

SECTION 4. APPENDICES

Contents

[Appendix A: Citation Formats, Acronyms and Glossary of Common Terms.](#)

[Appendix B: General Conditions.](#)

[Appendix C: Common Conditions.](#)

[Appendix D: Common Testing Requirements.](#)

[Appendix E: Best Management Practices.](#)

[Appendix F: Preliminary Leak Detection and Repair \(LDAR\) Program.](#)

[Appendix G: NSPS 40 CFR 60, Subpart A - General Provisions.](#)

[Appendix H: NSPS 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.](#)

[Appendix I: NSPS 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels \(Including Petroleum Liquid Storage Vessels\).](#)

[Appendix J: NSPS 40 CFR 60, Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.](#)

[Appendix K: NSPS 40 CFR 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.](#)

[Appendix L: NSPS 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.](#)

[Appendix M: NESHAP 40 CFR 63, Subpart ZZZZ - National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.](#)

[Appendix N: Form 556, Certification of Qualifying Facility \(QF\) Status for a Small Power Production or Cogeneration Facility.](#)

SECTION 4. APPENDIX A
Citation Formats and Glossary of Common Terms

CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

Old Permit Numbers

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit
“AO” identifies the permit as an Air Operation Permit
“123456” identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located
“2222” represents the specific facility ID number for that county
“001” identifies the specific permit project number
“AC” identifies the permit as an air construction permit
“AF” identifies the permit as a minor source federally enforceable state operation permit
“AO” identifies the permit as a minor source air operation permit
“AV” identifies the permit as a major Title V air operation permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality
“FL” means that the permit was issued by the State of Florida
“317” identifies the specific permit project number

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

µg: microgram

AAQS: Ambient Air Quality Standard

acf: actual cubic feet

acfm: actual cubic feet per minute

ARMS: Air Resource Management System
(Department’s database)

BACT: best available control technology

bhp: brake horsepower

Btu: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

CFR: Code of Federal Regulations

CAA: Clean Air Act

CMS: continuous monitoring system

CO: carbon monoxide

CO₂: carbon dioxide

COMS: continuous opacity monitoring system

DARM: Division of Air Resource Management

DEP: Department of Environmental Protection

Department: Department of Environmental Protection

SECTION 4. APPENDIX A

CITATION FORMATS AND GLOSSARY OF COMMON TERMS

dscf: dry standard cubic feet	RATA: relative accuracy test audit
dscfm: dry standard cubic feet per minute	RBLC: EPA's RACT/BACT/LAER Clearinghouse
EPA: Environmental Protection Agency	SAM: sulfuric acid mist
ESP: electrostatic precipitator (control system for reducing particulate matter)	scf: standard cubic feet
EU: emissions unit	scfm: standard cubic feet per minute
F: fluoride	SIC: standard industrial classification code
F.A.C.: Florida Administrative Code	SIP: State Implementation Plan
F.A.W.: Florida Administrative Weekly	SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
F.D.: forced draft	SO₂: sulfur dioxide
F.S.: Florida Statutes	TPD: tons/day
FGD: flue gas desulfurization	TPH: tons per hour
FGR: flue gas recirculation	TPY: tons per year
ft²: square feet	TRS: total reduced sulfur
ft³: cubic feet	UTM: Universal Transverse Mercator coordinate system
gpm: gallons per minute	VE: visible emissions
gr: grains	VOC: volatile organic compounds
HAP: hazardous air pollutant	
Hg: mercury	
I.D.: induced draft	Table of Contents
ID: identification	
kPa: kilopascals	
lb: pound	
MACT: maximum achievable control technology	
MMBtu: million British thermal units	
MSDS: material safety data sheets	
MW: megawatt	
NESHAP: National Emissions Standards for Hazardous Air Pollutants	
NO_x: nitrogen oxides	
NSPS: New Source Performance Standards	
O&M: operation and maintenance	
O₂: oxygen	
Pb: lead	
PM: particulate matter	
PM₁₀: particulate matter with a mean aerodynamic diameter of 10 microns or less	
ppm: parts per million	
ppmv: parts per million by volume	
ppmvd: parts per million by volume, dry basis	
QA: quality assurance	
QC: quality control	
PSD: prevention of significant deterioration	
psi: pounds per square inch	
PTE: potential to emit	
RACT: reasonably available control technology	

SECTION 4. APPENDIX B
GENERAL CONDITIONS

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are “permit conditions” and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - a. Have access to and copy any records that must be kept under conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of noncompliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than

SECTION 4. APPENDIX B
GENERAL CONDITIONS

those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (not applicable);
 - b. Determination of Prevention of Significant Deterioration (not applicable); and
 - c. Compliance with New Source Performance Standards (applicable).
14. The permittee shall comply with the following:
 - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - (1) The date, exact place, and time of sampling or measurements;
 - (2) The person responsible for performing the sampling or measurements;
 - (3) The dates analyses were performed;
 - (4) The person responsible for performing the analyses;
 - (5) The analytical techniques or methods used;
 - (6) The results of such analyses.

When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

[Table of Contents](#)

SECTION 4. APPENDIX C
COMMON CONDITIONS

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

EMISSIONS AND CONTROLS

1. **Plant Operation - Problems:** If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. **Circumvention:** The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. **Excess Emissions Allowed:** Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed 2 hours in any 24-hour period unless specifically authorized by the Department for longer duration. Pursuant to Rule 62-210.700(5), F.A.C., the permit subsection may specify more or less stringent requirements for periods of excess emissions. Rule 62-210.700(Excess Emissions), F.A.C., cannot vary or supersede any federal NSPS or NESHAP provision. [Rule 62-210.700(1), F.A.C.]
4. **Excess Emissions Prohibited:** Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. **Excess Emissions - Notification:** In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. **VOC or OS Emissions:** No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) 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.]
7. **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. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. **General 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 equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. **Unconfined Particulate Emissions:** During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

RECORDS AND REPORTS

10. **Records Retention:** All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. **Emissions Computation and Reporting:**
 - a. *Applicability.* This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C., or of any permit condition that requires emissions be computed in accordance with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit. [Rule 62-210.370(1), F.A.C.]
 - b. *Computation of Emissions.* For any of the purposes set forth in subsection 62-210.370(1), F.A.C., the owner or

SECTION 4. APPENDIX C
COMMON CONDITIONS

operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.

- (1) **Basic Approach.** The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
 - (a) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
 - (b) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C, but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
 - (c) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
- (2) **Continuous Emissions Monitoring System (CEMS).**
 - (a) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
 - 1) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or
 - 2) The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
 - (b) Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
 - 1) A calibrated flow meter that records data on a continuous basis, if available; or
 - 2) The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
 - (c) The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.
- (3) **Mass Balance Calculations.**
 - (a) An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
 - 1) Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and
 - 2) Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.
 - (b) Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the

SECTION 4. APPENDIX C
COMMON CONDITIONS

range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.

- (c) In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.
- (4) Emission Factors.
- (a) An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
 - 1) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
 - 2) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
 - 3) The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
 - (b) If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.
- (5) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.
- (6) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
- (7) Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.
- (8) Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the department for any regulatory purpose.

[Rule 62-210.370(2), F.A.C.]

c. Annual Operating Report for Air Pollutant Emitting Facility

- (1) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year for the following facilities:
 - (a) All Title V sources.
 - (b) All synthetic non-Title V sources.

SECTION 4. APPENDIX C
COMMON CONDITIONS

- (c) All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area.
- (d) All facilities for which an annual operating report is required by rule or permit.
- (2) Notwithstanding paragraph 62-210.370(3)(a), F.A.C., no annual operating report shall be required for any facility operating under an air general permit.
- (3) By April 1 of the year following each calendar year, an annual operating report shall be submitted to the appropriate Department of Environmental Protection (DEP) division, district or DEP-approved local air pollution control program office. However, if the annual operating report is submitted using the DEP's electronic annual operating report software, there is no requirement to submit DEP Form No. 62-210.900(5) to any DEP or local air program office. Each Title V Source shall submit the annual operating report using the DEP's electronic annual operating report software, unless the Title V source claims a technical or financial hardship. A technical or financial hardship is claimed by submitting DEP Form No. 62-210.900(5) to the DEP Division of Air Resource Management at:

AOR and Major Air Pollution Source Annual Emissions Fee
P.O. Box 3070
Tallahassee, Florida 32315-3070

(See <http://www.dep.state.fl.us/air/emission/eaor/> for information regarding annual operating reports.)

- (4) Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C., for purposes of the annual operating report.

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

- d. *Facility Relocation.* Unless otherwise provided by rule or more stringent permit condition, the owner or operator of a relocatable facility must submit a Facility Relocation Notification Form (DEP Form No. 62-210.900(6)) to the Department at least 30 days prior to the relocation. A separate form shall be submitted for each facility in the case of the relocation of multiple facilities which are jointly owned or operated. [Rule 62-210.370(4), F.A.C.]

[Table of Contents](#)

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

EMISSIONS TESTING REQUIREMENTS

1. Applicability: Unless otherwise stated in a specific rule, permit, or other order, the general requirements set forth in subsections 62-297.310(2) through (10), F.A.C., shall be used for regulated stationary sources' emissions tests for comparison with air pollution emission-limiting standards that are enforceable under state law. An emissions test is an emissions rate test, a concentration test, or an opacity test. [Rule 62-297.310(1), F.A.C.]
2. Required Number of Test Runs: For emission rate or concentration limitations, an emissions test shall consist of three valid test runs to determine the total air pollutant emission rate or concentration through the test section of the stack or duct. A valid test run is a test run that meets all requirements of the applicable test method. An emissions test shall also consist of three distinct determinations of any applicable process parameters corresponding to the three distinct test run time periods during which the emission rate or concentration was measured when such data are needed in conjunction with emissions data to compare the emissions test results with the applicable emission limiting standards. Such data shall be obtained pursuant to subsection 62-297.310(6), F.A.C. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, results of the two valid runs shall be accepted, provided that the arithmetic mean of the results of the two valid runs is at least 20% below the allowable emission limiting standard. [Rule 62-297.310(2), F.A.C.]
3. Operating Conditions during Emissions Testing: Testing of emissions shall be conducted with the emissions unit operating at the testing capacity as defined below. If it is impracticable to test at the testing capacity, an emissions unit may be tested at less than the testing capacity. If an emissions unit is tested at less than the testing capacity, another emissions test shall be conducted and completed no later than 60 days after the emissions unit operation exceeds 110% of the capacity at which its most recent emissions test was conducted. Testing capacity is defined as at least 90% of the maximum operation rate specified by the permit. [Rule 62-297.310(3), F.A.C.]
4. Calculation of Emission Rate or Concentration: The emission rate or concentration used for comparison with the relevant standard shall be the arithmetic average of the emission rate or concentration determined by each of the three valid test runs unless otherwise specified in an applicable rule or test method. Data collected during periods of soot blowing shall not be excluded from any calculation of emission rate or concentration. [Rule 62-297.310(4), F.A.C.]
5. Required Sampling Times and Observation Periods: Unless otherwise specified in an applicable test method, rule, permit, or other order, the owner or operator shall conduct emissions tests in accordance with the following procedures:
 - a. *Emission Rate or Concentration Tests*. The required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes, except that for operations that are typically completed within less than the minimum required sampling time, the duration of each test run shall include each occurrence of the operation during the minimum required sampling time. The test period shall include the period of typical operation during which the highest representative emissions are expected to occur.
 - b. *Opacity Tests*. When EPA Method 9 or is specified as the applicable opacity test method, the required minimum period of observation for a visible emissions test shall be 60 minutes for emissions units that are subject to a multiple-valued opacity standard, and 30 minutes for all other emissions units, except that for batch, cyclical processes, or other operations that are typically completed within less than the minimum observation period, the period of observation shall include each occurrence of the operation during the minimum observation period. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.[Rule 62-297.310(5), F.A.C.]
6. Determination of Process Parameters:
 - a. *Required Process Equipment*. The owner or operator of an emissions unit for which emissions tests are required shall install, operate, and maintain equipment or instruments necessary to determine process parameters, when such data are needed in conjunction with emissions data to compare emissions test results with applicable emission limiting standards.
 - b. *Accuracy of Process Measurement Equipment*. Equipment or instruments used to directly or indirectly determine process parameters shall be calibrated and adjusted so as to determine the value of the process parameter to within 10% of its true value.

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

[Rule 62-297.310(6), F.A.C.]

7. Required Emissions Testing Facilities:

- a. The owner or operator of an emissions unit, for which an emissions test other than a visible emissions test is required, shall provide emissions testing facilities that meet the requirements of 40 CFR 60.8(e), adopted and incorporated in Rule 62-204.800, F.A.C.
- b. *Permanent Emissions Testing Facilities.* The owner or operator of an emissions unit, for which an emissions test other than a visible emissions test is required on at least an annual basis, shall install and maintain permanent emissions testing facilities.
- c. *Temporary Emissions Testing Facilities.* The owner or operator of an emissions unit that is not required to conduct an emissions test on at least an annual basis may use permanent or temporary emissions testing facilities. If the owner or operator chooses to use temporary emissions testing facilities on an emissions unit, and the Department elects to test the unit, such temporary facilities shall be installed on the emissions unit within 5 days of a request by the Department and remain on the emissions unit until the test is completed.

