

D.22. Notification of Intent to Conduct a Performance Test. The owner or operator must submit a Notification of Intent to conduct a performance test required by 40 CFR 63 Subpart ZZZZ at least 60 days before the performance test is scheduled to begin, as required in 40 CFR 63.7(b)(1) and a separate notification at

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least 15 days prior to the scheduled test date [Appendix TR, Item TR7(9)]. The Notification shall be made to the Compliance Authority (**DEP_CD@dep.state.fl.us**). The notification must include the following information: the date, time and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and telephone number of the person conducting the test.
[40 CFR 63.6645(g) and Construction Permit No. 0090051-025-AC]

D.23. Notification of Compliance Status. Owners or operators required to conduct a compliance demonstration must submit a Notification of Compliance Status according to 40 CFR 63.9(h)(3).

a. For each compliance demonstration required in Condition **D.14.a** that does not include a performance test, the owner or operator must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.
b. For each compliance demonstration required in Conditions **D.13** and **D.14.b** that includes a performance test, the owner or operator must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40 CFR 63.10(d)(2).

[40 CFR 63.6645(h) and Construction Permit No. 0090051-025-AC]

D.24. Additional Notification Requirements: The owner or operator must submit all of the notifications in accordance with:

a. §63.7(b) Notification of Performance Test;
b. §63.7(c) Quality Assurance Program;
c. §63.8(e) Conduction of Performance Test;
d. §63.8(f)(4) Use of Alternative Test Methods;
e. §63.8(f)(6) and 63.9(b) Initial Notifications;
f. §63.9(c); Request for Extension of Compliance;
g. §63.9(d) Notification that source is subject to special compliance requirements;
h. §63.9(e) Notification of Performance Test;
i. §63.9(g) Additional Notification requirements for sources with continuous monitoring systems; and
j. §63.9(h) Notification of Compliance Status by the dates specified in each Rule.

[40 CFR 63.6645(a) and 40 CFR 63 Subpart A and Construction Permit No. 0090051-025-AC]

Recordkeeping Requirements

D.25. Record Retention.

a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.
b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

D.26. Notification, Performance and Compliance Records. The owner or operator must keep:

a. A copy of each notification and report that the owner or operator submitted to comply with Subsection D, including all documentation supporting any Initial Notification or Notification of Compliance Status that the owner or operator submitted.
b. Records of the occurrence and duration of each malfunction of operation.

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c. Records of all required maintenance performed on the hour meter.
d. Records of actions taken during periods of malfunction to minimize emissions in accordance with Specific Condition **D.10**., including corrective actions to restore malfunctioning process and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.6655]

D.27. Monthly Recordkeeping Requirement. In order to demonstrate compliance with Specific Conditions Nos. **D.1**. and **D.2.,** the permittee shall maintain a log at the facility for a period of at least five (5) years from the date the data are recorded. The log, at a minimum, shall contain the following:

Monthly

a. Date (month/year);
b. Type of fuel used;
c. Consecutive 12-month total of the quantity of each fuel type combusted for the entire E.U. 088; and
d. Consecutive 12-month total of operational hours for the engines comprising E.U. 088.

The monthly logs shall be completed by the end of the following month.

Note: A consecutive 12-month total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-month total treats each month of the year as the end of a 12-month period. A 12-month total is not a year-to-date total. Facilities or emission units that have not been operating for 12 months should retain 12-month totals using whatever number of months of data are available until such a time as a consecutive 12-month total can be maintained each month. [Rule 62-4.070(3), F.A.C.]

D.28. Fuel Certification Requirements The fuel certifications shall include the following information for distillate oil (i.e., No. 2 fuel oil):

a. The name of the oil supplier and either (b) and (c), or (d) following.
b. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c of 40 CFR 60, Subpart Dc; or
c. The sulfur content or maximum sulfur content of the oil; or
d. Documentation that the fuel is ultra-low sulfur diesel (e.g., fuel delivery receipt).

The records of the fuel supplier certifications that are maintained shall represent all of the fuel oil combusted in Emission Unit 088.

{Permitting Note: Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975.}

Reporting Requirements

D.29. Compliance Report. The owner or operator must submit semiannual Compliance Reports for engines in this emission unit according to the following requirements:

a. Each semiannual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31 and

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must be postmarked or delivered no later than August 30 or February 28 whichever date is the first date following the end of the semiannual reporting period.

b. The Compliance Report must contain the following information:
   1) Company name and address.
   2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
   3) Date of report and beginning and ending dates of the reporting period.
   4) If you had a deviation or malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a deviation or malfunction of an affected source to minimize emissions in accordance with Specific Conditions **D.6 or D.10**, including actions taken to correct a malfunction.
   5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.
   6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period. Link to 40 CFR 63.8: http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=5da53a158d187990195161c0be320dcc&rgn=div5&view=text&node=40:10.0.1.1.1&idno=40#40:10.0.1.1.1.1.5.8

c. For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CPMS to comply with the emission and operating limitations in 40 CFR 63.6650 you must include information in paragraphs b.1 through 4, above, and 1 through 12, below.
   1) The date and time that each malfunction started and stopped.
   2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
   3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).
   4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
   5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
   6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
   7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
   8) An identification of each parameter and pollutant (CO) that was monitored at the stationary RICE.
   9) A brief description of the stationary RICE.
   10) A brief description of the CMS.
   11) The date of the latest CMS certification or audit.
   12) A description of any changes in CMS, processes, or controls since the last reporting period.

