



# State of New Jersey

CHRIS CHRISTIE  
*Governor*

DEPARTMENT of ENVIRONMENTAL PROTECTION  
AIR QUALITY, ENERGY AND SUSTAINABILITY  
Division of Air Quality  
Bureau of Stationary Sources  
401 E. State Street, 2<sup>nd</sup> floor, P.O. Box 420, Mail Code 401-02  
Trenton, NJ 08625-0420

BOB MARTIN  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

## Air Pollution Control Operating Permit Significant Modification and Preconstruction Approval

**Permit Activity Number: BOP160001**

**Program Interest Number: 08857**

Mailing Address	Plant Location
ROBERT HALEY PROJECTS GENERAL MANAGER NEWARK ENERGY CENTER LLC 955 DELANCY ST Newark, NJ 07105	NEWARK ENERGY CENTER 955 Delancy St Newark Essex County

**Initial Operating Permit Approval Date:** November 1, 2012  
**Significant Modification Approval Date:** DRAFT  
**Operating Permit Expiration Date:** October 31, 2017

This significant modification is approved and issued under the authority of Chapter 106, P.L. 1967 (N.J.S.A. 26:2C-9.2). The equipment at the facility must be operated in accordance with the requirements of this permit.

This approval, in response to your application, merges the provisions of the previously approved operating permit and the changes from this significant modification into a single comprehensive permit that replaces the one previously issued. This significant modification makes the following changes to the operating permit:

1. Remove FC REF#16 as NEC has provided all funds to the city of Newark and no longer has any control or knowledge of those funds.
2. Remove (2) Ammonia Storage Tanks (IS2) from permit as they are exempt from permitting as per the definition of "exempt activity" at N.J.A.C. 7:27-22.1.
3. Change the compliance monitoring calculation for annual VOC, TSP, PM-10 and PM2.5 emission limits to be based on actual emission rates from the latest stack test performed, rather than on the maximum emission rate permitted.
4. Change the compliance monitoring calculation for annual SO2 emission limits to be based on emission rates calculated from the latest monthly natural gas sulfur test, rather than on the maximum emission rate permitted.
5. Replace continuous monitoring of CO2 emissions with continuous monitoring using certified fuel flow meters and calculations based on Equation G-4 of 40 CFR Part 75.
6. Recalculate CO2 and greenhouse gas emission (GHG) limitations in the permit using the following:
  - Use 40 CFR 75, equation G-4 to calculate CO2 and GHG emissions. This will make the permit limits consistent with the new CO2 monitoring method.
  - Updated Global Warming Potentials for methane and nitrous oxide (from 40 CFR 98, table A-1)
7. Remove CO2 lb/hr emission limits from the permit as there is no reporting threshold for CO2 lb/hr emissions. CO2 ton per year emission limit remain in the permit.
8. Remove the restriction on firing the duct burners at temperatures below 59 degrees Fahrenheit.
9. Change the lower limit of the selective catalytic reduction (SCR) operating temperature range from 550 degrees F to 400 degrees F, consistent with the operation and maintenance manual for the SCR system.

10. Clarify that the control efficiency of the SCR system should have a design value of 90% or greater. Delete exemption during start-up and shut down as design value does not change.
11. Change the lower limit of the catalytic oxidizer (CO) catalyst operating temperature range from 550 degrees F to 350 degrees F, consistent with the manufacturer's guidelines for the catalyst used.
12. Remove New Source Performance Standards (NSPS) conditions which require the installation and operation of a continuous opacity monitoring system from the operating permit since these requirements do not apply to this facility. The facility will demonstrate compliance with the opacity limits using Method 9, pursuant to 40 CFR 60.11(b).
13. Combine NSPS Subpart KKKK emission limits into one permit condition and clarify that, pursuant to Subpart KKKK, compliance must be demonstrated with either the ppm@15% O2 limit or the lb/MW-hr limit, not with both of these limits.
14. Remove Clean Air Interstate Rule (CAIR) requirements from Permit and replace with Cross State Air Pollution Rule (CSAPR) requirements.
15. Delete the submittal requirement for Ammonia permit limits as that requirement is for monitoring with a continuous emission monitor, not a continuous process monitor, as is required for Ammonia.
16. Replace continuous monitoring requirement for heat input to emergency engines with manufacturer's design specification.
17. Change the definition of "Hot Start-up" to include a start-up that occurs after the turbine has been shut down for less than 8 hours. The current permit defines a hot start-up as a start-up that occurs after the turbine has been shut down for more than 4 hours but less than 8 hours.
18. Add a limit on the number of cold start-ups, warm/hot start-ups and shutdowns that the turbine can make during any 365 day period. This limit is consistent with the number of start-ups and shutdowns assumed for permitted emission limit calculations and for modelling.
19. Break up the current startup/shutdown operating scenarios (OS5 and OS6) into separate operating scenarios for Cold, Warm and Hot Start-up and Shut down of CT1 and CT2 (OS5 thru OS12). Renumber the Auxilliary Boiler operating scenario from "OS7" to "OS13".
20. Require CEMs monitoring of the NOx and CO emissions during start-up and shut down in order to demonstrate compliance with the applicable emission limits.
21. Add a requirement to continuously monitor the Oxidation Reduction Potential of the cooling tower water.
22. Reduce the maximum heat input of the auxilliary boiler from 66.2 MMBtu/hr to 60.6 MMBtu/hr; adjust fuel use and emission limits to reflect the lower heat input.
23. Include a compliance schedule that requires installation and commissioning of the auxiliary boiler NOx burner by January 6, 2017, in accordance with NEA-150003-08857 and requires the auxilliary boiler to be stack tested within 180 days of commencement of operation of the auxiliary boiler with the new NOx burner, in order to demonstrate compliance with the applicable permit limits.

Equipment at the facility referenced by this significant modification **is covered** by the permit shield, pursuant to the provisions of N.J.A.C. 7:27-22.17. Pursuant to N.J.A.C. 7:27-22.33(e), this significant modification consists of both a preconstruction approval and operating permit approval. This operating permit does not include compliance schedules as part of the approved compliance plan.