[Rule 62-297.310(7), F.A.C.]

8. Frequency of Emissions Tests: The following provisions apply only to those emissions units that are subject to an emissions-limiting standard for which emissions testing is required.

a. *Annual Emissions Tests Required.*

1. Where used in Rules 62-210.310, 62-297.310, or Chapter 62-296, F.A.C., to refer to frequency of required emissions tests, the terms “annual,” “annually,” and “annually thereafter” shall mean no less frequently than once every calendar year (January 1 – December 31).
2. Unless exempted by subparagraph 62-297.310(8)(a)5., F.A.C., the owner or operator shall have an emissions unit tested annually for each of the following pollutants that has an emissions-limiting standard for which emissions testing is required:
 - (a) Each hazardous air pollutant regulated by 40 CFR Part 61, adopted and incorporated by reference at Rule 62-204.800, F.A.C.; and
 - (b) Any other regulated air pollutant, as defined at Rule 62-210.200, F.A.C., or a pollutant designated as a surrogate to a regulated air pollutant by an applicable rule or order, if allowable emissions equal or exceed 100 tons per year.
3. Unless exempted by subparagraph 62-297.310(8)(a)5., F.A.C., the owner or operator shall have an emissions unit tested annually for visible emissions, if there is an applicable standard other than the general opacity standard of subparagraph 62-296.320(4)(b)1., F.A.C.
4. Unless exempted by subparagraph 62-297.310(8)(a)5., F.A.C., the owner or operator shall have an emissions unit tested annually if a rule, permit or other order issued after March 9, 2015, requires an initial emissions test but is silent as to the frequency of additional testing. A rule, permit, or other order that states that no further testing is required after an initial test, or which expressly lists or describes the tests that shall be conducted annually, is not considered silent as to the frequency of additional testing. Annual testing is not required where a permit or other order issued prior to March 9, 2015, is silent as to the frequency of additional testing.
5. Exemptions from subparagraphs 62-297.310(8)(a)2., 3., and 4., F.A.C.
 - (a) An annual emissions test shall not be required for any pollutant for which a rule, permit, or other order requires emissions testing at some other specific frequency. If multiple applicable rules, permits, or other orders, other than subparagraphs 62-297.310(8)(a)2., 3., and 4., F.A.C., require different testing frequencies, testing must comply with the frequency requirements of each such rule, permit, or order.
 - (b) An annual emissions test shall not be required for any pollutant for which a rule, permit, or other order requires that the pollutant emissions be measured by a continuous emission monitoring system and, either that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 60, adopted and incorporated in Rule 62-204.800, F.A.C., or that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 75, adopted and incorporated in Rule 62-204.800, F.A.C.

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

- (c) An annual emissions test shall not be required for visible emissions for which a rule, permit, or other order requires that emissions be measured by a continuous opacity monitoring system, and that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 60, adopted and incorporated in Rule 62-204.800, F.A.C., and the manufacturer's recommended quality assurance and quality control measures.
 - (d) An annual emissions test shall not be required for any emissions unit that operated for 400 hours or less (including during startup and shutdown) during the calendar year. If an emission unit operates for more than 400 hours during the calendar year, an emissions test shall be completed no later than 60 days after the emissions unit's annual operation exceeds 400 hours, or by the end of the calendar year, whichever is later.
 - (e) An annual emissions test shall not be required for any emissions unit with emissions generated solely from the combustion of fuel, provided that the emissions unit does not burn any liquid fuel or solid fuel or fuel blend for more than 400 hours combined, other than during startup, during the calendar year. If an emissions unit's liquid fuel or solid fuel or fuel blend burning exceeds 400 hours combined during the calendar year, other than during startup, an emissions test shall be completed no later than 60 days after the emissions unit's liquid fuel or solid fuel or fuel blend burning exceeds 400 hours combined, or by the end of the calendar year, whichever is later.
 - (f) An annual emissions test shall not be required for each fuel-specific emissions limit, provided the fuel or fuel blend subject to a fuel-specific limit was not burned for more than 400 hours, other than during startup, during the calendar year. If an emissions unit burns a fuel or fuel blend subject to a fuel-specific emission limit for more than 400 hours, other than during startup, during the calendar year, an emissions test for that fuel or fuel blend shall be completed no later than 60 days after the unit's burning of that fuel or fuel blend exceeds 400 hours, or by the end of the calendar year, whichever is later.
 - (g) An emissions unit shall not be required to start up for the sole purpose of conducting an emissions test to meet the frequency requirements of subsection 62-297.310(8), F.A.C. In such a case, an emissions test shall be completed no later than 60 days after the emissions unit next starts up.
 - (h) An emissions unit permitted to burn multiple fuels or fuel blends shall not be required to switch fuels for the sole purpose of conducting an annual emissions test to meet the frequency requirements of subsection 62-297.310(8), F.A.C. In such a case, an emissions test shall be completed no later than 60 days after a switch is made to burn the fuel or fuel blend for which testing is required.
 - (i) An annual emissions test for visible emissions shall not be required for emissions units exempted from air permitting pursuant to paragraphs 62-210.300(3)(a) or (b), F.A.C.; emissions units determined to be insignificant pursuant to paragraph 62-213.430(6)(b), F.A.C.; or emissions units authorized pursuant to the general permit provisions in subsection 62-210.300(4), F.A.C., unless the general permit specifically requires such testing.
- b. Emissions Tests Prior to Obtaining an Air Operation Permit.*
- (1) Unless exempted by subparagraph 62-297.310(8)(b)3., F.A.C., prior to obtaining an initial or renewal air operation permit for any emissions unit that is subject to any emission-limiting standard, the owner or operator shall have an emissions test conducted for each such standard to assist in providing reasonable assurance, per Rule 62-4.070, F.A.C., that the emission-limiting standard can be met and shall submit the test report as specified in subsection 62-297.310(10), F.A.C. For an emissions unit at a Title V source, such prior emissions testing is not required provided that an emissions testing compliance plan is included in the Title V permit.
 - (2) For the purpose of renewal of an air operation permit, the owner or operator may satisfy the requirements of subparagraph 62-297.310(8)(b)1., F.A.C., for any emissions unit by submitting the most recent emissions test, as specified in subsection 62-297.310(10), F.A.C., provided such test occurred within the term of the current operating permit.
 - (3) Exemptions from subparagraph 62-297.310(8)(b)1., F.A.C.
 - (a) An emissions test shall not be required for any pollutant for which a rule, permit, or other order requires that the emissions be measured by a continuous emission monitoring system and, either that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 60,

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

adopted and incorporated in Rule 62-204.800, F.A.C., or that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 75, adopted and incorporated in Rule 62-204.800, F.A.C.

- (b) An emissions test shall not be required for visible emissions for which a rule, permit, or other order requires that emissions be measured by a continuous opacity monitoring system, and that system meets the performance specifications and quality assurance and quality control measures of 40 CFR part 60, adopted and incorporated in Rule 62-204.800, F.A.C., and the manufacturer's recommended quality assurance and quality control measures.
 - (c) For the purpose of renewal of an air operation permit, an emissions test shall not be required for any emissions unit that, in the previous five-year period of permitted operation, operated for 400 hours or less (including during startup and shutdown) during each calendar year included in the five-year period of permitted operation. The first time an emissions unit subsequently exceeds 400 hours of operation during a calendar year, emissions must be tested no later than 60 days after 400 hours of operation is exceeded in that calendar year, or by the end of that calendar year, whichever is later.
 - (d) For the purpose of renewal of an air operation permit, an emissions test shall not be required for any emissions unit with emissions generated solely from the combustion of fuel provided that, in the previous five-year period of permitted operation, the emissions unit did not burn any liquid fuel or solid fuel or fuel blend for more than 400 hours combined, other than during startup, during each calendar year included in the five-year period of permitted operation. The first time an emissions unit subsequently burns any liquid fuel or solid fuel or fuel blend for more than 400 hours combined during a calendar year, emissions must be tested no later than 60 days after the emissions unit's combined burning of any liquid fuel or solid fuel or fuel blend exceeds 400 hours in that calendar year, or by the end of that calendar year, whichever is later.
 - (e) An emissions test shall not be required for each fuel-specific emissions limit prior to the renewal of an air operation permit for an emissions unit provided that, in the previous five-year period of permitted operation, the fuel or fuel blend subject to a fuel-specific limit was not burned for more than 400 hours, other than during startup, during each calendar year included in the five-year period of permitted operation. The first time an emissions unit subsequently burns a fuel or fuel blend subject to a fuel-specific emission limit for more than 400 hours, other than during startup, during any calendar year, an emissions test for that fuel or fuel blend must be completed no later than 60 days after the emissions unit's burning of that fuel or fuel blend exceeds 400 hours in that calendar year, or by the end of that calendar year, whichever is later.
 - (f) An emissions unit shall not be required to start up for the sole purpose of conducting an emissions test to meet the frequency requirements of subsection 62-297.310(8), F.A.C. In such a case, an emissions test shall be completed no later than 60 days after the emissions unit starts up.
 - (g) An emissions unit permitted to burn multiple fuels or fuel blends shall not be required to switch fuels for the sole purpose of conducting the emissions test to meet the frequency requirements of subsection 62-297.310(8), F.A.C. In such a case, an emissions test shall be completed no later than 60 days after a switch is made to burn the fuel or fuel blend for which testing is required.
 - (h) An emissions test for visible emissions shall not be required for emissions units exempted from air permitting pursuant to paragraphs 62-210.300(3)(a) or (b), F.A.C.; emissions units determined to be insignificant pursuant to paragraph 62-213.430(6)(b), F.A.C.; or emissions units authorized pursuant to the general permit provisions in subsection 62-210.300(4), F.A.C., unless the general permit specifically requires such testing.
- c. *Special Compliance Tests.* When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit, unless the Department obtains other information sufficient to demonstrate compliance. The owner or operator of the emissions unit shall provide a report on the results of said tests to the Department in accordance with the provisions of subsection 62-297.310(10), F.A.C.

[Rule 62-297.310(8), F.A.C.]

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

9. Scheduling and Notification: At least 15 days prior to the date on which each required emissions test is to begin, the owner or operator shall notify the air compliance program identified by permit, unless shorter notice is agreed to by the appropriate air compliance program. The notification shall include the date, time, place of each such test, Facility ID Number, Emission Unit ID Number(s) and description(s), Emission Point Number(s) and description(s), test method(s), pollutant(s) to be tested, along with the name and telephone number of the person who will be responsible for conducting such test(s) for the owner or operator. If a scheduled emissions test needs to be re-scheduled, the owner or operator shall submit to the appropriate air compliance program a revised notification at least seven days prior to the re-scheduled emissions test date or arrange a re-scheduled test date with the appropriate air compliance program by mutual agreement. [Rule 62-297.310(9), F.A.C.]

REPORTS

10. Test Reports:

- a. The owner or owner's authorized agent of an emissions unit for which an emissions test is required shall submit a written test report to the compliance authority specified by permit, on the results of each such test as soon as practicable but no later than 45 days after the last run of each test is completed. Test reports may be submitted electronically.
- b. If the owner or owner's authorized agent of an emissions unit for which an emissions test is required submits the results of each such test electronically using the EPA Electronic Reporting Tool (ERT), the written report specified in paragraph 62-297.310(10)(a), F.A.C., need not be submitted, provided the conditions of subparagraphs 62-297.310(10)(b)1. through 3., F.A.C., are met:
 - (1) The owner or owner's authorized agent shall submit the test information using the ERT as soon as practicable but no later than 45 days after the last run of each test is completed;
 - (2) The test information shall provide, as a minimum, the information specified in subparagraphs 62-297.310(10)(c)1. through 24., F.A.C.; and
 - (3) The compliance authority specified by permit must receive written notification, no later than 45 days after the last run of each test is completed, of the date that the test data was submitted using the ERT.
- c. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA Method 9 test, shall provide the following information.
 - (1) The type, location, and identification number of the emissions unit tested.
 - (2) The facility at which the emissions unit is located.
 - (3) The owner and, if other than the owner, operator of the emissions unit.
 - (4) The type and amount of fuels and materials typically used and processed, and the actual types and amounts of fuels used and material processed during each test run.
 - (5) If necessary in order to compare the emissions test results with an applicable emission limiting standard, the means, raw data, and computations used to determine the amount of fuels used and materials processed.
 - (6) The type of air pollution control devices installed on the emissions unit, their general condition, their typical operating parameters, and their actual operating parameters during each test run.
 - (7) A diagram of the sampling location, including the distance to any upstream and downstream bends or other flow disturbances.
 - (8) The date, starting time, and duration of each sampling run.
 - (9) The test procedures, including any authorized alternative procedures, used.
 - (10) The number of points sampled, and the configuration and location of the sampling plane.
 - (11) For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack or duct, temperatures, average meter temperatures, and sample time per point.
 - (12) The type, manufacturer, and configuration of the sampling equipment used.
 - (13) Data related to the required calibration of the test equipment.