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d. If you submit a Compliance Report pursuant to this specific condition along with, or as part of, the semiannual monitoring report required in Appendix RR of this Title V Air Operation Permit and the semiannual monitoring report includes all required information in this specific condition, submission of the semiannual monitoring report shall be deemed to satisfy any obligation to report the same deviations and malfunctions in a semiannual Compliance Report required by this specific condition. However, submission of a compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

[40 CFR 63.6650(a) - (f) and Table 7 and Construction Permit No. 0090051-025-AC]

Permit Application

D.30. The permittee shall submit an updated version of Attachment 5-A with Title V operating permit revision applications that address Emission Unit 088.

D.31. The permittee shall submit an updated version of Attachment 5-A with each Title V operating permit renewal application.

General Provisions

D.32. 40 CFR 63 Subpart A - General Provisions. The owner or operator shall comply with the following applicable requirements of 40 CFR 63 Subpart A - General Provisions, which have been adopted by reference in Rule 62-204.800(11)(d)1., F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 63.5(e), 40 CFR 63.5(f), 40 CFR 63.6(g), 40 CFR 63.6(h)(9), 40 CFR 63.6(j), 40 CFR 63.13, and 40 CFR 63.14. Link to 40 CFR 63, Subpart A - General Provisions: http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&rgn=div6&view=text&node=40:10.0.1.1.1.1&idno=40

General Provisions Citation	Subject of Citation
§63.1	General applicability of the General Provisions
§63.2	Definitions (additional terms defined in 43 CFR 63.6675)
§63.3	Units and abbreviations
§63.4	Prohibited activities and circumvention
§63.5	Construction and reconstruction
§63.6(a)	Applicability
§63.7(b)	Notification of Performance tests
§63.9(a)	Applicability and State delegation of notification requirements
§63.9(b)(1)-(5)	Initial notifications (except that §63.9(b)(3) is reserved)
§63.9(i)	Adjustment of submittal deadlines
§63.9(j)	Change in previous information
§63.10(a)	Administrative provisions for recordkeeping/reporting
§63.10(b)(1)	Record retention
§63.10(b)(2)(vi)–(xi)	Records
§63.10(b)(2)(xii)	Record when under waiver
§63.10(b)(2)(xiv)	Records of supporting documentation
§63.10(b)(3)	Records of applicability determination
§63.10(d)(1)	General reporting requirements

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General Provisions Citation	Subject of Citation
§63.10(f)	Waiver for recordkeeping/reporting
§63.12	State authority and delegations
§63.13	Addresses
§63.14	Incorporation by reference
§63.15	Availability of information

[40 CFR 63.6665 and 40 CFR 63, Table 8]

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The specific conditions in this section apply to the following emission unit:

EU No.	Brief Description
-093	Non-Emergency Existing Stationary Compression Ignition (CI) Reciprocating Internal Combustion Engines (RICE) with Installed Controls. This emission unit includes engines that are considered non-emergency existing stationary engines and use oxidation catalyst control systems. For inventory tracking purposes, the engines that comprise Emission Unit 093 are listed in Attachment 7-A in this permit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10). These non-emergency stationary CI RICE are subject to the non-emergency provisions of the RICE NESHAP 40 CFR 63, Subpart ZZZZ.

Essential Potential to Emit Parameters

E.1. Capacity. The annual (consecutive 12-month) fuel usage rate for E.U. 086 and E.U. 093 combined shall not exceed 305,000 gallons (based on diesel fuel). [Rule 62-210.200(225), Potential to Emit, F.A.C. and Construction Permit Nos. 0090051-010-AC, 0090051-017-AC and 0090051-025-AC]
{*Permitting Note: This fuel limit is based on normal operations. Engine operation (including fuel use) is not limited in the event of an extended emergency (e.g., hurricane response)*}.

E.2. Hours of Operation. Each engine is allowed to operate continuously.
Rule 62-210.200(225), Potential to Emit, F.A.C. and Construction Permit Nos. 0090051-010-AC and 0090051-017-AC]

E.3. Authorized Fuel. These non-emergency stationary CI RICE must use diesel fuel that meets the following requirements for non-road diesel fuel:

a. *Sulfur Content*. The sulfur content shall not exceed 15 ppm or 0.0015% by weight (i.e., ultra low sulfur diesel specifications for non-road fuel).
b. *Cetane and Aromatic*. The fuel must have a minimum cetane index of 40 or a maximum aromatic content of 35% by volume.