The permittee shall submit to the Department and to the EPA a periodic compliance certification, in accordance with N.J.A.C. 7:27-22.19. The certification shall be submitted electronically through the NJDEP online web portal – Periodic Compliance Certification service, and shall be certified pursuant to N.J.A.C. 7:27-1.39 by the responsible official. Access to DEP Online shall be obtained by following the instructions at: <http://www.state.nj.us/dep/online/>. The certification should be printed for submission to EPA at the address below. The schedule for compliance certifications set forth in the compliance plan in this operating permit. The annual compliance certification reporting period will cover the calendar year ending December 31. **The annual compliance certification is due to the Department and the EPA within 60 days after the end of each calendar year during which this permit was in effect.**

The annual compliance certification report may also be considered as your six month deviation report for the period from July 1 through December 31 which is due by January 30 of each year, as required by paragraph 13 in Section

E, *General Provisions and Authorities*, of this permit, if the annual compliance certification is submitted by January 30.

Your facility's current approved operating permit and any previous versions (e.g. superseded, expired, or terminated) are now available for download in the PDF format at: <http://www.nj.gov/dep/aqpp/>. After accessing the website, click on "Approved Operating Permits" listed under "Reports" and then type in the Program Interested (PI) Number as instructed on the screen. A RADIUS file for your permit, containing Facility Specific Requirements (Compliance Plan), Inventories, and Compliance Schedules (if needed), can be obtained by contacting your permit writer. Upon importing this information into your personal computer with RADIUS software, you will have up-to-date information in RADIUS format. RADIUS software, instructions, and help are available at the Department's website at [www.state.nj.us/dep/aqpp/](http://www.state.nj.us/dep/aqpp/). We also have an Operating Permit Help Line available from 9:00 AM to 4:00 PM daily, where you may speak to someone about any questions you may have. The Operating Permit Help Line number is 609-633-8248.

If, in your judgment, the Department is imposing any unreasonable condition of approval in this permit modification action, you may contest the Department's decision on the modification and request an adjudicatory hearing pursuant to N.J.S.A. 52:14b-1 et seq. and N.J.A.C. 7:27-22.32(a). All requests for an adjudicatory hearing must be received in writing by the Department within 20 calendar days of the date you receive this letter. The request must contain the information requested in N.J.A.C. 7:27-1.32 and the information on the enclosed Administrative Hearing Request Checklist and Tracking Form.

The permittee is responsible for submitting a timely and administratively complete operating permit renewal application. The Operating Permit Renewal Application consists of a RADIUS application and the Application Attachment available in Portable Document Format (PDF) and MS Word format at the Department's website <http://www.nj.gov/dep/aqpp/applying.html> (check Attachment to the RADIUS Operating Permit Renewal Application). Both the RADIUS application and the Application Attachment, along with any other supporting documents must be submitted using the Department's Portal at: <http://njdeponline.com/>. The application is considered timely if it is received at least 12 months before the expiration date of the operating permit. To be deemed administratively complete, an application for renewal of the operating permit shall include all of the information required by the application form for the renewal and the information required pursuant to N.J.A.C. 7:27-22.30(d). However, consistent with N.J.A.C. 7:27-22.30(c), the permittee is encouraged to submit the renewal application at least 15 months prior to expiration of the operating permit, so that the Department can notify the applicant of any deficiencies in the application. This will allow the permittee to correct any deficiencies, and to better ensure that the application is administratively complete by the renewal deadline. Only applications which are timely and administratively complete will be eligible for coverage by an application shield.

Permittees that are subject to Compliance Assurance Monitoring (CAM), pursuant to 40 CFR 64, shall develop a CAM Plan for modified equipment as well as existing sources. Details of the rule and guidance on how to prepare a plan can be found at EPA's website: [www.epa.gov/ttn/emc/cam.html](http://www.epa.gov/ttn/emc/cam.html). In addition, CAM Plans must be included as part of the permit renewal application. Permittees that do not submit a CAM Plan may have their modification applications denied, pursuant to N.J.A.C. 7:27-22.3.

If you have any questions regarding this permit approval, please call your permit writer, Michael Hogan, at (609) 633-1124.

Approved by:

\_\_\_\_\_  
David Owen  
Bureau of Stationary Sources

Enclosure

CC: S. Riva  
United States Environmental Protection Agency, Region II  
Air Compliance Branch  
290 Broadway  
New York, New York 10007-1866

## Administrative Hearing Request Checklist and Tracking Form

### I. Document Being Appealed

Name of the Facility	Program Interest (PI) Number	Permit Activity Number	Issuance Date
NEWARK ENERGY CENTER	08857	BOP160001	

### II. Contact Information

Name of Person Requesting Hearing	Name of Attorney (if applicable)
<b>Address:</b>	<b>Address:</b>
<b>Telephone:</b>	<b>Telephone:</b>

### III. Please include the following information as part of your request:

- A. The date the permittee received the permit decision,
- B. One printed and two PDF (or scanned) copies of the document being appealed saved on two CDs – for submitting to address 1 below;  
A PDF (or scanned) copy of all documents being submitted to the Office of Legal Affairs saved on a CD – for submitting to address 2 below;
- C. The legal and factual questions you are appealing;
- D. A statement as to whether or not you raised each legal and factual issues during the permit application process;
- E. Suggested revised or alternative permit conditions;
- F. An estimate of the time required for the hearing;
- G. A request, if necessary, for a barrier-free hearing location for physically disabled persons;
- H. A clear indication of any willingness to negotiate a settlement with the Department prior to the Departments processing of your hearing request to the Office of Administrative Law;

Mail this form, completed, signed and dated with all of the information listed above, including attachment, to:

1. New Jersey Department of Environmental Protection  
Office of Legal Affairs  
Attention: Adjudicatory Hearing Requests  
401 E. State Street, P.O. Box 402  
Trenton, New Jersey 08625-0402
  
2. Mr. Bachir Bouzid  
Bureau of Stationary Sources  
New Jersey Department of Environmental Protection  
401 E. State Street, 2nd Floor, P.O. Box 420, Mail Code 401-02  
Trenton, New Jersey 08625-0420  
Phone: (609) 633-2829

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Date**

## Administrative Hearing Request Checklist and Tracking Form

### IV. If you are not the applicant but rather an interested person claiming to be aggrieved by the permit decision, please include the following information:

1. The date you or your agent received notice of the permit decision (include a copy of that permit decision with your hearing request);
2. Evidence that a copy of the request has been delivered to the applicant for the permit which is the subject of the permit decision;
3. A detailed statement of which findings of fact and/or conclusion of law you are challenging;
4. A description of your participation in any public hearings held in connection with the permit application and copies of any written comments you submitted;
5. Whether you claim a statutory or constitutional right to a hearing, and, if you claim such a right, a reference to the applicable statute or explanation of how your property interests are affected by the permit decision;
6. If the appeal request concerns a CAFRA permit decision, evidence that a copy of the request has been delivered to the clerks of the county and the municipality in which the project which is the subject of the permit decision is located;
7. Suggested revised or alternative permit conditions;
8. An estimate of the time required for the hearing;
9. A request, if necessary, for a barrier-free hearing location for physically disable persons;
10. A clear indication of any willingness to negotiate a settlement with the Department prior to the Department's transmittal of the hearing request to the Office of Administrative Law;

Mail this form, completed, signed and dated with all of the information listed above, including attachment, to:

1. New Jersey Department of Environmental Protection  
Office of Legal Affairs  
Attention: Adjudicatory Hearing Requests  
401 East State Street, P.O. Box 402  
Trenton, New Jersey 08625-0402
  
3. Mr. Bachir Bouzid  
Bureau of Stationary Sources  
New Jersey Department of Environmental Protection  
401 E. State Street, 2nd Floor, P.O. Box 420, Mail Code 401-02  
Trenton, New Jersey 08625-0420  
Phone: (609) 633-2829

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**Signature**

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**Date**

**Facility Name: NEWARK ENERGY CENTER**  
**Program Interest Number: 08857**  
**Permit Activity Number: BOP160001**

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## Section A

**Facility Name: NEWARK ENERGY CENTER**

**Program Interest Number: 08857**

**Permit Activity Number: BOP160001**

### REASON FOR PERMIT

The reason for issuance of this permit is to comply with the air pollution control permit provisions of Title V of the federal Clean Air Act, federal rules promulgated at 40 CFR 70, and state regulations promulgated at N.J.A.C. 7:27-22, which requires the state to issue operating permits to major facilities and minor facilities that are in certain designated source categories. This is the operating permit for the facility listed on the cover page, which includes a significant modification which makes the following changes to the operating permit:

1. Remove FC REF#16 as NEC has provided all funds to the city of Newark and no longer has any control or knowledge of those funds.
2. Remove (2) Ammonia Storage Tanks (IS2) from permit as they are exempt from permitting as per the definition of "exempt activity" at N.J.A.C. 7:27-22.1.
3. Change the compliance monitoring calculation for annual VOC, TSP, PM-10 and PM2.5 emission limits to be based on actual emission rates from the latest stack test performed, rather than on the maximum emission rate permitted.
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6. Recalculate CO2 and greenhouse gas emission (GHG) limitations in the permit using the following:
  - Use 40 CFR 75, equation G-4 to calculate CO2 and GHG emissions. This will make the permit limits consistent with the new CO2 monitoring method.
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7. Remove CO2 lb/hr emission limits from the permit as there is no reporting threshold for CO2 lb/hr emissions. CO2 ton per year emission limit remain in the permit.
8. Remove the restriction on firing the duct burners at temperatures below 59 degrees Fahrenheit.
9. Change the lower limit of the selective catalytic reduction (SCR) operating temperature range from 550 degrees F to 400 degrees F, consistent with the operation and maintenance manual for the SCR system.
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12. Remove New Source Performance Standards (NSPS) conditions which require the installation and operation of a continuous opacity monitoring system from the operating permit since these requirements do not apply to this facility. The facility will demonstrate compliance with the opacity limits using Method 9, pursuant to 40 CFR 60.11(b).
13. Combine NSPS Subpart KKKK emission limits into one permit condition and clarify that, pursuant to Subpart KKKK, compliance must be demonstrated with either the ppm@15% O2 limit or the lb/MW-hr limit, not with both of these limits.
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15. Delete the submittal requirement for Ammonia permit limits as that requirement is for monitoring with a continuous emission monitor, not a continuous process monitor, as is required for Ammonia.

16. Replace continuous monitoring requirement for heat input to emergency engines with manufacturer's design specification.
17. Change the definition of "Hot Start-up" to include a start-up that occurs after the turbine has been shut down for less than 8 hours. The current permit defines a hot start-up as a start-up that occurs after the turbine has been shut down for more than 4 hours but less than 8 hours.
18. Add a limit on the number of cold start-ups, warm/hot start-ups and shutdowns that the turbine can make during any 365 day period. This limit is consistent with the number of start-ups and shutdowns assumed for permitted emission limit calculations and for modelling.
19. Break up the current startup/shutdown operating scenarios (OS5 and OS6) into separate operating scenarios for Cold, Warm and Hot Start-up and Shut down of CT1 and CT2 (OS5 thru OS12). Renumber the Auxilliary Boiler operating scenario from "OS7" to "OS13".
20. Require CEMs monitoring of the NOx and CO emissions during start-up and shut down in order to demonstrate compliance with the applicable emission limits.
21. Add a requirement to continuously monitor the Oxidation Reduction Potential of the cooling tower water.
22. Reduce the maximum heat input of the auxilliary boiler from 66.2 MMBtu/hr to 60.6 MMBtu/hr; adjust fuel use and emission limits to reflect the lower heat input.
23. Include a compliance schedule that requires installation and commissioning of the auxiliary boiler NOx burner by January 6, 2017, in accordance with NEA-150003-08857 and requires the auxilliary boiler to be stack tested within 180 days of commencement of operation of the auxiliary boiler with the new NOx burner, in order to demonstrate compliance with the applicable permit limits.

New Jersey has elected to integrate its Title I New Source Review (NSR) preconstruction permits with the new Title V operating permits instead of issuing separate permits. Consequently, the existing preconstruction permit provisions that were previously approved for this facility have been consolidated into this permit. This permit may also include applicable requirements for grandfathered sources.

This permit action consolidates previously approved permit terms and conditions into one single permit for the facility. The New Jersey Department of Environmental Protection (Department) issues this operating permit authorizing the facility to operate equipment and air pollution control devices. In the operating permit application, the facility represented that it meets all applicable requirements of the federal Clean Air Act and the New Jersey Air Pollution Control Act codified at N.J.S.A. 26:2C. Based on an evaluation of the data contained in the facility's application, the Department has approved this operating permit.