SECTION 4. APPENDIX D
COMMON TESTING REQUIREMENTS

- (14) Data on the identification, processing, and weights of all filters used.
- (15) Data on the types and amounts of any chemical solutions used.
- (16) For each sampling run, data on the amount of pollutant collected from each sampling probe.
- (17) For each sampling run, data on the amount of pollutant collected from the filters.
- (18) For each sampling run, data on the amount of pollutant collected from the impingers.
- (19) The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
- (20) All measured and calculated data required to be determined by each applicable test procedure for each run.
- (21) The detailed calculations for one run that relate the collected data to the calculated emission rate or concentration, as applicable.
- (22) The applicable emission standard, and the resulting maximum allowable emission rate or concentration for the emissions unit, as applicable, plus the test result in the same form and unit of measure.
- (23) When an emissions test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or owner's authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his or her knowledge.
- (24) For non-Title V sources, a certification by the owner or owner's authorized agent that, to his or her knowledge, all data submitted are true and correct.
- (25) Any report submitted for a Title V source shall contain certification by a responsible official. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

[Rule 62-297.310(10), F.A.C.]

[Table of Contents](#)

SECTION 4. APPENDIX E
BEST MANAGEMENT PRACTICES

Introduction

As per Condition A.4 of the permit, authorized feedstock for the INEOS New Planet BioEnergy (INPB) facility in Indian River County (IRC) consists of vegetative matter, yard waste, land clearing debris, untreated wood and municipal solid waste (MSW). These terms are defined in Rule 62-210.200, F.A.C.

- "Biomass" – Vegetative matter and untreated wood.
- "Yard Waste" – Vegetative matter resulting from landscaping and yard maintenance operations and other such routine property clean-up activities. It includes materials such as leaves, shrub trimmings, grass clippings, palm fronds, and brush.
- "Land Clearing Debris" – Uprooted or cleared vegetation resulting from a land clearing operation, including any untreated wood generated by the land clearing operation (e.g., untreated fence posts).
- "Untreated Wood" – Wood (including lighter pine, tree trunks, limbs and stumps, shrubs, and lumber) which is free of paint, glue, filler, pentachlorophenol, creosote, tar, asphalt, chromated copper arsenate (CCA), and other wood preservatives or treatments.
- "Solid Waste" – Includes garbage, refuse, yard trash, clean debris, white goods, special waste, ashes, sludge, or other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from domestic, industrial, commercial, mining, agricultural, or governmental operations.

This Appendix BMP contains best management practices related to materials separation, quality control and dust minimization. In this Appendix BMP, "feedstock" refers to any authorized feedstock at the facility; "vegetative matter" refers to yard waste and land clearing debris other than untreated wood; "construction and demolition (C&D) debris" refers to untreated wood other than yard waste and land clearing debris; and "MSW" refers to solid waste other than yard trash and clean debris. As such, the three non-overlapping categories of authorized feedstock are vegetative matter, C&D debris and MSW.

Any material delivered to the facility that is not authorized by the permit as feedstock shall be collected and delivered to IRC Solid Waste Disposal District (SWDD) or to another disposal facility.

Limited Use of MSW

The preliminary feedstock for the INPB IRC facility consists of vegetative matter and C&D debris, blended together in varying ratios depending upon availability. On an annual average basis, the blend is approximately 90 percent vegetative matter with the remainder made up of C&D debris or MSW. The permit authorizes up to 100 percent use of MSW; however, prior to processing MSW, an odor control plan must be submitted to and approved by the Compliance Authority. All MSW to be processed in the facility will be received pre-shredded and pre-sorted for recyclables. Any material delivered to the facility that is not authorized by the permit as feedstock shall be collected and delivered to IRC Solid Waste Disposal District (SWDD) or to another disposal facility.

Vegetative Matter

Source: The vegetative matter is primarily yard waste from the IRC SWDD curbside collection program, supplemented by additional yard waste and land clearing debris delivered by the public directly to the county's customer convenience centers. Some vegetative matter may be delivered by the public to the INPB IRC facility.

Screening Prior to Shredding: Shredding may be performed either by the county before the vegetative matter is delivered to the facility or by the facility following delivery. Vegetative matter shall not be processed at the INPB IRC facility, however, unless it was collected under the following conditions:

- Personnel at scale houses or other receiving areas have been trained to prevent significant quantities of undesirable waste (more than 1 percent plastic, metal or other non-vegetative matter) from being disposed of in the vegetative matter stream.
- The public providing the yard waste have been educated in reducing the amount of plastic and garbage that is discarded with the yard waste through outreach activities such as posting signs at drop off areas.

Alternate Disposal: The permit authorizes a tipping floor, designed to accommodate a 48-hour period of operation (730 tons), with an additional hard-packed gravel overflow storage area for vegetative matter and C&D debris. The INPB IRC facility shall have the necessary agreements, logistics and procedures in place for at least one alternative disposal location

SECTION 4. APPENDIX E
BEST MANAGEMENT PRACTICES

should the storage capacity of the site be exceeded. Additional feedstock storage will be provided in the windrows drying areas.

C&D Debris

Source: The C&D debris is primarily waste accepted by the IRC SWDD for disposal. Some C&D debris may be delivered by the public to the INPB IRC facility.

Screening Prior to Shredding: Shredding may be performed either by the county before the C&D debris is delivered to the facility or by the facility following delivery. To ensure that wood treated with chromated copper arsenate (CCA) is not included in the feedstock, C&D debris shall be processed at the facility under the following conditions:

- The C&D debris delivered from the county landfill shall be pre-screened under a wood management plan in compliance with Rule 62-701.730, F.A.C.
- Prior to on-site shredding, the C&D debris delivered directly to the INPB IRC facility shall be pre-screened under the Florida DEP "Guidance for the Management and Disposal of CCA-Treated Wood," August 10, 2005 draft or subsequent final version (attached).

Alternate Disposal: The permit authorizes a tipping floor, designed to accommodate a 48-hour period of operation (730 tons), with an additional hard-packed gravel overflow storage area for vegetative matter and C&D debris. The INPB IRC facility shall have the necessary agreements, logistics and procedures in place for at least one alternative disposal location should the storage capacity of the site be exceeded. Additional feedstock storage will be provided in the windrows drying areas.

Municipal Solid Waste

Source: MSW to be used as feedstock will be waste delivered pre-shredded. No MSW shall be delivered by the public to the INPB IRC facility.

Screening Prior to Shredding: Shredding will be performed before the MSW is delivered to the facility and will only be received from permitted solid waste processing facilities that have approved materials separation plans with adequate recycling procedures already in place. The INPB IRC facility will employ spotters to ensure further removal of hazardous materials (if any) such as propane tanks from the waste.

Alternate Disposal: The permit authorizes a tipping floor, designed to accommodate a 48-hour period of operation (730 dry tons, 15% moisture), with an additional enclosed, paved storage area for MSW that create objectionable odors, designed to accommodate two days of operation (730 dry ton, 15% moisture). MSW that creates objectionable odors shall be stored in the enclosed paved area, and any MSW that is creating objectionable odors and which has been at the INPB IRC facility for more than 48 hours shall be directed to the county landfill. If objectionable odors arise while any type of MSW is processed, the permittee shall take immediate actions to eliminate the odors. In addition, the permitted shall within 10 days submit a plan to the Compliance Authority documenting the corrective actions taken to eliminate the odors and outlining how in the future objectionable odors will be prevented.

Best Management Practices

In addition to the reasonable precautions to prevent emissions of unconfined particulate matter (PM) specified in the permit, the facility shall implement the following best management practices:

- The feedstock shall be delivered directly to the tipping floor or windrows area for placement in windrows.
- The feedstock shall not be sprayed with water to control dust emissions, unless water-spraying proves necessary to prevent emissions of unconfined PM.
- The feedstock piles shall be managed by front end loaders and mobile composting machinery.
- Unnecessary movement of the piles shall be avoided to minimize fugitive emissions.
- The front end loaders shall feed the biomass or MSW to a conveyor system connected to the dryers.
- The conveyor system from the tipping floor to the dryers and from the dryers to the gasifiers shall be covered and shall employ flexible connections to avoid drops.
- The ash from the gasifiers shall be collected as wet slurry and stored in bins prior to removal for off-site disposal. The bins shall be covered for transportation. Ash from other process areas shall be wetted prior to transport to prevent emissions of unconfined PM.

SECTION 4. APPENDIX E
BEST MANAGEMENT PRACTICES

- Both the sodium bicarbonate and activated carbon used as air pollution controls shall be delivered in batch loads. The silos for storage of these materials shall be equipped with dust collection systems to limit fugitive particulate matter emissions.
- Other chemicals used on site, such as nutrients for the fermentation process will be delivered as liquids.
- Trucks shall deliver feedstock or remove ash only during a 12-hour day, seven days per week.

[Table of Contents](#)

SECTION 4. APPENDIX F
PRELIMINARY LEAK DETECTION AND REPAIR (LDAR) PROGRAM

PRELIMINARY LEAK DETECTION AND REPAIR (LDAR) PROGRAM

1. Introduction

The New Source Performance Standards (NSPS) for equipment leaks at synthetic organic chemical manufacturing industries (40 CFR 60, subpart VVa) apply to several areas of the INEOS New Planet (INP) BioEnergy Indian River County (IRC) Facility. The NSPS applies to each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, flange or other connector that contains or contacts a process fluid that is at least 10 percent VOC by weight. It also applies to any devices or systems that it requires to be installed.

One requirement of subpart VVa is the development of a leak detection and repair (LDAR) program. Because the final list of subject equipment will not be known until the facility's design is complete, this preliminary procedure has been developed and will be used until a final LDAR program can be submitted to the Compliance Authority.

2. Procedures

Except as may be provided for in the special conditions of the air construction permit, the following requirements apply:

- A. These conditions shall not apply (1) where the VOC has an aggregate partial pressure or vapor pressure of less than 0.044 pounds per square inch, absolute (psia) at 68°F or (2) operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this condition shall be identified in a list or by one of the methods described below to be made available upon request.

The exempted components may be identified by one or more of the following methods:

- i. piping and instrumentation diagram (PID); or
 - ii. a written or electronic database.
- B. Construction of new and reworked piping, valves, pump systems, and compressor systems shall conform to applicable American National Standards Institute (ANSI), American Petroleum Institute (API), American Society of Mechanical Engineers (ASME), or equivalent codes.
- C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.
- D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves, as defined by the NSPS subpart, shall be identified in a list to be made available upon request. The non-accessible valves may be identified by one or more of the methods described in subparagraph A above.
- E. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. Gas or hydraulic testing of the new and reworked piping connections at no less than operating pressure shall be performed prior to returning the components to service or they shall be monitored for leaks using an approved gas analyzer within 8 hours of the components being returned to service. Adjustments shall be made as necessary to obtain leak-free performance. Connectors shall be inspected by visual, audible, and/or olfactory means at least weekly by operating personnel walk-through.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve. Except during sampling, the second valve shall be closed. If the removal of a component for repair or replacement results in an open-ended line or valve, it is exempt from the requirement to install a cap, blind flange, plug, or second valve for 24 hours. If the repair or replacement is not completed within 24 hours, the line or valve must have a cap, blind flange, plug, or second valve installed.

- F. Accessible valves shall be monitored by leak-checking for fugitive emissions at least quarterly using an approved gas analyzer. Sealless/leakless valves (including, but not limited to, welded bonnet bellows and diaphragm valves) and relief valves equipped with a rupture disc upstream or venting to a control device are not required to be monitored. For valves equipped with rupture discs, a pressure-sensing device shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

An approved gas analyzer shall conform to requirements listed in Method 21 of 40 CFR part 60, appendix A. The gas analyzer shall be calibrated with methane. In addition, the response factor of the instrument for a specific VOC of interest shall be determined and meet the requirements of Section 8 of Method 21. If a mixture of VOCs is being monitored, the response factor shall be calculated for the average composition of the process fluid. If a response factor

SECTION 4. APPENDIX F
PRELIMINARY LEAK DETECTION AND REPAIR (LDAR) PROGRAM

less than 10 cannot be achieved using methane, than the instrument may be calibrated with one of the VOC to be measured or any other VOC so long as the instrument has a response factor of less than 10 for each of the VOC to be measured.

Replacements for leaking components shall be re-monitored within 15 days of being placed back into VOC service.

- G. Except as may be provided for in the special conditions of this permit, all pump, compressor, and agitator seals shall be monitored with an approved gas analyzer at least quarterly or be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. Seal systems designed and operated to prevent emissions or seals equipped with an automatic seal failure detection and alarm system need not be monitored. These seal systems may include (but are not limited to) dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned, or magnetic-driven pumps) may be used to satisfy the requirements of this condition and need not be monitored.
- H. Damaged or leaking valves or connectors found to be emitting VOC in excess of 500 parts per million by volume (ppmv) or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired. Damaged or leaking pump, compressor, and agitator seals found to be emitting VOC in excess of 2,000 ppmv or found by visual inspection to be leaking (e.g., dripping process fluids) shall be tagged and replaced or repaired.
- I. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. If the repair of a component would require a unit shutdown that would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. A listing of all components that qualify for delay of repair shall be maintained on a delay of repair list.
- J. The results of the required fugitive instrument monitoring and maintenance program shall be made available to the FDEP upon request. Records shall indicate appropriate dates, test methods, instrument readings, repair results, justification for delay of repairs, and corrective actions taken for all components. Records of physical inspections shall be noted in the operator's log or equivalent.
- K. Alternative monitoring frequency schedules as specified in the NSPS subpart may be used in lieu of Items F through G of this condition.