[40 CFR 63.6604(a) and 40 CFR 80.510(b) and Construction Permit No. 0090051-025-AC]

Emission Limitations and Standards

E.4. Carbon Monoxide (CO) Emissions. The owner or operator must comply with either of the following CO limitations:

a. Limit concentration of CO in the stationary RICE exhaust to 23 parts per million by volume, dry basis at 15 % O_2; or
b. Reduce CO emissions by at least 70% or more

[40 CFR 63.6640 Table 2d and Construction Permit No. 0090051-025-AC]

Operation and Monitoring Requirements

E.5. Oxidation Catalyst Use. Because an oxidation catalyst is used to comply with the CO limitation contained in Condition E.4. the permittee must:

a. Maintain each catalyst so that the pressure drop across the catalyst is within the established operating range developed for each engine; and,

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b. Maintain the temperature of each stationary RICE exhaust so that the catalyst inlet temperature (4-hour rolling average) is greater than or equal to 450°F and less than or equal to 1,350°F during normal operation.

[40 CFR 63.6640 Table 2b, Construction Permit No. 0090051-025-AC, NASA KSC Site Specific RICE NESHAP Oxidation Catalyst Pressure Drop Monitoring Plan (July 30, 2014)]

E.6. Continuous Parameter Monitoring System (CPMS). The applicant has installed a continuous parameter monitoring system (CPMS) as specified in Table 5 of 40 CFR 63, Subpart ZZZZ. Each CPMS must be installed, operated, and maintained according to the requirements in 40 CFR 63.6625(b)(1) through (6) as specified below.

a. The owner or operator must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of §63.6625(b) and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (1) through (5) of §63.6625(b) in your site-specific monitoring plan.
    1) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;
    2) Sampling interface (*e.g.*, thermocouple) location such that the monitoring system will provide representative measurements;
    3) Equipment performance evaluations, system accuracy audits, or other audit procedures;
    4) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and
    5) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

b. Each CPMS must be installed, operated, and maintained in continuous operation according to the procedures in the site-specific monitoring plan.

c. The CPMS must collect data at least once every 15 minutes (see also §63.6635).

d. For a CPMS used for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 % of the measurement range, whichever is larger.

e. The CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan must be conducted at least annually.

f. A performance evaluation of each CPMS must be conducted in accordance with your site-specific monitoring plan.

[40 CFR 63.6625(b) and Construction Permit No. 0090051-025-AC]

{Permitting Note: The permittee submitted a CPMS site-specific monitoring plan dated November 13, 2013.}

E.7. Continuous Monitoring and Data Collection. In order to comply with the emission and operating limitations, the owner or operator must monitor and collect data in accordance with the following:

a. Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

b. You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

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[40 CFR 63.6635 and Construction Permit No. 0090051-025-AC]

E.8. Continuous Compliance Demonstration. The owner or operator must demonstrate continuous compliance with the emission limitation contained in Condition **E.4.** and the operation limitation contained in Condition **E.5**. by

a. Collecting the catalyst inlet temperature data according to Condition **E.6(c)** (every 15-minutes)
b. Reducing these data to 4-hour rolling averages for normal operation times;
c. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
d. Measuring the pressure drop across the catalyst once per month (if the engine is operated) and demonstrating that the pressure drop across the catalyst is within the operating limitation established for the specific engine per the site specific oxidation catalyst pressure drop monitoring plan.

[40 CFR 63.6640 Table 6, Construction Permit No. 0090051-025-AC and NASA KSC Site Specific RICE NESHAP Oxidation Catalyst Pressure Drop Monitoring Plan (July 30, 2014)]

E.9. Closed Crankcase Ventilation System. The owner and operator must follow the manufacturer's specified maintenance requirements for operating and maintaining the closed crankcase ventilation systems and replacing the crankcase ventilation filters.
[40CFR 63.6625(g)(1) and Construction Permit No. 0090051-025-AC]

E.10. Operation and Maintenance of Equipment. At all times the owner or operator must operate and maintain, any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the compliance authority which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[40 CFR 63.6605(b) and Construction Permit No. 0090051-025-AC]

E.11. Operation at Idle and Startup Conditions. During periods of startup the owner or operator must minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup (i.e., normal operation) emission limitations contained in Condition **E.4.** apply.
[40 CFR 63.6640 Table 2d and Construction Permit No. 0090051-025-AC]

E.12. Hour Meter. Each engine must have a non-resettable hour meter.
[40 CFR 63.6625(f) and Construction Permit No. 0090051-025-AC]

Test Methods and Procedures

E.13. Compliance Tests. The permittee must conduct performance tests according to Conditions **E.15** thru **E.19** for each non-emergency CI RICE engine within 8,760 hours of operation from the last test or within 3 years of the date of the last test, whichever comes first.
[40 CFR 63.6612 Table 3 and Construction Permit No. 0090051-025-AC]

{Permitting Note: The permittee has conducted the initial performance test on these engines in March 2014}

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E.14. Compliance Tests after Catalyst Maintenance or Change.

a. When catalyst maintenance is performed, the following must be demonstrated within 60 days. Catalyst maintenance includes cleaning (i.e., the same catalyst bed is removed, cleaned and then reinstalled):

1) Operating Temperature. Demonstrate operating temperature between 450 °F and 1,350 °F.