This permit allows this facility to operate the equipment and air pollution control devices specified in this permit and emit up to a level specified for each source operation. The signatories named in the application are responsible for ensuring that the facility is operated in a manner consistent with this permit, its conditions, and applicable rules.



## **Section B**

**Facility Name: NEWARK ENERGY CENTER**

**Program Interest Number: 08857**

**Permit Activity Number: BOP160001**

### **DEFINITIONS**

The terms used in this permit are used consistent with the definitions at N.J.A.C. 7:27-1 and N.J.A.C. 7:27-22. Any terms defined in this section are not defined at N.J.A.C. 7:27-1 or N.J.A.C. 7:27-22, and are needed for clarifying the permit.

“Permitting Authority” means the New Jersey Department of Environmental Protection (NJDEP).

“The EPA,” or the “Administrator,” means the Administrator of the EPA or his designee.

“M” preceding a unit of measure means one thousand. For example, “10 M gal.” means ten thousand gallons.

“MM” preceding a unit of measure means one million. For example, “10 MM gal.” means ten million gallons.

“Grandfathered” means, in reference to equipment or control apparatus, that construction, reconstruction, or modification occurred prior to enactment of N.J.S.A. 26:2C-9.2 on June 15, 1967, or prior to the subsequent applicable revisions to rules and regulations codified at N.J.A.C. 7:27-8 that occurred March 5, 1973, June 1, 1976, April 5, 1985, and October 31, 1994, and no construction, reconstruction, or modification of the equipment or control apparatus has occurred since.

“Compliance Plan” means the applicable requirements, monitoring requirements, recordkeeping requirements, and submittal/action requirements detailed in Section G, Facility Specific Requirements, of the operating permit.

## Section C

**Facility Name: NEWARK ENERGY CENTER**

**Program Interest Number: 08857**

**Permit Activity Number: BOP160001**

### POLLUTANT EMISSIONS SUMMARY

Table 1: Total emissions from all significant source operations at the facility.

Facility's Potential Emissions from all Significant Source Operations (tons per year)											
Source Categories	Primary						Secondary				
	VOC (total)	NO <sub>x</sub>	CO	SO <sub>2</sub>	TSP (total)	Other* (total)	PM <sub>10</sub> (total)	PM <sub>2.5</sub> (total)	Pb	HAPs* (total)	CO <sub>2</sub> e <sup>1</sup>
Emission Units Summary	34.98	139.08	483.62	19.7	67.09	282.33	101.26	97.6	N / A	8.22	
Batch Process Summary	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	
Group Summary	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	
Total Emissions from Significant Source Operations <sup>2</sup>	34.98	139.08	483.62	19.7	67.09	282.33	101.26	97.6	N / A	8.22	2,160,278

Table 2: Estimate of total emissions from all insignificant source operations and total emissions from Non-Source Fugitives at the facility.

Emissions from all Insignificant Source Operations and Non-Source Fugitive Emissions (tons per year)										
Source Categories	Primary						Secondary			
	VOC (total)	NO <sub>x</sub>	CO	SO <sub>2</sub>	TSP (total)	Other (total)	PM <sub>10</sub> (total)	PM <sub>2.5</sub> (total)	Pb	HAPs (total)
Estimate of Total Emissions from Insignificant Source Operations <sup>2</sup>	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A
Total Non-Source Fugitive Emissions <sup>3</sup>	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A	N / A

VOC: Volatile Organic Compounds

NO<sub>x</sub>: Nitrogen Oxides

CO: Carbon Monoxide

SO<sub>2</sub>: Sulfur Dioxide

TSP: Total Suspended Particulates

Other: Any other air contaminant regulated under the Federal CAA

PM<sub>10</sub>: Particulates under 10 microns

PM<sub>2.5</sub>: Particulates under 2.5 microns

Pb: Lead

HAPs: Hazardous Air Pollutants

CO<sub>2</sub>e: Carbon Dioxide equivalent

\*Emission summary of individual HAPs and Other Air Contaminants is provided on next page.

<sup>1</sup> Total CO<sub>2</sub>e emissions for the facility that includes all significant sources (emission units, batch process, group) and insignificant sources.

<sup>2</sup> Significant Source Operations and Insignificant Source Operations are defined at N.J.A.C 7:27-22.1.

<sup>3</sup> Non-Source fugitive emissions are defined at N.J.A.C 7:27-22.1 and are included if the facility falls into one or more categories listed at N.J.A.C 7:27-22.2(a)2.

## Section C

**Facility Name: NEWARK ENERGY CENTER**  
**Program Interest Number: 08857**  
**Permit Activity Number: BOP160001**

### POLLUTANT EMISSIONS SUMMARY

The following table shows the hazardous air pollutants (HAP) emissions summary<sup>4</sup>:

HAP	TPY
Acrolein	0.06
Benzene	0.23
Formaldehyde	2.15
Toluene	2.51

The following table shows the "Other" air contaminants emissions summary:

Other Air Contaminant	TPY
H2SO4	10.55
Ammonia (NH3)	119.00
Methane	152.78

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<sup>4</sup> Do not sum the values below for the purpose of establishing a total HAP potential to emit. See previous page for the allowable total HAP emissions.

## Section D

**Facility Name: NEWARK ENERGY CENTER**

**Program Interest Number: 08857**

**Permit Activity Number: BOP160001**

### POLLUTION PREVENTION REPORTING

#### General Pollution Prevention Conditions

The following evaluation requirements are included to track the facility's progress in several critical areas identified in the National Environmental Performance Partnership System (NEPPS). Nitrogen Oxides (NO<sub>x</sub>) and Volatile Organic Compounds (VOC) are precursors to the air pollutant Ozone, for which New Jersey is non-attainment with the air quality standard for the protection of public health. The control of hazardous air pollutants (HAPs) is also a focus item for the next decade in order to minimize localized hot spots and general urban air toxics levels. Therefore, the Department is requiring evaluation of emission trends at 5-year intervals for major sources of these air contaminants. Also, as part of significant modification applications, proposed major increases of these air contaminants require evaluation of pollution prevention and cross media effects.

The evaluation of these trends requires no increased monitoring. Rather it utilizes existing monitoring data, as reported annually in Emission Statements (for NO<sub>x</sub> and VOC) and annual Release and Pollution Prevention Reports (for HAPs). The intent of this evaluation is to better utilize the existing data by having the company, the public and the Department review major source trends periodically, as part of the 5-year renewal review and public comment process.