[Table of Contents](#)

SECTION 4. APPENDIX G

NSPS SUBPART A AND NESHAP SUBPART A - IDENTIFICATION OF GENERAL PROVISIONS

NSPS - SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a New Source Performance Standard of 40 C.F.R. part 60 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

- § 60.1 Applicability.
- § 60.2 Definitions.
- § 60.3 Units and abbreviations.
- § 60.4 Address.
- § 60.5 Determination of construction or modification.
- § 60.6 Review of plans.
- § 60.7 Notification and Record Keeping.
- § 60.8 Performance Tests.
- § 60.9 Availability of information.
- § 60.10 State Authority.
- § 60.11 Compliance with Standards and Maintenance Requirements.
- § 60.12 Circumvention.
- § 60.13 Monitoring Requirements.
- § 60.14 Modification.
- § 60.15 Reconstruction.
- § 60.16 Priority List.
- § 60.17 Incorporations by Reference.
- § 60.18 General Control Device Requirements.
- § 60.19 General Notification and Reporting Requirements.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

[Link to NSPS Subpart A](#)

NESHAP - SUBPART A, IDENTIFICATION OF GENERAL PROVISIONS

The provisions of this Subpart may be provided in full upon request. Emissions units subject to a National Emission Standards for Hazardous Air Pollutants of 40 C.F.R. part 63 are also subject to the applicable requirements of Subpart A, the General Provisions, including:

- § 63.1 Applicability.
- § 63.2 Definitions.
- § 63.3 Units and abbreviations.
- § 63.4 Prohibited Activities and Circumvention.
- § 63.5 Preconstruction Review and Notification Requirements.
- § 63.6 Compliance with Standards and Maintenance Requirements.
- § 63.7 Performance Testing Requirements.
- § 63.8 Monitoring Requirements.
- § 63.9 Notification Requirements.

SECTION 4. APPENDIX G

NSPS SUBPART A AND NESHAP SUBPART A - IDENTIFICATION OF GENERAL PROVISIONS

§ 63.10 Recordkeeping and Reporting Requirements.

§ 63.11 Control Device Requirements.

§ 63.12 State Authority and Delegations.

§ 63.13 Addresses of State Air Pollution Control Agencies and EPA Regional Offices.

§ 63.14 Incorporation by Reference.

§ 63.15 Availability of Information and Confidentiality.

Individual subparts may exempt specific equipment or processes from some or all of these requirements. The general provisions may be provided in full upon request.

[Link to NESHAP Subpart A](#)

[Table of Contents](#)

SECTION 4. APPENDIX H

NSPS SUBPART DC - STANDARDS OF PERFORMANCE FOR SMALL INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS

40 CFR 60.60, Subpart Dc applies to the vent gas boiler (EU 006). This subpart does not have any applicable emission limits and only imposes recordkeeping requirements.

[Link to NSPS Subpart Dc](#)

[Table of Contents](#)

SECTION 4. APPENDIX I

NSPS, SUBPART Kb – STANDARDS OF PERFORMANCE FOR VOLATILE ORGANIC LIQUID STORAGE VESSELS

40 CFR 60, Subpart Kb applies to each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) (19,800 gallons) that is used to store volatile organic liquids (VOL) for which construction, reconstruction or modification is commenced after July 23, 1984. This subpart does not apply, however, to the following:

- Storage vessels with a capacity greater than or equal to 151 m^3 (39,900 gallons) storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) (0.51 pounds per square inch absolute, psia), or
- with a capacity greater than or equal to 75 m^3 (19,800 gallons) but less than 151 m^3 (39,900 gallons) storing a liquid with a maximum true vapor pressure less than 15.0 kPa (2.18 psia).

The product storage tank will have a capacity of 94,755 gallons, and it will store material with vapor pressure greater than 0.51 psia, so it is subject to subpart Kb. The denaturant storage tank will have a capacity of 19,800 gallons, and it will store material with a vapor pressure greater than 2.18 psia, so it is also subject to subpart Kb. The other storage tanks at the INPB IRC facility are not subject to subpart Kb.

The complete provisions of subparts A and Kb may be provided in full upon request and are also available from the following links:

[Link to Subpart Kb](#)

[Table of Contents](#)

SECTION 4. APPENDIX J

NSPS SUBPART VVa – STANDARDS OF PERFORMANCE FOR EQUIPMENT LEAKS OF VOC IN THE SOCMI

The most practical method of controlling fugitive VOC emissions from INEOS Bio Facility is to promptly repair any leaking components. The INEOS Bio Facility is subject to NSPS 40 CFR 60, Subpart VVa - VOC Equipment Leaks in the Synthetic Chemical Manufacturing Industry (SOCMI), for projects that commence construction or modifications after November 7, 2006. NSPS Subpart VVa requires a LDAR program.

[Link to NSPS Subpart VVa](#)

[Table of Contents](#)

SECTION 4. APPENDIX K

NSPS, SUBPART JJJJ - STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES

In the materials handling area (EU-001), the two shredders are powered by model year 2011 Mercedes Benz OM 460 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. The two trammel screens will be powered by model year 2011 Daimler-Chrysler OM 904 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. In addition, a 2009 model year 400 kW Kohler Model No. 400REZX natural gas fired emergency generator (EU-011) replaces the existing (1989 model year) Caterpillar 3412 diesel-powered unit that is rated for approximately 500 kilowatts as a result of this permitting action.

The gas-fired engine is subject to the applicable requirements of 40 C.F.R. part 60, subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The provisions of this subpart may be provided in full upon request and are also available at the following link:

[Link to Subpart JJJJ](#)

[Table of Contents](#)

SECTION 4. APPENDIX L

NSPS, SUBPART IIII - STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

In the materials handling area (EU-001), the two shredders will be powered by model year 2011 Mercedes Benz OM 460 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. The two trammel screens will be powered by model year 2011 Daimler-Chrysler OM 904 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. In addition, a 2009 model year 400 kW Kohler Model No. 400REZX natural gas fired emergency generator (EU-011) replaces the existing (1989 model year) Caterpillar 3412 diesel-powered unit that is rated for approximately 500 kilowatts as a result of this permitting action.

These existing diesel-fired engines are subject to the applicable requirements of 40 C.F.R. part 60, subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The provisions of this subpart may be provided in full upon request and are also available at the following link:

[Link to Subpart IIII](#)

[Table of Contents](#)

SECTION 4. APPENDIX M

NESHAP, SUBPART ZZZZ – STATIONARY RECIPROCATING INTERNAL COMBUSTION ENGINES

In the materials handling area (EU-001), the two shredders will be powered by model year 2011 Mercedes Benz OM 460 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. The two trammel screens will be powered by model year 2011 Daimler-Chrysler OM 904 LA diesel-fired engines, or equivalent engines with respect to engine power output rating and emission rates. The new emergency generator for the facility is a 2009 model year 400 kW Kohler Model No. 400REZX natural gas fired emergency generator (EU-011) which replaces the existing (1989 model year) Caterpillar 3412 diesel-powered unit.

These engines are subject to the applicable requirements of 40 C.F.R. part 63, subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. The complete provisions of subpart ZZZZ may be provided in full upon request and are also available at the following link:

[Link to Subpart ZZZZ](#)

[Table of Contents](#)

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

PUBLIC (REDACTED)

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC

OMB Control # 1902-0075
Expiration: 5/31/2013

Form 556

Certification of Qualifying Facility (QF) Status for a Small Power
Production or Cogeneration Facility

General

Questions about completing this form should be sent to Form556@ferc.gov. Information about the Commission's QF program, answers to frequently asked questions about QF requirements or completing this form, and contact information for QF program staff are available at the Commission's QF website, www.ferc.gov/QF. The Commission's QF website also provides links to the Commission's QF regulations (18 C.F.R. § 131.80 and Part 292), as well as other statutes and orders pertaining to the Commission's QF program.

Who Must File

Any applicant seeking QF status or recertification of QF status for a generating facility with a net power production capacity (as determined in lines 7a through 7g below) greater than 1000 kW must file a self-certification or an application for Commission certification of QF status, which includes a properly completed Form 556. Any applicant seeking QF status for a generating facility with a net power production capacity 1000 kW or less is exempt from the certification requirement, and is therefore not required to complete or file a Form 556. See 18 C.F.R. § 292.203.

How to Complete the Form 556

This form is intended to be completed by responding to the items in the order they are presented, according to the instructions given. If you need to back-track, you may need to clear certain responses before you will be allowed to change other responses made previously in the form. If you experience problems, click on the nearest help button (?) for assistance, or contact Commission staff at Form556@ferc.gov.

Certain lines in this form will be automatically calculated based on responses to previous lines, with the relevant formulas shown. You must respond to all of the previous lines within a section before the results of an automatically calculated field will be displayed. If you disagree with the results of any automatic calculation on this form, contact Commission staff at Form556@ferc.gov to discuss the discrepancy before filing.

You must complete all lines in this form unless instructed otherwise. Do not alter this form or save this form in a different format. Incomplete or altered forms, or forms saved in formats other than PDF, will be rejected.

How to File a Completed Form 556

Applicants are required to file their Form 556 electronically through the Commission's eFiling website (see instructions on page 2). By filing electronically, you will reduce your filing burden, save paper resources, save postage or courier charges, help keep Commission expenses to a minimum, and receive a much faster confirmation (via an email containing the docket number assigned to your facility) that the Commission has received your filing.

If you are simultaneously filing both a waiver request and a Form 556 as part of an application for Commission certification, see the "Waiver Requests" section on page 3 for more information on how to file.

Paperwork Reduction Act Notice

This form is approved by the Office of Management and Budget (OMB Control No. 1902-0075, expiration 05/31/2013). Compliance with the information requirements established by the FERC Form No. 556 is required to obtain or maintain status as a QF. See 18 C.F.R. § 131.80 and Part 292. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The estimated burden for completing the FERC Form No. 556, including gathering and reporting information, is as follows: 3 hours for self-certification of a small power production facility, 8 hours for self-certifications of a cogeneration facility, 6 hours for an application for Commission certification of a small power production facility, and 50 hours for an application for Commission certification of a cogeneration facility. Send comments regarding this burden estimate or any aspect of this collection of information, including suggestions for reducing this burden, to the following: Information Clearance Officer, Office of the Executive Director (ED-32), Federal Energy Regulatory Commission, 888 First Street N.E., Washington, DC 20426; and Desk Officer for FERC, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503 (oina_submission@omb.eop.gov). Include the Control No. 1902-0075 in any correspondence.

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 2 - Instructions

Electronic Filing (eFiling)

To electronically file your Form 556, visit the Commission's QF website at www.ferc.gov/QF and click the eFiling link.

If you are eFiling your first document, you will need to register with your name, email address, mailing address, and phone number. If you are registering on behalf of an employer, then you will also need to provide the employer name, alternate contact name, alternate contact phone number and alternate contact email.

Once you are registered, log in to eFiling with your registered email address and the password that you created at registration. Follow the instructions. When prompted, select one of the following QF-related filing types, as appropriate, from the Electric or General filing category.

Filing category	Filing Type as listed in eFiling	Description
Electric	(Fee) Application for Commission Cert. as Cogeneration QF	Use to submit an application for Commission certification or Commission recertification of a cogeneration facility as a QF.
	(Fee) Application for Commission Cert. as Small Power QF	Use to submit an application for Commission certification or Commission recertification of a small power production facility as a QF.
	Self-Certification Notice (QF, EG, FC)	Use to submit a notice of self-certification of your facility (cogeneration or small power production) as a QF.
	Self-Recertification of Qualifying Facility (QF)	Use to submit a notice of self-recertification of your facility (cogeneration or small power production) as a QF.
	Supplemental Information or Request	Use to correct or supplement a Form 556 that was submitted with errors or omissions, or for which Commission staff has requested additional information. Do not use this filing type to report new changes to a facility or its ownership; rather, use a self-recertification or Commission recertification to report such changes.
General	(Fee) Petition for Declaratory Order (not under FPA Part 1)	Use to submit a petition for declaratory order granting a waiver of Commission QF regulations pursuant to 18 C.F.R. §§ 292.204(a) (3) and/or 292.205(c). A Form 556 is not required for a petition for declaratory order unless Commission recertification is being requested as part of the petition.

You will be prompted to submit your filing fee, if applicable, during the electronic submission process. Filing fees can be paid via electronic bank account debit or credit card.

During the eFiling process, you will be prompted to select your file(s) for upload from your computer.