2) Operating Pressure. The permittee shall either:

a) Demonstrate the differential pressure during an engine run is within the established operating pressure curve for the engine; or,

b) Reestablish the acceptable operating pressure drop range for the engine by:

i. Developing a revised operating curve; or

ii. Identifying the rationale for the revised curve; and,

iii. Providing this curve and rationale to the FDEP for review and comment.

b. When the catalyst is changed, the permittee must reestablish the pressure operating curve during the compliance demonstration testing according to Conditions **E.15**. thru **E.19**. within 60 days of changing the catalyst.

[40 CFR 63.6612(a), Table 4 and Table 5; 40 CFR 63.6640(b); and Rule 62-297.310(7), F.A.C. and Construction Permit No. 0090051-025-AC]

E.15. Test Requirements. The permittee must conduct three separate test runs for each performance test required in this section. Unless otherwise approved by the FDEP, each test run must last at least 1 hour. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit. The permittee may suggest an alternate testing procedure to provide a balance of:

a. A reasonable number of test runs;

b. Reasonable duration of each run;

c. Allowance for abbreviated tests for engines of the same make and model; and;

d. Establishing or re-establishing an operating pressure range for a range of engine loads.

[40 CFR 63.6620(d) and Rule 62-297.310, F.A.C., Construction Permit No. 0090051-025-AC and NASA KSC Site Specific RICE NESHAP Oxidation Catalyst Pressure Drop Monitoring Plan (July 30, 2014)]

E.16. Measurements to Determine O_2 and CO.

a. *Measurements to determine O_2:* The owner or operator must measure the O_2 at the inlet and outlet of the control device in accordance with Method 3, 3A or 3B of 40 CFR Part 60 Appendix A, or using a portable CO and O_2 analyzer according to the ASTM D6522–00 (2005) (incorporated by reference, see 40 CFR 63.14) requirements. Measurements to determine O_2 must be made at the same time as the measurements for CO concentration. Methods 3A and 10 may also be used as options to ASTM–D6522–00 (2005).

b. *Measurements to determine CO:* The owner or operator must measure the CO at the inlet and the outlet of the control device using a portable CO and O_2 analyzer according to the ASTM D6522–00 (2005) (incorporated by reference, see 40 CFR 63.14) or Method 10 of 40 CFR 60 Appendix A requirements. The CO concentration must be at 15% O_2, dry basis. Methods 3A and 10 may also be used as options to ASTM–D6522–00 (2005). Method 320 of 40 CFR Part 63, Appendix A, or ASTM D6348–03 may also be used.

c. *Sample port location and number of traverse points:* The owner or operator must select sample port locations and the number of traverse points in accordance with Method 1 or 1A of 40 CFR Part 60 Appendix A. The sampling site must be located at the outlet of the oxidation catalyst device.

d. *Measurements to determine moisture content*: The owner or operator must measure the moisture content of each stationary RICE exhaust at the sample port location in accordance with Method 4

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of 40 CFR Part 60 Appendix A, or Test Method 320 of 40 CFR Part 63 Appendix A according to the ASTM D6348–03 (incorporated by reference, see 40 CFR 63.14) requirements.

[40 CFR 63.6620 Table 4(1.) and (3.) and Construction Permit No. 0090051-025-AC]

E.17. Percent Reduction of CO Determination. Percent reduction of CO must be determined using the following equation:

Where:

Ci = concentration of carbon monoxide (CO), at the control device inlet,

Co = concentration of CO, at the control device outlet, and

R = percent reduction of CO emissions

[40 CFR 63.6620(e) (1) and Construction Permit No. 0090051-025-AC]

E.18. Inlet and Outlet Normalization of CO Concentrations. The CO concentrations at the inlet and outlet of the control device must be normalized to a dry basis and to 15% oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15% oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in the following equations:

a. Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero % excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu)

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu)

b. Calculate the CO_2 correction factor for correcting measurement data to 15% O_2, using the following equation:

Where:

= CO_2 concentration correction factor, percent.

5.9 = 20.9% O_2 – 15% O_2, the defined O_2 correction value, percent.

c. Calculate the CO gas concentrations adjusted to 15% O_2 correction value, using the following equation:

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Where:

= calculated concentration of CO adjusted to 15% O_2.

C_d = measured concentration of CO uncorrected.

= CO_2 correction factor, percent.

= Measured CO_2 concentration measured, dry basis, percent.

[40 CFR 63.6620(e)(2) and Construction Permit No. 0090051-025-AC]

E.19. Determination of Engine Load. The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, and strain gauges are used, the model number of the measurement device, and an estimate of its accuracy in percentage of true value must be provided.
[40 CFR 63.6620(i) and Construction Permit No. 0090051-025-AC]

Notification Requirements

E.20. Notification about the Catalyst.

a. You must notify the Department at least 30 days before performing routine maintenance on the catalyst, or, as soon as possible, when it is emergency maintenance. Catalyst maintenance includes cleaning (removed, cleaned and then reinstalled).
b. You must notify the Department at least 30 days before replacing the catalyst, or, as soon as possible, when the replacement is an emergency.