Pollution prevention includes changes that result in the reduction in use or generation of non-product output per unit of product. Cross media effects are practices that result in transferring the ultimate release or disposal of a contaminant from one environmental medium (e.g. air) to another environmental medium (e.g. water, solid or hazardous wastes).

#### Information to include with the renewal application:

1. The facility will evaluate annual emission trends over the last five years for actual air contaminant emissions of Volatile Organic Compounds (VOC), Nitrogen Oxides (NO<sub>x</sub>), if the facility's potential to emit VOC or NO<sub>x</sub> is greater than 25 tons per year, or any Hazardous Air Pollutants (HAP), for which the facility's potential to emit is greater than 10 tons per year. The VOC and NO<sub>x</sub> emission data should reflect annual emission statement reports submitted pursuant to N.J.A.C. 7:27-21, and the HAP emissions data should reflect the annual Release and Pollution Prevention Report submitted pursuant to N.J.A.C. 7:1G-4 and 5 and N.J.A.C. 7:1K-6. Although not required, the Department encourages the facility to explain the reason for any significant trend, including whether it is the result of cross media shifts (to air, water, or solid waste) and/or pollution prevention. Changes should be itemized for each emission unit (or process) with a potential to emit over five tons per year of VOC or NO<sub>x</sub> or a potential to emit over one ton per year of any HAP. Also, show the net change for the facility.
2. The facility will summarize annual potential to emit limits (allowable emissions) for VOC, NO<sub>x</sub>, and HAPs, which are subject to reporting under 1 above, for the last five years. Changes should be itemized for each emission unit (or process) with a potential to emit over five tons per year of VOC or NO<sub>x</sub> or a potential to emit over one ton per year of any HAP. Also, show the net change for the facility.
3. The facility will summarize five-year trends in annual VOC, NO<sub>x</sub>, and HAP emissions, which are subject to reporting under 1 above, on a pound per unit of product basis, based on annual actual emissions and annual production over the five year period. Changes should be itemized for each emission unit (or process) with a potential to emit over five tons per year of VOC or NO<sub>x</sub> or a potential to emit over one ton per year of any HAP. Also, show the net change for the facility.

4. The facility will discuss five-year trends in actual air contaminant emissions of non-source VOC and HAP fugitives, which are subject to reporting under 1 above; explain measures taken to minimize such fugitives; and provide an explanation for any significant changes.

Information to include with an application for a Significant Modification to this permit:

1. For any significant modifications, the facility is encouraged to explain any cross media shifts of VOC and HAP air contaminants as part of the significant modification application. If an explanation is provided, the facility should identify the pollutant and the specific environmental media to which the pollutant is anticipated to be transferred, whether it be from air to solid waste or water, or from water or solid waste to the air.

## Section E

**Facility Name: NEWARK ENERGY CENTER**

**Program Interest Number: 08857**

**Permit Activity Number: BOP160001**

### GENERAL PROVISIONS AND AUTHORITIES

#### Operating Permits

1. No permittee shall allow any air contaminant, including an air contaminant detectable by the sense of smell, to be present in the outdoor atmosphere in a quantity and duration which is, or tends to be, injurious to human health or welfare, animal or plant life or property, or which would unreasonably interfere with the enjoyment of life or property. This shall not include an air contaminant which occurs only in areas over which the permittee has exclusive use or occupancy. Conditions relative only to nuisance situations, including odors, are not considered Federally enforceable. [N.J.A.C. 7:27-22.16(g)8]

2. Any deviation from operating permit requirements which results in a release of air contaminants shall be reported to the Department as follows:

If the air contaminants are released in a quantity or concentration which poses a potential threat to public health, welfare or the environment or which might reasonably result in citizen complaints, the permittee shall report the release to the Department:

- i. Immediately on the Department hotline at 1-877-927-6337, pursuant to N.J.S.A. 26:2C-19(e); and
- ii. As part of the compliance certification required in N.J.A.C. 7:27-22.19(f). However, if the deviation is identified through source emissions testing, it shall be reported through the source emissions testing and monitoring procedures at N.J.A.C. 7:27-22.18(e)3; or

If the air contaminants are released in a quantity or concentration which poses no potential threat to public health, welfare or the environment and which will not likely result in citizen complaints, the permittee shall report the release to the Department as part of the compliance certification required in N.J.A.C. 7:27-22.19(f), except for deviations identified by source emissions testing reports, which shall be reported through the procedures at N.J.A.C. 7:27-22.18(e)3; or

If the air contaminants are released in a quantity or concentration which poses no potential threat to public health, welfare or the environment and which will not likely result in citizen complaints, and the permittee intends to assert the affirmative defense afforded by N.J.A.C. 7:27-22.16(l), the violation shall be reported by 5:00 P.M. of the second full calendar day following the occurrence, or of becoming aware of the occurrence, consistent with N.J.A.C. 7:27-22.16(l). [N.J.A.C. 7:27-22.19(g)]

3. The permittee shall comply with all conditions of the operating permit including the approved compliance plan. Any non-compliance with a permit condition constitutes a violation of the New Jersey Air Pollution Control Act N.J.S.A. 26:2C-1 et seq., or the CAA, 42 U.S.C. §7401 et seq., or both, and is grounds for enforcement action; for termination, revocation and reissuance, or for modification of the operating permit; or for denial of an application for a renewal of the operating permit. [N.J.A.C. 7:27-22.16(g)1]

4. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of its operating permit. [N.J.A.C. 7:27-22.16(g)2]