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 3 - Instructions

Filing Fee

No filing fee is required if you are submitting a self-certification or self-recertification of your facility as a QF pursuant to 18 C.F.R. § 292.207(a).

A filing fee is required if you are filing either of the following:

- (1) an application for Commission certification or recertification of your facility as a QF pursuant to 18 C.F.R. § 292.207(b), or
- (2) a petition for declaratory order granting waiver pursuant to 18 C.F.R. §§ 292.204(a)(3) and/or 292.205(c).

The current fees for applications for Commission certifications and petitions for declaratory order can be found by visiting the Commission's QF website at www.ferc.gov/QF and clicking the Fee Schedule link.

You will be prompted to submit your filing fee, if applicable, during the electronic filing process described on page 2.

Required Notice to Utilities and State Regulatory Authorities

Pursuant to 18 C.F.R. § 292.207(a)(ii), you must provide a copy of your self-certification or request for Commission certification to the utilities with which the facility will interconnect and/or transact, as well as to the State regulatory authorities of the states in which your facility and those utilities reside. Links to information about the regulatory authorities in various states can be found by visiting the Commission's QF website at www.ferc.gov/QF and clicking the Notice Requirements link.

What to Expect From the Commission After You File

An applicant filing a Form 556 electronically will receive an email message acknowledging receipt of the filing and showing the docket number assigned to the filing. Such email is typically sent within one business day, but may be delayed pending confirmation by the Secretary of the Commission of the contents of the filing.

An applicant submitting a self-certification of QF status should expect to receive no documents from the Commission, other than the electronic acknowledgement of receipt described above. Consistent with its name, a self-certification is a certification by the applicant itself that the facility meets the relevant requirements for QF status, and does not involve a determination by the Commission as to the status of the facility. An acknowledgement of receipt of a self-certification, in particular, does not represent a determination by the Commission with regard to the QF status of the facility. An applicant self-certifying may, however, receive a rejection, revocation or deficiency letter if its application is found, during periodic compliance reviews, not to comply with the relevant requirements.

An applicant submitting a request for Commission certification will receive an order either granting or denying certification of QF status, or a letter requesting additional information or rejecting the application. Pursuant to 18 C.F.R. § 292.207(b)(3), the Commission must act on an application for Commission certification within 90 days of the later of the filing date of the application or the filing date of a supplement, amendment or other change to the application.

Waiver Requests

18 C.F.R. § 292.204(a)(3) allows an applicant to request a waiver to modify the method of calculation pursuant to 18 C.F.R. § 292.204(a)(2) to determine if two facilities are considered to be located at the same site, for good cause. 18 C.F.R. § 292.205(c) allows an applicant to request waiver of the requirements of 18 C.F.R. §§ 292.205(a) and (b) for operating and efficiency upon a showing that the facility will produce significant energy savings. A request for waiver of these requirements must be submitted as a petition for declaratory order, with the appropriate filing fee for a petition for declaratory order. Applicants requesting Commission recertification as part of a request for waiver of one of these requirements should electronically submit their completed Form 556 along with their petition for declaratory order, rather than filing their Form 556 as a separate request for Commission recertification. Only the filing fee for the petition for declaratory order must be paid to cover both the waiver request and the request for recertification if such requests are made simultaneously.

18 C.F.R. § 292.203(d)(2) allows an applicant to request a waiver of the Form 556 filing requirements, for good cause. Applicants filing a petition for declaratory order requesting a waiver under 18 C.F.R. § 292.203(d)(2) do not need to complete or submit a Form 556 with their petition.

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 4 - Instructions

Geographic Coordinates

If a street address does not exist for your facility, then line 3c of the Form 556 requires you to report your facility's geographic coordinates (latitude and longitude). Geographic coordinates may be obtained from several different sources. You can find links to online services that show latitude and longitude coordinates on online maps by visiting the Commission's QF webpage at www.ferc.gov/QF and clicking the Geographic Coordinates link. You may also be able to obtain your geographic coordinates from a GPS device, Google Earth (available free at <http://earth.google.com>), a property survey, various engineering or construction drawings, a property deed, or a municipal or county map showing property lines.

Filing Privileged Data or Critical Energy Infrastructure Information in a Form 556

The Commission's regulations provide procedures for applicants to either (1) request that any information submitted with a Form 556 be given privileged treatment because the information is exempt from the mandatory public disclosure requirements of the Freedom of Information Act, 5 U.S.C. § 552, and should be withheld from public disclosure; or (2) identify any documents containing critical energy infrastructure information (CEII) as defined in 18 C.F.R. § 388.113 that should not be made public.

If you are seeking privileged treatment or CEII status for any data in your Form 556, then you must follow the procedures in 18 C.F.R. § 388.112. See www.ferc.gov/help/filing-guide/file-ceii.asp for more information.

Among other things (see 18 C.F.R. § 388.112 for other requirements), applicants seeking privileged treatment or CEII status for data submitted in a Form 556 must prepare and file both (1) a complete version of the Form 556 (containing the privileged and/or CEII data), and (2) a public version of the Form 556 (with the privileged and/or CEII data redacted). Applicants preparing and filing these different versions of their Form 556 must indicate below the security designation of this version of their document. If you are not seeking privileged treatment or CEII status for any of your Form 556 data, then you should not respond to any of the items on this page.

<input type="checkbox"/> Non-Public: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This non-public version of the applicant's Form 556 contains all data, including the data that is redacted in the (separate) public version of the applicant's Form 556.
<input checked="" type="checkbox"/> Public (redacted): Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This public version of the applicant's Form 556 contains all data <u>except</u> for data from the lines indicated below, which has been redacted.
Privileged: Indicate below which lines of your form contain data for which you are seeking privileged treatment
Critical Energy Infrastructure Information (CEII): Indicate below which lines of your form contain data for which you are seeking CEII status

The eFiling process described on page 2 will allow you to identify which versions of the electronic documents you submit are public, privileged and/or CEII. The filenames for such documents should begin with "Public", "Priv", or "CEII", as applicable, to clearly indicate the security designation of the file. Both versions of the Form 556 should be unaltered PDF copies of the Form 556, as available for download from www.ferc.gov/QF. To redact data from the public copy of the submittal, simply omit the relevant data from the Form. For numerical fields, leave the redacted fields blank. For text fields, complete as much of the field as possible, and replace the redacted portions of the field with the word "REDACTED" in brackets. Be sure to identify above all fields which contain data for which you are seeking non-public status.

The Commission is not responsible for detecting or correcting filer errors, including those errors related to security designation. If your documents contain sensitive information, make sure they are filed using the proper security designation.

**FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR
COGENERATION FACILITY**

OMB Control # 1902-0075
Expiration 5/31/2013

1a Full name of applicant (legal entity on whose behalf qualifying facility status is sought for this facility) INEOS New Planet BioEnergy LLC			
1b Applicant street address 3030 Warrenville Road, Ste 650			
1c City isle		1d State/province IL	
1e Postal code 60532	1f Country (if not United States) USA		1g Telephone number 630-857-7100
1h Has the instant facility ever previously been certified as a QF? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
1i If yes, provide the docket number of the last known QF filing pertaining to this facility: QF ____ - ____ - ____			
1j Under which certification process is the applicant making this filing? <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input checked="" type="checkbox"/> Notice of self-certification <small>(see note below)</small> </div> <div style="width: 48%;"> <input type="checkbox"/> Application for Commission certification (requires filing fee; see "Filing Fee" section on page 3) </div> </div> <p><small>Note: a notice of self-certification is a notice by the applicant itself that its facility complies with the requirements for QF status. A notice of self-certification does not establish a proceeding, and the Commission does not review a notice of self-certification to verify compliance. See the "What to Expect From the Commission After You File" section on page 3 for more information.</small></p>			
1k What type(s) of QF status is the applicant seeking for its facility? (check all that apply) <input checked="" type="checkbox"/> Qualifying small power production facility status <input type="checkbox"/> Qualifying cogeneration facility status			
1l What is the purpose and expected effective date(s) of this filing? <input checked="" type="checkbox"/> Original certification; facility expected to be installed by <u>4/15/12</u> and to begin operation on <u>9/1/12</u> <input type="checkbox"/> Change(s) to a previously certified facility to be effective on _____ <small>(identify type(s) of change(s) below, and describe change(s) in the Miscellaneous section starting on page 19)</small> <div style="margin-left: 20px;"> <input type="checkbox"/> Name change and/or other administrative change(s) <input type="checkbox"/> Change in ownership <input type="checkbox"/> Change(s) affecting plant equipment, fuel use, power production capacity and/or cogeneration thermal output </div> <input type="checkbox"/> Supplement or correction to a previous filing submitted on _____ <small>(describe the supplement or correction in the Miscellaneous section starting on page 19)</small>			
1m If any of the following three statements is true, check the box(es) that describe your situation and complete the form to the extent possible, explaining any special circumstances in the Miscellaneous section starting on page 19. <div style="margin-left: 20px;"> <input type="checkbox"/> The instant facility complies with the Commission's QF requirements by virtue of a waiver of certain regulations previously granted by the Commission in an order dated _____ (specify any other relevant waiver orders in the Miscellaneous section starting on page 19) <input type="checkbox"/> The instant facility would comply with the Commission's QF requirements if a petition for waiver submitted concurrently with this application is granted <input type="checkbox"/> The instant facility complies with the Commission's regulations, but has special circumstances, such as the employment of unique or innovative technologies not contemplated by the structure of this form, that make the demonstration of compliance via this form difficult or impossible (describe in Misc. section starting on p. 19) </div>			

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 6 - All Facilities

Contact Information	2a Name of contact person Dan Cummings		2b Telephone number 630-857-7165	
	2c Which of the following describes the contact person's relationship to the applicant? (check one) <input type="checkbox"/> Applicant (self) <input type="checkbox"/> Employee, owner or partner of applicant authorized to represent the applicant <input checked="" type="checkbox"/> Employee of a company affiliated with the applicant authorized to represent the applicant on this matter <input type="checkbox"/> Lawyer, consultant, or other representative authorized to represent the applicant on this matter			
	2d Company or organization name (if applicant is an individual, check here and skip to line 2e) <input type="checkbox"/> INEOS New Planet BioEnergy LLC			
	2e Street address (if same as Applicant, check here and skip to line 3a) <input checked="" type="checkbox"/>			
	2f City		2g State/province	
	2h Postal code		2i Country (if not United States)	
Facility Identification and Location	3a Facility name Indian River BioEnergy Center			
	3b Street address (if a street address does not exist for the facility, check here and skip to line 3c) <input type="checkbox"/> 925 74th Ave. SW			
	3c Geographic coordinates: If you indicated that no street address exists for your facility by checking the box in line 3b, then you must specify the latitude and longitude coordinates of the facility in degrees (to three decimal places). Use the following formula to convert to decimal degrees from degrees, minutes and seconds: decimal degrees = degrees + (minutes/60) + (seconds/3600). See the "Geographic Coordinates" section on page 4 for help. If you provided a street address for your facility in line 3b, then specifying the geographic coordinates below is optional. Longitude <input type="checkbox"/> East (+) _____ degrees <input type="checkbox"/> West (-) _____ degrees Latitude <input type="checkbox"/> North (+) _____ degrees <input type="checkbox"/> South (-) _____ degrees			
	3d City (if unincorporated, check here and enter nearest city) <input type="checkbox"/> Vero Beach		3e State/province FL	
	3f County (or check here for independent city) <input type="checkbox"/> Indian River (zip 32968)		3g Country (if not United States) US	
Transacting Utilities	Identify the electric utilities that are contemplated to transact with the facility.			
	4a Identify utility interconnecting with the facility Florida Power and Light (FPL)			
	4b Identify utilities providing wheeling service or check here if none <input checked="" type="checkbox"/>			
	4c Identify utilities purchasing the useful electric power output or check here if none <input type="checkbox"/> Florida Power and Light (FPL)			
4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none <input type="checkbox"/> Florida Power and Light (FPL)				

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR
COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 7 - All Facilities

Ownership and Operation	5a Direct ownership as of effective date or operation date: Identify all direct owners of the facility holding at least 10 percent equity interest. For each identified owner, also (1) indicate whether that owner is an electric utility, as defined in section 3(22) of the Federal Power Act (16 U.S.C. 796(22)), or a holding company, as defined in section 1262(8) of the Public Utility Holding Company Act of 2005 (42 U.S.C. 16451(8)), and (2) for owners which are electric utilities or holding companies, provide the percentage of equity interest in the facility held by that owner. If no direct owners hold at least 10 percent equity interest in the facility, then provide the required information for the two direct owners with the largest equity interest in the facility.		
	Full legal names of direct owners	Electric utility or holding company	If Yes, % equity interest
	1) INEOS Bio USA LLC	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	80%
	2) NPE Florida LLC	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	20%
	3)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
	4)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
	5)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
	6)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
	7)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
	8)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
9)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%	
10)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%	
<input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed			
5b Upstream (i.e., indirect) ownership as of effective date or operation date: Identify all upstream (i.e., indirect) owners of the facility that both (1) hold at least 10 percent equity interest in the facility, and (2) are electric utilities, as defined in section 3(22) of the Federal Power Act (16 U.S.C. 796(22)), or holding companies, as defined in section 1262(8) of the Public Utility Holding Company Act of 2005 (42 U.S.C. 16451(8)). Also provide the percentage of equity interest in the facility held by such owners. (Note that, because upstream owners may be subsidiaries of one another, total percent equity interest reported may exceed 100 percent.)			
Check here if no such upstream owners exist. <input checked="" type="checkbox"/>			
Full legal names of electric utility or holding company upstream owners	% equity interest		
1)	%		
2)	%		
3)	%		
4)	%		
5)	%		
6)	%		
7)	%		
8)	%		
9)	%		
10)	%		
<input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed			
5c Identify the facility operator INEOS New Planet BioEnergy LLC			



SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

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Page 8 - All Facilities

Energy Input	6a	Describe the primary energy input: (check one main category and, if applicable, one subcategory)	
	<input checked="" type="checkbox"/> Biomass (specify)	<input type="checkbox"/> Renewable resources (specify)	<input type="checkbox"/> Geothermal
	<input type="checkbox"/> Landfill gas <input type="checkbox"/> Manure digester gas <input type="checkbox"/> Municipal solid waste <input type="checkbox"/> Sewage digester gas <input type="checkbox"/> Wood <input checked="" type="checkbox"/> Other biomass (describe on page 19)	<input type="checkbox"/> Hydro power - river <input type="checkbox"/> Hydro power - tidal <input type="checkbox"/> Hydro power - wave <input type="checkbox"/> Solar - photovoltaic <input type="checkbox"/> Solar - thermal <input type="checkbox"/> Wind <input type="checkbox"/> Other renewable resource (describe on page 19)	<input type="checkbox"/> Fossil fuel (specify) <input type="checkbox"/> Coal (not waste) <input type="checkbox"/> Fuel oil/diesel <input type="checkbox"/> Natural gas (not waste) <input type="checkbox"/> Other fossil fuel (describe on page 19) <input type="checkbox"/> Other (describe on page 19)
6b	If you specified "waste" as the primary energy input in line 6a, indicate the type of waste fuel used: (check one)		
	<input type="checkbox"/>	Waste fuel listed in 18 C.F.R. § 292.202(b) (specify one of the following)	
	<input type="checkbox"/>	Anthracite culm produced prior to July 23, 1985	
	<input type="checkbox"/>	Anthracite refuse that has an average heat content of 6,000 Btu or less per pound and has an average ash content of 45 percent or more	
	<input type="checkbox"/>	Bituminous coal refuse that has an average heat content of 9,500 Btu per pound or less and has an average ash content of 25 percent or more	
	<input type="checkbox"/>	Top or bottom subbituminous coal produced on Federal lands or on Indian lands that has been determined to be waste by the United States Department of the Interior's Bureau of Land Management (BLM) or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that the applicant shows that the latter coal is an extension of that determined by BLM to be waste	
	<input type="checkbox"/>	Coal refuse produced on Federal lands or on Indian lands that has been determined to be waste by the BLM or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that applicant shows that the latter is an extension of that determined by BLM to be waste	
	<input type="checkbox"/>	Lignite produced in association with the production of montan wax and lignite that becomes exposed as a result of such a mining operation	
	<input type="checkbox"/>	Gaseous fuels (except natural gas and synthetic gas from coal) (describe on page 19)	
	<input type="checkbox"/>	Waste natural gas from gas or oil wells (describe on page 19 how the gas meets the requirements of 18 C.F.R. § 2.400 for waste natural gas; include with your filing any materials necessary to demonstrate compliance with 18 C.F.R. § 2.400)	
	<input type="checkbox"/>	Materials that a government agency has certified for disposal by combustion (describe on page 19)	
	<input type="checkbox"/>	Heat from exothermic reactions (describe on page 19)	
	<input type="checkbox"/>	Residual heat (describe on page 19)	
	<input type="checkbox"/>	Used rubber tires	
	<input type="checkbox"/>	Plastic materials	
	<input type="checkbox"/>	Refinery off-gas	
	<input type="checkbox"/>	Petroleum coke	
	<input type="checkbox"/>	Other waste energy input that has little or no commercial value and exists in the absence of the qualifying facility industry (describe in the Miscellaneous section starting on page 19; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)	
	6c	Provide the average energy input, calculated on a calendar year basis, in terms of Btu/h for the following fossil fuel energy inputs, and provide the related percentage of the total average annual energy input to the facility (18 C.F.R. § 292.202(j)). For any oil or natural gas fuel, use lower heating value (18 C.F.R. § 292.202(m)).	
		Fuel	Annual average energy input for specified fuel
		Percentage of total annual energy input	
		Natural gas	0 Btu/h
		Oil-based fuels	0 Btu/h
		Coal	0 Btu/h

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 9 - All Facilities

Technical Facility Information	Indicate the maximum gross and maximum net electric power production capacity of the facility at the point(s) of delivery by completing the worksheet below. Respond to all items. If any of the parasitic loads and/or losses identified in lines 7b through 7e are negligible, enter zero for those lines.	
	7a The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	6,400 kW
	7b Parasitic station power used at the facility to run equipment which is necessary and integral to the power production process (boiler feed pumps, fans/blowers, office or maintenance buildings directly related to the operation of the power generating facility, etc.). If this facility includes non-power production processes (for instance, power consumed by a cogeneration facility's thermal host), do not include any power consumed by the non-power production activities in your reported parasitic station power.	2,900 kW
	7c Electrical losses in interconnection transformers	23 kW
	7d Electrical losses in AC/DC conversion equipment, if any	0 kW
	7e Other interconnection losses in power lines or facilities (other than transformers and AC/DC conversion equipment) between the terminals of the generator(s) and the point of interconnection with the utility	0 kW
	7f Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	2,923.0 kW
	7g Maximum net power production capacity = 7a - 7f	3,477.0 kW
	<p>7h Description of facility and primary components: Describe the facility and its operation. Identify all boilers, heat recovery steam generators, prime movers (any mechanical equipment driving an electric generator), electrical generators, photovoltaic solar equipment, fuel cell equipment and/or other primary power generation equipment used in the facility. Descriptions of components should include (as applicable) specifications of the nominal capacities for mechanical output, electrical output, or steam generation of the identified equipment. For each piece of equipment identified, clearly indicate how many pieces of that type of equipment are included in the plant, and which components are normally operating or normally in standby mode. Provide a description of how the components operate as a system. Applicants for cogeneration facilities do not need to describe operations of systems that are clearly depicted on and easily understandable from a cogeneration facility's attached mass and heat balance diagram; however, such applicants should provide any necessary description needed to understand the sequential operation of the facility depicted in their mass and heat balance diagram. If additional space is needed, continue in the Miscellaneous section starting on page 19.</p> <p>The INEOS New Planet BioEnergy facility is designed to produce approximately eight million gallons of third generation bioethanol per year from renewable biomass including yard, wood, and vegetative materials and municipal solid wastes. The facility will also generate clean renewable power for sale to the Florida market.</p> <p>Operation Description: Renewable biomass material is gasified to produce syngas which is converted to ethanol in the fermentation section of the plant. A fermentation broth side stream is continuously fed forward to the distillation and dehydration section of the plant to produce fuel grade ethanol. Ethanol produced is stored in on-site tanks prior to shipment. Excess syngas not converted to ethanol, along with a landfill gas stream is sent to a vent gas boiler to produce high pressure steam for power generation in a steam turbine-generator set. In addition, the heat of combustion from the gasification process is converted into high pressure steam, also used for power generation.</p> <p>continued on page 19</p>	



SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

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Page 10 - Small Power Production

Information Required for Small Power Production Facility

If you indicated in line 1k that you are seeking qualifying small power production facility status for your facility, then you must respond to the items on this page. Otherwise, skip page 10.

Certification of Compliance with Size Limitations	<p>Pursuant to 18 C.F.R. § 292.204(a), the power production capacity of any small power production facility, together with the power production capacity of any other small power production facilities that use the same energy resource, are owned by the same person(s) or its affiliates, and are located at the same site, may not exceed 80 megawatts. To demonstrate compliance with this size limitation, or to demonstrate that your facility is exempt from this size limitation under the Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990 (Pub. L. 101-575, 104 Stat. 2834 (1990) as amended by Pub. L. 102-46, 105 Stat. 249 (1991)), respond to lines 8a through 8e below (as applicable).</p> <p>8a Identify any facilities with electrical generating equipment located within 1 mile of the electrical generating equipment of the instant facility, and for which any of the entities identified in lines 5a or 5b, or their affiliates, holds at least a 5 percent equity interest.</p> <p>Check here if no such facilities exist. <input checked="" type="checkbox"/></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Facility location (city or county, state)</th><th style="width:15%;">Root docket # (if any)</th><th style="width:35%;">Common owner(s)</th><th style="width:20%;">Maximum net power production capacity</th></tr> </thead> <tbody> <tr> <td>1) _____</td><td>QF - _____</td><td>_____</td><td>_____ kW</td></tr> <tr> <td>2) _____</td><td>QF - _____</td><td>_____</td><td>_____ kW</td></tr> <tr> <td>3) _____</td><td>QF - _____</td><td>_____</td><td>_____ kW</td></tr> </tbody> </table> <p><input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed</p> <p>8b The Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990 (Incentives Act) provides exemption from the size limitations in 18 C.F.R. § 292.204(a) for certain facilities that were certified prior to 1995. Are you seeking exemption from the size limitations in 18 C.F.R. § 292.204(a) by virtue of the Incentives Act?</p> <p><input type="checkbox"/> Yes (continue at line 8c below) <input checked="" type="checkbox"/> No (skip lines 8c through 8e)</p> <p>8c Was the original notice of self-certification or application for Commission certification of the facility filed on or before December 31, 1994? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>8d Did construction of the facility commence on or before December 31, 1999? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>8e If you answered No in line 8d, indicate whether reasonable diligence was exercised toward the completion of the facility, taking into account all factors relevant to construction? Yes <input type="checkbox"/> No <input type="checkbox"/> If you answered Yes, provide a brief narrative explanation in the Miscellaneous section starting on page 19 of the construction timeline (in particular, describe why construction started so long after the facility was certified) and the diligence exercised toward completion of the facility.</p>	Facility location (city or county, state)	Root docket # (if any)	Common owner(s)	Maximum net power production capacity	1) _____	QF - _____	_____	_____ kW	2) _____	QF - _____	_____	_____ kW	3) _____	QF - _____	_____	_____ kW
Facility location (city or county, state)	Root docket # (if any)	Common owner(s)	Maximum net power production capacity														
1) _____	QF - _____	_____	_____ kW														
2) _____	QF - _____	_____	_____ kW														
3) _____	QF - _____	_____	_____ kW														
Certification of Compliance with Fuel Use Requirements	<p>Pursuant to 18 C.F.R. § 292.204(b), qualifying small power production facilities may use fossil fuels, in minimal amounts, for only the following purposes: ignition; start-up; testing; flame stabilization; control use; alleviation or prevention of unanticipated equipment outages; and alleviation or prevention of emergencies, directly affecting the public health, safety, or welfare, which would result from electric power outages. The amount of fossil fuels used for these purposes may not exceed 25 percent of the total energy input of the facility during the 12-month period beginning with the date the facility first produces electric energy or any calendar year thereafter.</p> <p>9a Certification of compliance with 18 C.F.R. § 292.204(b) with respect to uses of fossil fuel:</p> <p><input checked="" type="checkbox"/> Applicant certifies that the facility will use fossil fuels exclusively for the purposes listed above.</p> <p>9b Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:</p> <p><input checked="" type="checkbox"/> Applicant certifies that the amount of fossil fuel used at the facility will not, in aggregate, exceed 25 percent of the total energy input of the facility during the 12-month period beginning with the date the facility first produces electric energy or any calendar year thereafter.</p>																



SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY



FERC Form 556

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Page 11 - Cogeneration Facilities

Information Required for Cogeneration Facility

If you indicated in line 1k that you are seeking qualifying cogeneration facility status for your facility, then you must respond to the items on pages 11 through 13. Otherwise, skip pages 11 through 13.