See Condition D.14 regarding required testing.
[40 CFR 63.6640(b) and 63.6650 and Construction Permit No. 0090051-025-AC]

E.21. Notification of Deviations from Limitations. The owner or operator must report each instance when an emission limitation or operating limitation contained in this permit was not met. These instances are deviations from the emission and operating limitations in this permit. These deviations must be reported according to the requirements in Condition **E.29**.
[40 CFR 63.6650 and Construction Permit No. 0090051-025-AC]

E.22. Notification of Intent to Conduct a Performance Test. The owner or operator must submit a Notification of Intent to conduct a performance test required by 40 CFR 63 Subpart ZZZZ at least 60 days before the performance test is scheduled to begin, as required in 40 CFR 63.7(b)(1), and a separate notification at least 15 days prior to the scheduled test date [Appendix TR, Item TR7(9)]. The Notification shall be made to the Compliance Authority (**DEP_CD@dep.state.fl.us**). The notification must include the following information: the date, time and location of each test; the name and telephone number of the facility's contact person who will be responsible for coordinating the test; and the name, company, and telephone number of the person conducting the test.
[40 CFR 63.6645(g) and Construction Permit No. 0090051-025-AC]

E.23. Notification of Compliance Status. Owners or operators required to conduct a compliance demonstration must submit a Notification of Compliance Status according to 40 CFR 63.9(h)(3).

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a. For each compliance demonstration required in Condition **E.14.a** that does not include a performance test, the owner or operator must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.
b. For each compliance demonstration required in Conditions **E.13 and E.14.b** that does includes a performance test, the owner or operator must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40 CFR 63.10(d)(2).

[40 CFR 63.6645(h) and Construction Permit No. 0090051-025-AC]

E.24. Additional Notification Requirements. The owner or operator must submit all of the notifications in accordance with:

a. §63.7(b) Notification of Performance Test;
b. §63.7(c) Quality Assurance Program;
c. §63.8(e) Conduction of Performance Test;
d. §63.8(f)(4) Use of Alternative Test Methods;
e. §63.8(f)(6) and 63.9(b) Initial Notifications;
f. §63.9(c); Request for Extension of Compliance;
g. §63.9(d) Notification that source is subject to special compliance requirements;
h. §63.9(e) Notification of Performance Test;
i. §63.9(g) Additional Notification requirements for sources with continuous monitoring systems; and
j. §63.9(h) Notification of Compliance Status by the dates specified in each Rule.

[40 CFR 63.6645(a) and 40 CFR 63 Subpart A and Construction Permit No. 0090051-025-AC]

Recordkeeping Requirements

E.25. Record Retention.

a. The owner or operator must keep records in a suitable and readily available form for expeditious reviews.
b. The owner or operator must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

[40 CFR 63.6660 and 40 CFR 63.10(b)(1)]

E.26. Notification, Performance and Compliance Records. The owner or operator must keep:

a. A copy of each notification and report that the owner or operator submitted to comply with Subsection E, including all documentation supporting any Initial Notification or Notification of Compliance Status that the owner or operator submitted.
b. Records of the occurrence and duration of each malfunction of operation.
c. Records of all required maintenance performed on the hour meter.
d. Records of actions taken during periods of malfunction to minimize emissions in accordance with Specific Condition **E.10**. including corrective actions to restore malfunctioning process and monitoring equipment to its normal or usual manner of operation.

[40 CFR 63.6655]

E.27. Monthly Recordkeeping Requirement. In order to demonstrate compliance with Specific Conditions No. **E.1.** and **E.2**., the permittee shall maintain a log at the facility for a period of at least five (5) years from the date the data are recorded. The log, at a minimum, shall contain the following:

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Monthly

a. Date (month/year);
b. Amount and type of fuel used for E.U 093;

The monthly logs shall be completed by the end of the following month.

*{Permitting Note: The consecutive 12-month total of the quantity of fuel used for E.U. 086 and E.U. 093 is tracked as required by Condition **B.15.**}*

Note: A consecutive 12-month total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-month total treats each month of the year as the end of a 12-month period. A 12-month total is not a year-to-date total. Facilities or emission units that have not been operating for 12 months should retain 12-month totals using whatever number of months of data are available until such a time as a consecutive 12-month total can be maintained each month. [Rule 62-4.070(3), F.A.C.]

E.28. Fuel Certifications. The fuel certifications shall include the following information for distillate oil (i.e., No. 2 fuel oil):

a. The name of the oil supplier and either (b) and (c), or (d) following.
b. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c of 40 CFR 60, Subpart Dc; or
c. The sulfur content or maximum sulfur content of the oil; or
d. Documentation that the fuel is ultra-low sulfur diesel (e.g., fuel delivery receipt).

The records of the fuel supplier certifications that are maintained shall represent all of the fuel oil combusted in Emissions Unit 093.