5. This operating permit may be modified, terminated, or revoked for cause by the EPA pursuant to 40 CFR 70.7(g) and revoked or reopened and modified for cause by the Department pursuant to N.J.A.C. 7:27-22.25. [N.J.A.C. 7:27-22.16(g)3]
6. The permittee shall furnish to the Department, within a reasonable time, any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this operating permit; or to determine compliance with the operating permit. [N.J.A.C. 7:27-22.16(g)4]
7. The filing of an application for a modification of an operating permit, or of a notice of planned changes or anticipated non-compliance, does not stay any operating permit condition. [N.J.A.C. 7:27-22.16(g)5]
8. The operating permit does not convey any property rights of any sort, or any exclusive privilege. [N.J.A.C. 7:27-22.16(g)6]
9. Upon request, the permittee shall furnish to the Department copies of records required by the operating permit to be kept. [N.J.A.C. 7:27-22.16(g)7]
10. The Department and its authorized representatives shall have the right to enter and inspect any facility subject to N.J.A.C. 7:27-22, or portion thereof, pursuant to N.J.A.C. 7:27-1.31. [N.J.A.C. 7:27-22.16(g)9]
11. The permittee shall pay fees to the Department pursuant to N.J.A.C. 7:27. [N.J.A.C. 7:27-22.16(g)10]
12. Each permittee shall maintain records of all source emissions testing or monitoring performed at the facility and required by the operating permit in accordance with N.J.A.C. 7:27-22.19. Records shall be maintained, for at least five years from the date of each sample, measurement, or report. Each permittee shall maintain all other records required by this operating permit for a period of five years from the date each record is made. At a minimum, source emission testing or monitoring records shall contain the information specified at N.J.A.C. 7:27-22.19(b). [N.J.A.C. 7:27-22.19(a) and N.J.A.C. 7:27-22.19(b)]
13. In accordance with N.J.A.C. 7:27-22.19(c) and 22.19(d) 3, each permittee shall submit to the Department a six month deviation report relating to testing and monitoring required by the operating permit, not including information for testing and monitoring which have other reporting schedules specified in the permit. Normally, stack testing reporting is submitted within 45 days of test completion and continuous monitoring reporting is done quarterly. The six month report must address other specified monitoring, including, but not limited to, continuous and periodic monitoring data required by this permit. (See column two and three entitled "Monitoring Requirement" and "Recordkeeping Requirement," respectively, in the Facility Specific Requirement Section of this permit.). The six month reports for the testing and monitoring performed from January 1 through June 30, shall be reported by July 30 of the same calendar year; or from July 1 through December 31, shall be reported by January 30 of the following calendar year. Pursuant to N.J.A.C. 7:27-22.19(e), these six month reports shall clearly identify all deviations from operating permit requirements, the probable cause of such deviations, and any corrective actions taken. Any "None" listed in the Submittal/Action Requirement in the Operating Permit is not intended to override the six-month deviation report. The report shall be certified pursuant to N.J.A.C. 7:27-1.39 by a responsible official. The submittal procedure is listed in column entitled "Submittal/Action Requirement" in the Facility Specific Requirement Section FC of this permit. [N.J.A.C. 7:27-22.19(d) 3 and N.J.A.C. 7:27-22.19(e)]

An annual compliance certification required by paragraph 2 above and required by N.J.A.C. 7:27-19(f) may also be considered as your six month deviation report for the period from July 1 through December 31 which is due by January 30 of each year if the annual compliance certification is submitted by January 30.

14. For emergencies (as defined at 40 CFR 70.6(g)(1)) that result in non-compliance with any promulgated federal technology-based standard such as NSPS, NESHAPS, or MACT, a federal affirmative defense is available, pursuant to 40 CFR 70. To assert a federal affirmative defense, the permittee must use the procedures set forth in 40 CFR 70. The affirmative defense provisions described in 15 below may not be applied to any situation that caused the Facility to exceed any federally delegated regulation, including but not limited to NSPS, NESHAP, or MACT.

15. For situations other than those covered by 14 above, an affirmative defense is available for a violation of a provision or condition of the operating permit only if:
  - i. The violation occurred as a result of an equipment malfunction, an equipment start-up or shutdown, or during the performance of necessary equipment maintenance; and
  - ii. The affirmative defense is asserted and established as required by N.J.S.A. 26:2C-19.1 through 19.5 and any implementing rules. [N.J.A.C. 7:27-22.16(l)]
16. Each permittee shall meet all requirements of the approved source emissions testing and monitoring protocol during the term of the operating permit. Whenever the facility makes a replacement, modification, change or repair of a certified CEMS or COMS that may significantly affect the ability of the system to accurately measure or record data, the facility must recertify the CEMS or COMS in accordance with Section V.B. and Appendix E of Technical Manual 1005. The facility is responsible for contacting the Emission Measurement Section to determine the need for recertification and/or to initiate the recertification process. The facility is responsible for any downtime associated with the replacement, modification, change or repair of the CEMS or COMS. [N.J.A.C. 7:27-22.18(j)]
17. Unless specifically exempted from permitting, temporary mobile equipment for short-term activities may be periodically used at major facilities, on-site for up to 90 days if the requirements listed below, (a) through (h) are satisfied.
  - a. The permittee will ensure that the temporary mobile equipment will not be installed permanently or used permanently on site.
  - b. The permittee will ensure that the temporary mobile equipment will not circumvent any State or Federal rules and regulations, even for a short period of time, and the subject equipment will comply with all applicable performance standards.
  - c. The permittee cannot use temporary mobile equipment unless the owner of the subject equipment has obtained and maintains an approved mobile preconstruction permit, issued pursuant to N.J.A.C. 7:27-8, prior to bringing the temporary mobile equipment to operate at the major facility.
  - d. The permittee is responsible for ensuring the temporary mobile equipment's compliance with the terms and conditions specified in its approved mobile preconstruction permit when the temporary mobile equipment operates on the property of the permittee.
  - e. The permittee will ensure that temporary mobile equipment utilized for short-term activities will not operate on site for more than a total of ninety (90) days during any calendar year.
  - f. The permittee will keep on site a list of temporary mobile equipment being used at the facility with the start date, end date, and record of the emissions from all such equipment (amount and type of each air contaminant) no later than 30 days after the temporary mobile equipment completed its job in accordance with N.J.A.C. 7:27-22.19(i) 3.
  - g. Emissions from the temporary mobile equipment must be included in the emission netting analysis required of the permittee by N.J.A.C. 7:27-18.7. This information is maintained on-site by the permittee and provided to the Department upon request in accordance with existing applicable requirements in the FC Section of its Title V permit.
  - h. Where short-term activities (employing temporary mobile equipment) will re-occur on at least an annual basis, the permittee is required to include such activities (and the associated equipment) within one year of the first use, in its Title V permit through the appropriate modification procedures.
18. Each owner and each operator of any facility, source operation, or activity to which this permit applies is responsible for ensuring compliance with all requirements of N.J.A.C. 7:27-22. If the owner and operator are separate persons, or if there is more than one owner or operator, each owner and each operator is jointly



and severally liable for any fees due under N.J.A.C. 7:27-22, and for any penalties for violation of N.J.A.C. 7:27-22. [N.J.A.C. 7:27-22.3]