General Cogeneration Information	<p>Pursuant to 18 C.F.R. § 292.202(c), a cogeneration facility produces electric energy and forms of useful thermal energy (such as heat or steam) used for industrial, commercial, heating, or cooling purposes, through the sequential use of energy. Pursuant to 18 C.F.R. § 292.202(s), "sequential use" of energy means the following: (1) for a topping-cycle cogeneration facility, the use of reject heat from a power production process in sufficient amounts in a thermal application or process to conform to the requirements of the operating standard contained in 18 C.F.R. § 292.205(a); or (2) for a bottoming-cycle cogeneration facility, the use of at least some reject heat from a thermal application or process for power production.</p>		
	<p>10a What type(s) of cogeneration technology does the facility represent? (check all that apply)</p> <p><input type="checkbox"/> Topping-cycle cogeneration <input type="checkbox"/> Bottoming-cycle cogeneration</p>		
	<p>10b To help demonstrate the sequential operation of the cogeneration process, and to support compliance with other requirements such as the operating and efficiency standards, include with your filing a mass and heat balance diagram depicting average annual operating conditions. This diagram must include certain items and meet certain requirements, as described below. You must check next to the description of each requirement below to certify that you have complied with these requirements.</p>		
	<p>Check to certify compliance with indicated requirement</p>	<p>Requirement</p>	
	<input type="checkbox"/>	Diagram must show orientation within system piping and/or ducts of all prime movers, heat recovery steam generators, boilers, electric generators, and condensers (as applicable), as well as any other primary equipment relevant to the cogeneration process.	
	<input type="checkbox"/>	Any average annual values required to be reported in lines 10b, 12a, 13a, 13b, 13d, 13f, 14a, 15b, 15d and/or 15f must be computed over the anticipated hours of operation.	
	<input type="checkbox"/>	Diagram must specify all fuel inputs by fuel type and average annual rate in Btu/h. Fuel for supplementary firing should be specified separately and clearly labeled. All specifications of fuel inputs should use lower heating values.	
	<input type="checkbox"/>	Diagram must specify average gross electric output in kW or MW for each generator.	
	<input type="checkbox"/>	Diagram must specify average mechanical output (that is, any mechanical energy taken off of the shaft of the prime movers for purposes not directly related to electric power generation) in horsepower, if any. Typically, a cogeneration facility has no mechanical output.	
	<input type="checkbox"/>	At each point for which working fluid flow conditions are required to be specified (see below), such flow condition data must include mass flow rate (in lb/h or kg/s), temperature (in °F, R, °C or K), absolute pressure (in psia or kPa) and enthalpy (in Btu/lb or kJ/kg). Exception: For systems where the working fluid is liquid only (no vapor at any point in the cycle) and where the type of liquid and specific heat of that liquid are clearly indicated on the diagram or in the Miscellaneous section starting on page 19, only mass flow rate and temperature (not pressure and enthalpy) need be specified. For reference, specific heat at standard conditions for pure liquid water is approximately 1.002 Btu/(lb*°R) or 4.195 kJ/(kg*°K).	
<input type="checkbox"/>	Diagram must specify working fluid flow conditions at input to and output from each steam turbine or other expansion turbine or back-pressure turbine.		
<input type="checkbox"/>	Diagram must specify working fluid flow conditions at delivery to and return from each thermal application.		
<input type="checkbox"/>	Diagram must specify working fluid flow conditions at make-up water inputs.		

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 12 - Cogeneration Facilities

EPA 2005 Requirements for Fundamental Use of Energy Output from Cogeneration Facilities	<p>EPA 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPA 2005) established a new section 210(n) of the Public Utility Regulatory Policies Act of 1978 (PURPA), 16 USC 824a-3(n), with additional requirements for any qualifying cogeneration facility that (1) is seeking to sell electric energy pursuant to section 210 of PURPA and (2) was either not a cogeneration facility on August 8, 2005, or had not filed a self-certification or application for Commission certification of QF status on or before February 1, 2006. These requirements were implemented by the Commission in 18 C.F.R. § 292.205(d). Complete the lines below, carefully following the instructions, to demonstrate whether these additional requirements apply to your cogeneration facility and, if so, whether your facility complies with such requirements.</p>		
	<p>11a Was your facility operating as a qualifying cogeneration facility on or before August 8, 2005? Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
	<p>11b Was the initial filing seeking certification of your facility (whether a notice of self-certification or an application for Commission certification) filed on or before February 1, 2006? Yes <input type="checkbox"/> No <input type="checkbox"/></p>		
	<p>If the answer to either line 11a or 11b is Yes, then continue at line 11c below. Otherwise, if the answers to both lines 11a and 11b are No, skip to line 11e below.</p>		
	<p>11c With respect to the design and operation of the facility, have any changes been implemented on or after February 2, 2006 that affect general plant operation, affect use of thermal output, and/or increase net power production capacity from the plant's capacity on February 1, 2006?</p> <p><input type="checkbox"/> Yes (continue at line 11d below)</p> <p><input type="checkbox"/> No. Your facility is not subject to the requirements of 18 C.F.R. § 292.205(d) at this time. However, it may be subject to these requirements in the future if changes are made to the facility. At such time, the applicant would need to recertify the facility to determine eligibility. Skip lines 11d through 11j.</p>		
	<p>11d Does the applicant contend that the changes identified in line 11c are not so significant as to make the facility a "new" cogeneration facility that would be subject to the 18 C.F.R. § 292.205(d) cogeneration requirements?</p> <p><input type="checkbox"/> Yes. Provide in the Miscellaneous section starting on page 19 a description of any relevant changes made to the facility (including the purpose of the changes) and a discussion of why the facility should not be considered a "new" cogeneration facility in light of these changes. Skip lines 11e through 11j.</p> <p><input type="checkbox"/> No. Applicant stipulates to the fact that it is a "new" cogeneration facility (for purposes of determining the applicability of the requirements of 18 C.F.R. § 292.205(d)) by virtue of modifications to the facility that were initiated on or after February 2, 2006. Continue below at line 11e.</p>		
	<p>11e Will electric energy from the facility be sold pursuant to section 210 of PURPA?</p> <p><input type="checkbox"/> Yes. The facility is an EPA 2005 cogeneration facility. You must demonstrate compliance with 18 C.F.R. § 292.205(d)(2) by continuing at line 11f below.</p> <p><input type="checkbox"/> No. Applicant certifies that energy will not be sold pursuant to section 210 of PURPA. Applicant also certifies its understanding that it must recertify its facility in order to determine compliance with the requirements of 18 C.F.R. § 292.205(d) before selling energy pursuant to section 210 of PURPA in the future. Skip lines 11f through 11j.</p>		
<p>11f Is the net power production capacity of your cogeneration facility, as indicated in line 7g above, less than or equal to 5,000 kW?</p> <p><input type="checkbox"/> Yes, the net power production capacity is less than or equal to 5,000 kW. 18 C.F.R. § 292.205(d)(4) provides a rebuttable presumption that cogeneration facilities of 5,000 kW and smaller capacity comply with the requirements for fundamental use of the facility's energy output in 18 C.F.R. § 292.205(d)(2). Applicant certifies its understanding that, should the power production capacity of the facility increase above 5,000 kW, then the facility must be recertified to (among other things) demonstrate compliance with 18 C.F.R. § 292.205(d)(2). Skip lines 11g through 11j.</p> <p><input type="checkbox"/> No, the net power production capacity is greater than 5,000 kW. Demonstrate compliance with the requirements for fundamental use of the facility's energy output in 18 C.F.R. § 292.205(d)(2) by continuing on the next page at line 11g.</p>			

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 13 - Cogeneration Facilities

EPAct 2005 Requirements for Fundamental Use of Energy Output from Cogeneration Facilities (continued)	<p>Lines 11g through 11k below guide the applicant through the process of demonstrating compliance with the requirements for "fundamental use" of the facility's energy output. 18 C.F.R. § 292.205(d)(2). Only respond to the lines on this page if the instructions on the previous page direct you to do so. Otherwise, skip this page.</p> <p>18 C.F.R. § 292.205(d)(2) requires that the electrical, thermal, chemical and mechanical output of an EPAct 2005 cogeneration facility is used fundamentally for industrial, commercial, residential or institutional purposes and is not intended fundamentally for sale to an electric utility, taking into account technological, efficiency, economic, and variable thermal energy requirements, as well as state laws applicable to sales of electric energy from a qualifying facility to its host facility. If you were directed on the previous page to respond to the items on this page, then your facility is an EPAct 2005 cogeneration facility that is subject to this "fundamental use" requirement.</p> <p>The Commission's regulations provide a two-pronged approach to demonstrating compliance with the requirements for fundamental use of the facility's energy output. First, the Commission has established in 18 C.F.R. § 292.205(d)(3) a "fundamental use test" that can be used to demonstrate compliance with 18 C.F.R. § 292.205(d)(2). Under the fundamental use test, a facility is considered to comply with 18 C.F.R. § 292.205(d)(2) if at least 50 percent of the facility's total annual energy output (including electrical, thermal, chemical and mechanical energy output) is used for industrial, commercial, residential or institutional purposes.</p> <p>Second, an applicant for a facility that does not pass the fundamental use test may provide a narrative explanation of and support for its contention that the facility nonetheless meets the requirement that the electrical, thermal, chemical and mechanical output of an EPAct 2005 cogeneration facility is used fundamentally for industrial, commercial, residential or institutional purposes and is not intended fundamentally for sale to an electric utility, taking into account technological, efficiency, economic, and variable thermal energy requirements, as well as state laws applicable to sales of electric energy from a qualifying facility to its host facility.</p> <p>Complete lines 11g through 11j below to determine compliance with the fundamental use test in 18 C.F.R. § 292.205(d)(3). Complete lines 11g through 11j even if you do not intend to rely upon the fundamental use test to demonstrate compliance with 18 C.F.R. § 292.205(d)(2).</p>	
	11g Amount of electrical, thermal, chemical and mechanical energy output (net of internal generation plant losses and parasitic loads) expected to be used annually for industrial, commercial, residential or institutional purposes and not sold to an electric utility	MWh
	11h Total amount of electrical, thermal, chemical and mechanical energy expected to be sold to an electric utility	MWh
	11i Percentage of total annual energy output expected to be used for industrial, commercial, residential or institutional purposes and not sold to a utility $= 100 * 11g / (11g + 11h)$	%
	11j Is the response in line 11i greater than or equal to 50 percent? <div style="margin-top: 10px;"> <p>Yes. Your facility complies with 18 C.F.R. § 292.205(d)(2) by virtue of passing the fundamental use test provided in 18 C.F.R. § 292.205(d)(3). Applicant certifies its understanding that, if it is to rely upon passing the fundamental use test as a basis for complying with 18 C.F.R. § 292.205(d)(2), then the facility must comply with the fundamental use test both in the 12-month period beginning with the date the facility first produces electric energy, and in all subsequent calendar years.</p> <p>No. Your facility does not pass the fundamental use test. Instead, you must provide in the Miscellaneous section starting on page 19 a narrative explanation of and support for why your facility meets the requirement that the electrical, thermal, chemical and mechanical output of an EPAct 2005 cogeneration facility is used fundamentally for industrial, commercial, residential or institutional purposes and is not intended fundamentally for sale to an electric utility, taking into account technological, efficiency, economic, and variable thermal energy requirements, as well as state laws applicable to sales of electric energy from a QF to its host facility. Applicants providing a narrative explanation of why their facility should be found to comply with 18 C.F.R. § 292.205(d)(2) in spite of non-compliance with the fundamental use test may want to review paragraphs 47 through 61 of Order No. 671 (accessible from the Commission's QF website at www.ferc.gov/QF), which provide discussion of the facts and circumstances that may support their explanation. Applicant should also note that the percentage reported above will establish the standard that that facility must comply with, both for the 12-month period beginning with the date the facility first produces electric energy, and in all subsequent calendar years. See Order No. 671 at paragraph 51. As such, the applicant should make sure that it reports appropriate values on lines 11g and 11h above to serve as the relevant annual standard, taking into account expected variations in production conditions.</p> </div>	



SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

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Page 14 - Topping-Cycle Cogeneration Facilities

Information Required for Topping-Cycle Cogeneration Facility

If you indicated in line 10a that your facility represents topping-cycle cogeneration technology, then you must respond to the items on pages 14 and 15. Otherwise, skip pages 14 and 15.