{Permitting Note: Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975.}

Reporting Requirements

E.29. Compliance Report. The owner or operator must submit semiannual Compliance Reports for engines in this emission unit according to the following requirements:

a. Each semiannual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31 and must be postmarked or delivered no later than August 30 or February 28 whichever date is the first date following the end of the semiannual reporting period.
b. The Compliance Report must contain the following information:
    1) Company name and address.
    2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
    3) Date of report and beginning and ending dates of the reporting period.
    4) If you had a deviation or malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a deviation or

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malfunction of an affected source to minimize emissions in accordance with Specific Conditions **E.6 or E.10**, including actions taken to correct a malfunction.

5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period. Link to 40 CFR 63.8: http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=5da53a158d187990195161c0be320dcc&rgn=div5&view=text&node=40:10.0.1.1.1&idno=40#40:10.0.1.1.1.1.5.8

c. For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CPMS to comply with the emission and operating limitations in subpart 40 CFR 6350, you must include information in paragraphs b.1 through 4, above, and 1 through 12, below.

1) The date and time that each malfunction started and stopped.

2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

8) An identification of each parameter and pollutant (CO) that was monitored at the stationary RICE.

9) A brief description of the stationary RICE.

10) A brief description of the CMS.

11) The date of the latest CMS certification or audit.

12) A description of any changes in CMS, processes, or controls since the last reporting period.

d. If you submit a Compliance Report pursuant to this specific condition along with, or as part of, the semiannual monitoring report required in Appendix RR of this Title V Air Operation Permit and the semiannual monitoring report includes all required information in this specific condition, submission of the semiannual monitoring report shall be deemed to satisfy any obligation to report the same deviations and malfunctions in a semiannual Compliance Report required by this specific condition. However, submission of a compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

[40 CFR 63.6650(a) - (f) and Table 7 and Construction Permit No. 0090051-025-AC]

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E.30. The permittee shall submit an updated version of Attachment 7-A with any Title V operating permit revision applications that address Emission Unit 093.

E.31. The permittee shall submit an updated version of Attachment 7-A with each Title V operating permit renewal application.

{Permitting Note: The Department recommends having a pre-application meeting to discuss any possible permit application.}

General Provisions

E.32. 40 CFR 63 Subpart A - General Provisions. The owner or operator shall comply with the following applicable requirements of 40 CFR 63 Subpart A - General Provisions, which have been adopted by reference in Rule 62-204.800(11)(d)1., F.A.C., except that the Secretary is not the Administrator for purposes of 40 CFR 63.5(e), 40 CFR 63.5(f), 40 CFR 63.6(g), 40 CFR 63.6(h)(9), 40 CFR 63.6(j), 40 CFR 63.13, and 40 CFR 63.14. Link to 40 CFR 63, Subpart A - General Provisions: http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&rgn=div6&view=text&node=40:10.0.1.1.1.1&idno=40

General Provisions Citation	Subject of Citation
§63.1	General applicability of the General Provisions
§63.2	Definitions (additional terms defined in 43 CFR 63.6675)
§63.3	Units and abbreviations
§63.4	Prohibited activities and circumvention
§63.5	Construction and reconstruction
§63.6(a)	Applicability
§63.7(b)	Notification of Performance tests
§63.9(a)	Applicability and State delegation of notification requirements
§63.9(b)(1)-(5)	Initial notifications (except that §63.9(b)(3) is reserved)
§63.9(i)	Adjustment of submittal deadlines
§63.9(j)	Change in previous information
§63.10(a)	Administrative provisions for recordkeeping/reporting
§63.10(b)(1)	Record retention
§63.10(b)(2)(vi)–(xi)	Records
§63.10(b)(2)(xii)	Record when under waiver
§63.10(b)(2)(xiv)	Records of supporting documentation
§63.10(b)(3)	Records of applicability determination
§63.10(d)(1)	General reporting requirements
§63.10(f)	Waiver for recordkeeping/reporting
§63.12	State authority and delegations
§63.13	Addresses
§63.14	Incorporation by reference
§63.15	Availability of information

[40 CFR 63.6665 and 40 CFR 63, Table 8]

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Subsection F. Emission Unit 094 Non-Emergency Stationary NSPS CI RICE

The specific conditions in this section apply to the following emission unit:

EU No.	Brief Description
-094	Non-Emergency New Source Performance Standards (NSPS) Subject Stationary Compression Ignition (CI) Reciprocating Internal Combustion Engines (RICE). For inventory tracking purposes, the engines that comprise Emission Unit 094 are listed in Attachment 8-A in this permit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10).

This section is a placeholder for EU 094, which is currently under construction as authorized by Construction Permit 0090051-026-AC

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Subsection G. The specific conditions in this section apply to the following emission unit:

EU No.	Brief Description
-091	This emission unit is comprised of surface coating operations performed in paint booths or similar structures located at the facility. For inventory tracking purposes, the units that comprise Emission Unit 091 are listed in Attachment 2-A of this permit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10).

G.1. As required in Condition No. **G.8.**, the permittee shall maintain an up-to date version of Attachment 2-A at the facility. This updated copy shall include the following information for equipment comprising this Emission Unit:

a. The current inventory of operational paint booths and similar structures comprising this emission unit;
b. Listing of paint booths and similar structures removed from this emission unit during the prior five years;
c. For each paint booth or similar structure, the;
   1) Unique identifier (e.g., number);
   2) Source location (e.g., building number);
   3) Source description (e.g., Corrosion Control Booth Number 1);
   4) Manufacturer and model number (if applicable);
   5) Type of particulate matter control (e.g., filters or water wall);
   6) Date of installation (if installed after June 1, 2008); and
   7) Date of removal (if applicable, and if removed after June 2008).