19. In the event of a challenge to any part of this operating permit, all other parts of the permit shall continue to be valid. [N.J.A.C. 7:27-22.16(f)]
20. The permittee shall ensure that no air contaminant is emitted from any significant source operation at a rate, calculated as the potential to emit, that exceeds the applicable threshold for reporting emissions set forth in the Appendix to N.J.A.C. 7:27-22, unless emission of the air contaminant is authorized by this operating permit. [N.J.A.C. 7:27-22.3(c)]
21. Consistent with the provisions of N.J.A.C. 7:27-22.3(e), the permittee shall ensure that all requirements of this operating permit are met. In the event that there are multiple emission limitations, monitoring, recordkeeping, and/or reporting requirements for a given source operation, the facility must comply with all requirements, including the most stringent.
22. Consistent with the provisions of N.J.A.C. 7:27-22.9(c), the permittee shall use monitoring of operating parameters, where required by the compliance plan, as a surrogate for direct emissions testing or monitoring, to demonstrate compliance with applicable requirements.
23. The permittee shall file a timely and complete application for:
  - Administrative Amendments [N.J.A.C. 7:27-22.20(c)];
  - Seven-Day-Notice changes [N.J.A.C. 7:27-22.22(e)];
  - Minor Modifications [N.J.A.C. 7:27-22.23(e)];
  - Significant Modifications [N.J.A.C. 7:27-22.24(e)]; and
  - Renewals [N.J.A.C. 7:27-22.30(b)].
24. Except as allowed in Technical Manual 1005, or otherwise allowed by the Department in this permit or in written guidelines/ procedures issued or approved by the Department, process monitors required by the Compliance Plan included in this permit must be operated at all times when the associated process equipment is operating. The permittee must keep a service log to document any outage.

**Section F**

**Facility Name: NEWARK ENERGY CENTER**

**Program Interest Number: 08857**

**Permit Activity Number: BOP160001**

**STATE-ONLY APPLICABLE REQUIREMENTS**

N.J.A.C. 7:27-22.16(b)5 requires the Department to specifically designate as not being federally enforceable any permit conditions based only on applicable state requirements. The applicable state requirements to which this provision applies are listed in the table titled "State-Only Applicable Requirements."

**STATE-ONLY APPLICABLE REQUIREMENTS**

The following applicable requirements are not federally enforceable:

<u>SECTION</u>	<u>SUBJECT ITEM</u>	<u>ITEM #</u>	<u>REF. #</u>
E	---	15	---
G	FC	---	3
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## **Section G**

**Facility Name: NEWARK ENERGY CENTER**

**Program Interest Number: 08857**

**Permit Activity Number: BOP160001**

### **COMPLIANCE PLAN AND INVENTORIES**

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- COMPLIANCE SCHEDULES
- FACILITY PROFILE (ADMINISTRATIVE INFORMATION)
- REASON FOR APPLICATION
- INSIGNIFICANT SOURCE EMISSIONS
- EQUIPMENT INVENTORY
- EQUIPMENT DETAILS
- CONTROL DEVICE INVENTORY
- CONTROL DEVICE DETAILS
- EMISSION POINT INVENTORY
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- SUBJECT ITEM GROUP INVENTORY
- ADDITIONAL WORD/EXCEL/PDF DOCUMENTS
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**Facility Name: NEWARK ENERGY CENTER**  
**Program Interest Number: 08857**  
**Permit Activity Number: BOP160001**