Usefulness of Topping-Cycle Thermal Output	<p>The thermal energy output of a topping-cycle cogeneration facility is the net energy made available to an industrial or commercial process or used in a heating or cooling application. Pursuant to sections 292.202(c), (d) and (h) of the Commission's regulations (18 C.F.R. §§ 292.202(c), (d) and (h)), the thermal energy output of a qualifying topping-cycle cogeneration facility must be useful. In connection with this requirement, describe the thermal output of the topping-cycle cogeneration facility by responding to lines 12a and 12b below.</p>		
	<p>12a Identify and describe each thermal host, and specify the annual average rate of thermal output made available to each host for each use. For hosts with multiple uses of thermal output, provide the data for each use in separate rows.</p>		
	Name of entity (thermal host) taking thermal output	Thermal host's relationship to facility; Thermal host's use of thermal output	Average annual rate of thermal output attributable to use (net of heat contained in process return or make-up water)
	1)	<div>Select thermal host's relationship to facility</div> <div>Select thermal host's use of thermal output</div>	Btu/h
	2)	<div>Select thermal host's relationship to facility</div> <div>Select thermal host's use of thermal output</div>	Btu/h
	3)	<div>Select thermal host's relationship to facility</div> <div>Select thermal host's use of thermal output</div>	Btu/h
	4)	<div>Select thermal host's relationship to facility</div> <div>Select thermal host's use of thermal output</div>	Btu/h
	5)	<div>Select thermal host's relationship to facility</div> <div>Select thermal host's use of thermal output</div>	Btu/h
	6)	<div>Select thermal host's relationship to facility</div> <div>Select thermal host's use of thermal output</div>	Btu/h
	<p><input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed</p>		
<p>12b Demonstration of usefulness of thermal output: At a minimum, provide a brief description of each use of the thermal output identified above. In some cases, this brief description is sufficient to demonstrate usefulness. However, if your facility's use of thermal output is not common, and/or if the usefulness of such thermal output is not reasonably clear, then you must provide additional details as necessary to demonstrate usefulness. Your application may be rejected and/or additional information may be required if an insufficient showing of usefulness is made. (Exception: If you have previously received a Commission certification approving a specific use of thermal output related to the instant facility, then you need only provide a brief description of that use and a reference by date and docket number to the order certifying your facility with the indicated use. Such exemption may not be used if any change creates a material deviation from the previously authorized use.) If additional space is needed, continue in the Miscellaneous section starting on page 19.</p>			









SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 15 - Topping-Cycle Cogeneration Facilities

Topping-Cycle Operating and Efficiency Value Calculation	<p>Applicants for facilities representing topping-cycle technology must demonstrate compliance with the topping-cycle operating standard and, if applicable, efficiency standard. Section 292.205(a)(1) of the Commission's regulations (18 C.F.R. § 292.205(a)(1)) establishes the operating standard for topping-cycle cogeneration facilities: the useful thermal energy output must be no less than 5 percent of the total energy output. Section 292.205(a)(2) (18 C.F.R. § 292.205(a)(2)) establishes the efficiency standard for topping-cycle cogeneration facilities for which installation commenced on or after March 13, 1980: the useful power output of the facility plus one-half the useful thermal energy output must (A) be no less than 42.5 percent of the total energy input of natural gas and oil to the facility; and (B) if the useful thermal energy output is less than 15 percent of the total energy output of the facility, be no less than 45 percent of the total energy input of natural gas and oil to the facility. To demonstrate compliance with the topping-cycle operating and/or efficiency standards, or to demonstrate that your facility is exempt from the efficiency standard based on the date that installation commenced, respond to lines 13a through 13l below.</p> <p>If you indicated in line 10a that your facility represents both topping-cycle and bottoming-cycle cogeneration technology, then respond to lines 13a through 13l below considering only the energy inputs and outputs attributable to the topping-cycle portion of your facility. Your mass and heat balance diagram must make clear which mass and energy flow values and system components are for which portion (topping or bottoming) of the cogeneration system.</p>		
	13a Indicate the annual average rate of useful thermal energy output made available to the host(s), net of any heat contained in condensate return or make-up water	Btu/h	
	13b Indicate the annual average rate of net electrical energy output	kW	
	13c Multiply line 13b by 3,412 to convert from kW to Btu/h	Btu/h	
	13d Indicate the annual average rate of mechanical energy output taken directly off of the shaft of a prime mover for purposes not directly related to power production (this value is usually zero)	hp	
	13e Multiply line 13d by 2,544 to convert from hp to Btu/h	Btu/h	
	13f Indicate the annual average rate of energy input from natural gas and oil	Btu/h	
	13g Topping-cycle operating value = $100 * 13a / (13a + 13c + 13e)$	%	
	13h Topping-cycle efficiency value = $100 * (0.5 * 13a + 13c + 13e) / 13f$	%	
	13i Compliance with operating standard: Is the operating value shown in line 13g greater than or equal to 5%? <input type="checkbox"/> Yes (complies with operating standard) <input type="checkbox"/> No (does not comply with operating standard)		
	13j Did installation of the facility in its current form commence on or after March 13, 1980? <input type="checkbox"/> Yes. Your facility is subject to the efficiency requirements of 18 C.F.R. § 292.205(a)(2). Demonstrate compliance with the efficiency requirement by responding to line 13k or 13l, as applicable, below. <input type="checkbox"/> No. Your facility is exempt from the efficiency standard. Skip lines 13k and 13l.		
	13k Compliance with efficiency standard (for low operating value): If the operating value shown in line 13g is less than 15%, then indicate below whether the efficiency value shown in line 13h greater than or equal to 45%: <input type="checkbox"/> Yes (complies with efficiency standard) <input type="checkbox"/> No (does not comply with efficiency standard)		
	13l Compliance with efficiency standard (for high operating value): If the operating value shown in line 13g is greater than or equal to 15%, then indicate below whether the efficiency value shown in line 13h is greater than or equal to 42.5%: <input type="checkbox"/> Yes (complies with efficiency standard) <input type="checkbox"/> No (does not comply with efficiency standard)		

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 16 - Bottoming-Cycle Cogeneration Facilities

Information Required for Bottoming-Cycle Cogeneration Facility

If you indicated in line 10a that your facility represents bottoming-cycle cogeneration technology, then you must respond to the items on pages 16 and 17. Otherwise, skip pages 16 and 17.

Usefulness of Bottoming-Cycle Thermal Output	<p>The thermal energy output of a bottoming-cycle cogeneration facility is the energy related to the process(es) from which at least some of the reject heat is then used for power production. Pursuant to sections 292.202(c) and (e) of the Commission's regulations (18 C.F.R. § 292.202(c) and (e)), the thermal energy output of a qualifying bottoming-cycle cogeneration facility must be useful. In connection with this requirement, describe the process(es) from which at least some of the reject heat is used for power production by responding to lines 14a and 14b below.</p>		
	<p>14a Identify and describe each thermal host and each bottoming-cycle cogeneration process engaged in by each host. For hosts with multiple bottoming-cycle cogeneration processes, provide the data for each process in separate rows.</p>		
	<p>Name of entity (thermal host) performing the process from which at least some of the reject heat is used for power production</p>	<p>Thermal host's relationship to facility; Thermal host's process type</p>	<p>Has the energy input to the thermal host been augmented for purposes of increasing power production capacity? (if Yes, describe on p. 19)</p>
	1)	<div style="border: 1px solid black; padding: 2px;">Select thermal host's relationship to facility</div> <div style="border: 1px solid black; padding: 2px;">Select thermal host's process type</div>	Yes <input type="checkbox"/> No <input type="checkbox"/>
	2)	<div style="border: 1px solid black; padding: 2px;">Select thermal host's relationship to facility</div> <div style="border: 1px solid black; padding: 2px;">Select thermal host's process type</div>	Yes <input type="checkbox"/> No <input type="checkbox"/>
	3)	<div style="border: 1px solid black; padding: 2px;">Select thermal host's relationship to facility</div> <div style="border: 1px solid black; padding: 2px;">Select thermal host's process type</div>	Yes <input type="checkbox"/> No <input type="checkbox"/>
	<p><input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed</p>		
<p>14b Demonstration of usefulness of thermal output: At a minimum, provide a brief description of each process identified above. In some cases, this brief description is sufficient to demonstrate usefulness. However, if your facility's process is not common, and/or if the usefulness of such thermal output is not reasonably clear, then you must provide additional details as necessary to demonstrate usefulness. Your application may be rejected and/or additional information may be required if an insufficient showing of usefulness is made. (Exception: If you have previously received a Commission certification approving a specific bottoming-cycle process related to the instant facility, then you need only provide a brief description of that process and a reference by date and docket number to the order certifying your facility with the indicated process. Such exemption may not be used if any material changes to the process have been made.) If additional space is needed, continue in the Miscellaneous section starting on page 19.</p>			



SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556	PUBLIC (REDACTED)	Page 17 - Bottoming-Cycle Cogeneration Facilities
Bottoming-Cycle Operating and Efficiency Value Calculation	<p>Applicants for facilities representing bottoming-cycle technology and for which installation commenced on or after March 13, 1990 must demonstrate compliance with the bottoming-cycle efficiency standards. Section 292.205(b) of the Commission's regulations (18 C.F.R. § 292.205(b)) establishes the efficiency standard for bottoming-cycle cogeneration facilities: the useful power output of the facility must be no less than 45 percent of the energy input of natural gas and oil for supplementary firing. To demonstrate compliance with the bottoming-cycle efficiency standard (if applicable), or to demonstrate that your facility is exempt from this standard based on the date that installation of the facility began, respond to lines 15a through 15h below.</p> <p>If you indicated in line 10a that your facility represents both topping-cycle and bottoming-cycle cogeneration technology, then respond to lines 15a through 15h below considering only the energy inputs and outputs attributable to the bottoming-cycle portion of your facility. Your mass and heat balance diagram must make clear which mass and energy flow values and system components are for which portion of the cogeneration system (topping or bottoming).</p>	
	<p>15a Did installation of the facility in its current form commence on or after March 13, 1990?</p> <p><input type="checkbox"/> Yes. Your facility is subject to the efficiency requirement of 18 C.F.R. § 292.205(b). Demonstrate compliance with the efficiency requirement by responding to lines 15b through 15h below.</p> <p><input type="checkbox"/> No. Your facility is exempt from the efficiency standard. Skip the rest of page 17.</p>	
	15b Indicate the annual average rate of net electrical energy output	kW
	15c Multiply line 15b by 3,412 to convert from kW to Btu/h	Btu/h
	15d Indicate the annual average rate of mechanical energy output taken directly off of the shaft of a prime mover for purposes not directly related to power production (this value is usually zero)	hp
	15e Multiply line 15d by 2,544 to convert from hp to Btu/h	Btu/h
	15f Indicate the annual average rate of supplementary energy input from natural gas or oil	Btu/h
	15g Bottoming-cycle efficiency value = $100 * (15c + 15e) / 15f$	%
	<p>15h Compliance with efficiency standard: Indicate below whether the efficiency value shown in line 15g is greater than or equal to 45%:</p> <p><input type="checkbox"/> Yes (complies with efficiency standard) <input type="checkbox"/> No (does not comply with efficiency standard)</p>	

SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 18 - All Facilities

Certificate of Completeness, Accuracy and Authority

Applicant must certify compliance with and understanding of filing requirements by checking next to each item below and signing at the bottom of this section. Forms with incomplete Certificates of Completeness, Accuracy and Authority will be rejected by the Secretary of the Commission.

Signer identified below certifies the following: (check all items and applicable subitems)

- ☒ He or she has read the filing, including any information contained in any attached documents, such as cogeneration mass and heat balance diagrams, and any information contained in the Miscellaneous section starting on page 19, and knows its contents.
- ☒ He or she has provided all of the required information for certification, and the provided information is true as stated, to the best of his or her knowledge and belief.
- ☒ He or she possess full power and authority to sign the filing; as required by Rule 2005(a)(3) of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2005(a)(3)), he or she is one of the following: (check one)
 - ☐ The person on whose behalf the filing is made
 - ☒ An officer of the corporation, trust, association, or other organized group on behalf of which the filing is made
 - ☐ An officer, agent, or employee of the governmental authority, agency, or instrumentality on behalf of which the filing is made
 - ☐ A representative qualified to practice before the Commission under Rule 2101 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2101) and who possesses authority to sign
- ☒ He or she has reviewed all automatic calculations and agrees with their results, unless otherwise noted in the Miscellaneous section starting on page 19.
- ☒ He or she has provided a copy of this Form 556 and all attachments to the utilities with which the facility will interconnect and transact (see lines 4a through 4d), as well as to the regulatory authorities of the states in which the facility and those utilities reside. See the Required Notice to Public Utilities and State Regulatory Authorities section on page 3 for more information.

Provide your signature, address and signature date below. Rule 2005(c) of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2005(c)) provides that persons filing their documents electronically may use typed characters representing his or her name to sign the filed documents. A person filing this document electronically should sign (by typing his or her name) in the space provided below.

Your Signature

Your address

Date

Dan Cummings

Same as applicant

02/28/2012

Audit Notes

Commission Staff Use Only:



SECTION 4. APPENDIX N

FORM 556, CERTIFICATION OF QUALIFYING FACILITY (QF) STATUS FOR A SMALL POWER PRODUCTION OR COGENERATION FACILITY

FERC Form 556

PUBLIC (REDACTED)

Page 19 - All Facilities

Miscellaneous

Use this space to provide any information for which there was not sufficient space in the previous sections of the form to provide. For each such item of information clearly identify the line number that the information belongs to. You may also use this space to provide any additional information you believe is relevant to the certification of your facility.

Your response below is not limited to one page. Additional page(s) will automatically be inserted into this form if the length of your response exceeds the space on this page. Use as many pages as you require.

Further information in response to energy input item 6a)

The total energy input for power generation will be derived from a combination of various cellulosic biomass materials including: vegetative, yard, and wood wastes, and municipal solid waste, and (up to 50%) landfill gas.

Continued from #7h:

Both of these high pressure steam sources are sent to a steam turbine generator to produce electricity to sustain plant operations, with excess available for export.

Equipment Descriptions

Vent Gas Boiler: 1 item; continuous operation

Steam Produced = 56,440 #/hr @ 610psig; 780F = 1396 Btu/# = 78.790 MMBtu/hr

Waste Heat Recovery: 2 identical trains ; continuous operation

Primary syngas cooler

Syngas BFW preheater

HP Steam Drum

Steam Produced (each train) = 15,225 #/hr @ 610psig; 488F = 1189Btu/# = 18.103 MMBtu/hr

Total = 36.205 MMBtu/hr

Steam Turbine: 1 item; continuous operation

Rated generation capacity of 6.36 MW

[Table of Contents](#)