G.2. Hours of Operation. Each unit is allowed to operate continuously.
[Rule 62-2 10.200, (247), Potential to Emit), F.A.C.]

Emission Limitations and Standards

G.3. The permitted VOC emission rate from Emission Unit 091 is limited to less than 69.0 tons per year per consecutive twelve months, including the emissions from the air drying of empty cans and excess two-part epoxy paints prior to their disposal. Usage or purchasing records shall be maintained as provided in Specific Conditions No. **G.6**. **and G.7.**
[Rule 62-296.320(b)1.]

G.4. The combined HAP emission rate from EU 091 is limited to less than 20.0 tons per any consecutive twelve months and single HAP emissions are limited to less than 8.0 tons per any consecutive twelve months, updated monthly. Usage or purchasing records shall be maintained as provided in Specific Conditions No. **G.6**. and **G.7.**

G.5. Visible Emissions. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity).
[Rule 62-296.320(b)1.]

Recordkeeping and Reporting Requirements

G.6. Emissions of VOC and HAP from this emission unit shall be estimated monthly utilizing any one or combination of the following methods:

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a. Material balance approach based on either:
   1) Purchase data; or
   2) Usage data;
b. VOC and HAP content as obtained from any of the following methods:
   1) MSDS;
   2) Manufacturer data (e.g., certified product data sheet);
   3) As analytically measured using generally accepted methods; or,
   4) Using default values (e.g., 7.38 lbs/gallon VOC) for low use materials.
c. An alternate method using generally accepted engineering techniques that is submitted to the FDEP for review.

G.7. Monthly Recordkeeping Requirement. In order to demonstrate compliance with Specific Conditions No. **G.3.** and **G.4,** the permittee shall maintain a log at the facility for a period of at least five (5) years from the date the data are recorded. The log, at a minimum, shall contain the following:

Monthly

a. Date (month/year);
b. Consecutive 12-month total of VOC emissions
c. Consecutive 12-month total of total HAP emissions and;
d. Consecutive 12-month total of individual HAP emissions for each individual HAP with emissions of at least 0.5 tons during the current twelve-month period.

The monthly logs shall be completed by the end of the following month.

Note: A consecutive 12-month total is equal to the total for the month in question plus the totals for the eleven months previous to the month in question. A consecutive 12-month total treats each month of the year as the end of a 12-month period. A 12-month total is not a year-to-date total. Facilities or emission units that have not been operating for 12 months should retain 12-month totals using whatever number of months of data are available until such a time as a consecutive 12-month total can be maintained each month. [Rule 62-4.070(3), F.A.C.]

Logs must document the method, calculations, and formulas used in determining the usage rate and the emission rate. This includes, but is not limited to, the product name, density, individual and total HAP contents, and individual and total VOC content. All calculations, including those used to derive emission credits for mass balance, must be clearly documented and may be presented in the form of a template of sample calculations, which is filed with the logs required in this specific condition and available for review on site by regulatory inspectors. [Rule 62-4.070(3), F.A.C.]

G.8. The permittee shall maintain a current version of Attachment 2-A at the facility. The facility shall update the inventory with each submittal of the Semi-Annual Monitoring Report (Condition FW10).

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G.9. If a new paint booth or similar structure is installed at the facility that meets the criteria of units comprising EU 091, the permittee shall submit to the Permitting Authority one hard copy and one electronic copy of a construction permit application for the unit on the appropriate FDEP permit application forms (e.g., FDEP Form No. 62-210.900(1)). The permittee shall obtain a permit to construct the unit prior to the installation and operation of the unit.

G.10. After completion of construction of a new unit that is part of EU 091, the permittee shall submit a copy of the updated Attachment 2-A. A Title V operating permit revision is not required upon completion of construction.

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G.11. The permittee shall submit an updated version of Attachment 2-A with Title V operating permit revision applications that address Emission Unit 091.

G.12. The permittee shall submit an updated version of Attachment 2-A with each Title V operating permit renewal application.

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Subsection H. The specific conditions in this section apply to the following emissions unit:

EU No.	Brief Description
-089	This emission unit is comprised of hypergol servicing operations and activities. These operations include fueling operations, purging, fume hoods and scrubbers located at the facility. For inventory tracking purposes, the units that comprise Emission Unit 089 are listed in Attachment 6-A of this permit. The most recent list is included in the latest Semi-Annual Monitoring Report (Condition FW10).

H.1. As required in Condition No. **H.4**., the permittee shall maintain an up-to-date version of Attachment 6-A at the facility. This updated copy shall include the following information for equipment comprising this Emission Unit:

a. The current inventory of operations and activities comprising this emission unit;
b. Listing of operations and activities removed from this emission unit during the prior five years; and,
c. For each operations and activity, the;
   1) Unique identifier (e.g., number);
   2) Source location (e.g., building number); and,
   3) Source description (e.g., manufacturer and model number)

H.2. Hours of Operation. Each unit is allowed to operate continuously.

Emission Limitations and Standards

H.3. Visible Emissions. The visible emission limitation for hypergol servicing operations and activities shall be one hundred (100) percent opacity.
{*Permitting Note: Given the 100 percent VE limit for this emission unit, compliance is inherent. Hence periodic VE testing is not required*}

Recordkeeping and Reporting Requirements

H.4. The permittee shall maintain a current copy of Attachment 6-A at facility. The facility shall update the inventory with each submittal of the Semi-Annual Monitoring Report (Condition FW10).

Permit Application

H.5. Construction permits are not required for the installation and operation of hypergol servicing operations and activities such as fueling operations, purging, and fume hoods. See Condition numbers **H.4, H.8,** and **H.9.** for recordkeeping requirements associated with the installation and operations of new hypergol servicing operations and activities.

H.6. For the installation and operation of a new hypergol scrubbing system, the permittee shall submit to the Permitting Authority one hard copy and one electronic copy of a construction permit application for the unit on the appropriate FDEP permit application forms (e.g., FDEP Form No. 62-210.900(1)). The permittee shall obtain a permit to construct the unit prior to the installation and operation of the unit.

H.7. After completion of construction of a new scrubber that is part of EU 089, the permittee shall submit a copy of the updated Attachment 6-A. A Title V operating permit revision is not required upon completion of construction.

H.8. The permittee shall submit an updated version of Attachment 6-A with Title V operating permit revision applications that address Emission Unit 091.

H.9. The permittee shall submit an updated version of Attachment 6-A with each Title V operating permit renewal application.

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Subsection I. The specific conditions in this section apply to the following emission unit:

EU No.	Brief Description
-092	This emission unit provides for the operation of a portable material crushing operation. This portable material crushing operation will be used to recycle a variety of construction materials (e.g., concrete and porcelain plumbing fixtures such as sinks and toilets).

I.1. General Recordkeeping Requirements - The permittee shall keep records for each crushing system operated on site as follows:

a. Owner Name;
b. General and Title V Air Operation Permit number(s) (e.g., 7771234-XXX-AX) and permit effective date(s);
c. Latest arrival date on site;
d. Manufacturer's maximum rated capacity for any material; and
e. Date of most recent visible emissions (VE) test and a copy of the test report. The test report shall include the permitted capacity of the crusher and the actual operating rate of the crusher.

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

I.2. Hours of Operation. Each unit is allowed to operate continuously. [Rule 62-2 10.200, (247), Potential to Emit, F.A.C.]

I.3. Visible Emission (VE) Limitation. Visible emissions from any crusher, grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station, or any other emission point not subject to 40 CFR 60, Subpart OOO, shall be less than 20 percent opacity. [Rule 62-296.320(4)(b)1., F.A.C.]

I.4. Additional VE Limitations. Visible emissions from any crusher, grinding mill, screening operation, bucket elevator, transfer point on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station, or any other emission point subject to 40 CFR 60, Subpart OOO, shall comply with the following opacity limits:

Pollutant	With Capture System (opacity)	Without Capture System (opacity)
VE	10 percent	15 percent

[40 CFR 60 Subpart OOO and adopted by reference in Rule 62-204.800(8)(b), F.A.C.]

I.5. Unconfined Emissions of Particulate Matter. Unconfined emissions shall be controlled by using a water suppression system with spray bars located wherever unconfined emissions occur at the feeder, the entrance and exit of the crusher, screen, and the conveyor drop points.
[Rule 62-296.320(4)(c), F.A.C.]

I.6. Test Reports: If the Department requests to see a recent valid emission test report (does not have to be tested at the site) for a crusher, the test report shall be submitted to the Department no later than 14 days from the date requested by the Department.
[Rule 62-4.070(3), F.A.C.]

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SECTION IV. APPENDICES.

The Following Appendices Are Enforceable Parts of This Permit:

Appendix A, Glossary.
Appendix I, List of Insignificant Emissions Units and/or Activities.
Attachments 1-A, 2-A, 3-A, 4-A, 5-A, 6-A, 7-A and 8-A.
Appendix NESHAP, Subpart A – General Provisions.
Appendix NESHAP, Subpart JJJJJJ – Industrial, Commercial, and Institutional Boilers.
Appendix NESHAP Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines (RICE)
Appendix NSPS, Subpart A – General Provisions.
Appendix NSPS, Subpart IIII – Stationary Compression Ignition (CI) Internal Combustion Engines.
Appendix NSPS, Subpart JJJJ, Stationary Spark Ignition (SI) Internal Combustion Engines.
Appendix NSPS, Subpart OOO, Nonmetallic Mineral Processing Plants
Appendix RR, Facility-wide Reporting Requirements.
Appendix TR, Facility-wide Testing Requirements.
Appendix TV, Title V General Conditions.
Appendix U, List of Unregulated Emission Units and/or Activities.

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