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Subject Item: FC

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	General Provisions: The permittee shall comply with all applicable provisions of N.J.A.C. 7:27-1. [N.J.A.C. 7:27- 1]	None.	None.	None.
2	Control and Prohibition of Open Burning: The permittee is prohibited from open burning of rubbish, garbage, trade waste, buildings, structures, leaves, other plant life and salvage. Open burning of infested plant life or dangerous material may only be performed with a permit from the Department. [N.J.A.C. 7:27- 2]	None.	None.	Obtain an approved permit: Prior to occurrence of event (prior to open burning). [N.J.A.C. 7:27- 2]
3	Prohibition of Air Pollution: The permittee shall not emit into the outdoor atmosphere substances in quantities that result in air pollution as defined at N.J.A.C. 7:27-5.1. [N.J.A.C. 7:27- 5]	None.	None.	None.
4	Prevention and Control of Air Pollution Control Emergencies: Any person responsible for the operation of a source of air contamination set forth in Table 1 of N.J.A.C. 7:27-12 is required to prepare a written Standby Plan, consistent with good industrial practice and safe operating procedures, and be prepared for reducing the emission of air contaminants during periods of an air pollution alert, warning, or emergency. Any person who operates a source not set forth in Table 1 of N.J.A.C. 7:27-12 is not required to prepare such a plan unless requested by the Department in writing. [N.J.A.C. 7:27-12]	None.	None.	Comply with the requirement: Upon occurrence of event. Upon proclamation by the Governor of an air pollution alert, warning, or emergency, the permittee shall put the Standby Plan into effect. In addition, the permittee shall ensure that all of the applicable emission reduction objectives of N.J.A.C. 7:27-12.4, Table I, II, and III are complied with whenever there is an air pollution alert, warning, or emergency. [N.J.A.C. 7:27-12]
5	Emission Offset Rules: The permittee shall comply with all applicable provisions of Emission Offset Rules. [N.J.A.C. 7:27-18]	None.	None.	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	Emission Statements: Submit an annual emission statement electronically to the NJDEP by May 15 of each year (or by mutually agreed upon date, but no later than June 15 of each year). The emission statement shall be based on monitoring, recording and recordkeeping of actual emissions, capture and control efficiencies, process rate and operating data for source operations with the potential to emit certain air contaminants. [N.J.A.C. 7:27-21]	None.	Other: The emission statement and all supporting records shall be maintained on the operating premises for a period of five (5) years from the due date of each emission statement. [N.J.A.C. 7:27-21].	Submit an Annual Emission Statement: Annually and electronically by May 15 or by any mutually agreed upon date, but not later than June 15 of each year. [N.J.A.C. 7:27-21]
7	Compliance Certification: Submit annual compliance certification for each applicable requirement, pursuant to N.J.A.C. 7:27-22.19(f), within 60 days after the end of each calendar year during which this permit was in effect. [N.J.A.C. 7:27-22]	None.	None.	Submit an Annual Compliance Certification: Annually to the Department and EPA within 60 days after the end of each calendar year during which this permit was in effect. The annual compliance certification reporting period will cover the calendar year ending December 31. The certification shall be submitted electronically through the NJDEP online web portal - Periodic Compliance Certification service, and shall be certified pursuant to N.J.A.C. 7:27-1.39 by the responsible official. Access to the NJDEP online web portal shall be obtained by following the instructions at: <a href="http://www.state.nj.us/dep/online/">http://www.state.nj.us/dep/online/</a> .  The certification should be printed for submission to EPA at the following address: US EPA, Region II, Air Compliance Branch, 290 Broadway, New York, NY 10007-1866. [N.J.A.C. 7:27-22]
8	Prevention of Air Pollution from Consumer Products and Architectural Coatings: The permittee shall comply with all applicable provisions of N.J.A.C. 7:27-24 and [N.J.A.C. 7:27-23]	None.	None.	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	Any operation of equipment which causes off-property effects, including odors, or which might reasonably result in citizen's complaints shall be reported to the Department to the extent required by the Air Pollution Control Act, N.J.S.A. 26:2C-19(e). [N.J.S.A. 26: 2C-19(e)]	Other: Observation of plant operations. [N.J.S.A. 26: 2C-19(e)].	Other: Maintain a copy of all information submitted to the Department. [N.J.S.A. 26: 2C-19(e)].	Notify by phone: Upon occurrence of event. A person who causes a release of air contaminants in a quantity or concentration which poses a potential threat to public health, welfare or the environment or which might reasonably result in citizen complaints shall immediately notify the Department. Such notification shall be made by calling the Environmental Action Hotline at (877) 927-6337. [N.J.S.A. 26: 2C-19(e)]
10	Prevention of Significant Deterioration: The permittee shall comply with all applicable provisions of Prevention of Significant Deterioration (PSD). [40 CFR 52.21]	None.	None.	None.
11	The permittee shall comply with all applicable provisions of National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Asbestos, Subpart M. [40 CFR 61]	Other: Comply with 40 CFR 61.145 and 61.150 when conducting any renovation or demolition activities at the facility. [40 CFR 61].	Other: Comply with 40 CFR 61.153 when conducting any renovation or demolition activities at the facility. [40 CFR 61].	Comply with the requirement: Upon occurrence of event. The permittee shall comply with 40 CFR 61.153 when conducting any renovation or demolition activities at the facility. [40 CFR 61]

**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
12	<p>Protection of Stratospheric Ozone: 1) If the permittee manufactures, transforms, destroys, imports, or exports a Class I or Class II substance, the permittee is subject to all the requirements as specified at 40 CFR 82, Subpart A; 2) If the permittee performs a service on motor "fleet" vehicles when this service involves an ozone depleting substance refrigerant (or regulated substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified at 40 CFR 82, Subpart B. 3) The permittee shall comply with the standards for labeling of products containing or manufactured with ozone depleting substances pursuant to 40 CFR 82, Subpart E. 4). The permittee shall comply with the standards for recycling and emission reductions of Class I and Class II refrigerants or a regulated substitute substance during the service, maintenance, repair, and disposal of appliances pursuant to 40 CFR 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B. 5) The permittee shall be allowed to switch from any ozone depleting substance to any alternative that is listed in the Significant New Alternative Program (SNAP) promulgated pursuant to 40 CFR 82, Subpart G. [40 CFR 82]</p>	<p>Other: Comply with 40 CFR 82 Subparts A, B, E, F, and G. [40 CFR 82].</p>	<p>Other: Comply with 40 CFR 82 Subparts A, B, E, F, and G. [40 CFR 82].</p>	<p>Comply with the requirement: Upon occurrence of event. The permittee shall comply with 40 CFR 82 Subparts A, B, E, F, and G. [40 CFR 82]</p>



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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	<p>Deviation Report: In accordance with N.J.A.C. 7:27-22.19(c) and 22.19(d)3, the permittee shall submit to the Department a certified six-month deviation report relating to testing and monitoring required by the operating permit, not including information for stack emissions testing or continuous emissions monitoring which have other reporting schedules specified in the permit (normally, stack test report is submitted within 45 days of test completion and continuous monitor reporting is done quarterly). Pursuant to N.J.A.C. 7:27-22.19(e), the six-month report must address other specified monitoring, including continuous and periodic monitoring requirements found in column 2 and 3, entitled "Monitoring Requirement" and "Recordkeeping Requirement," respectively, of the Facility Specific Requirements section of this permit. These six-month reports shall clearly identify all deviations from operating permit requirements, the probable cause of such deviations, and any corrective actions or preventive measures taken. If no deviations occurred, the report should say so. Any "None" listed in the Submittal/Action Requirement in the Operating Permit is not intended to override the six-month deviation report. [N.J.A.C. 7:27-22.19(d)3, N.J.A.C.7:27-22.19(e), and [N.J.A.C. 7:27-22.19(c)]</p>	None.	Other: The permittee shall maintain deviation reports for a period of five years from the date each report is submitted to the Department. [N.J.A.C. 7:27-22.19(a)].	<p>Submit a report: As per the approved schedule. The six-month reports for other specified testing or monitoring required by the operating permit performed from January 1 through June 30 shall be submitted by July 30 of the same calendar year, and from July 1 through December 31, shall be submitted by January 30 of the following calendar year.</p> <p>The report shall be submitted electronically through the NJDEP online web portal - Periodic Compliance Certification service, and shall be certified pursuant to N.J.A.C. 7:27-1.39 by the responsible official. Access to the NJDEP online web portal shall be obtained by following the instructions at: <a href="http://www.state.nj.us/dep/online/">http://www.state.nj.us/dep/online/</a> . [N.J.A.C. 7:27-22]</p>
14	<p>Used Oil Combustion: No person shall combust used oil except as authorized pursuant to N.J.A.C. 7:27-20. [N.J.A.C. 7:27-20.2]</p>	None.	None.	<p>Comply with the requirement: Prior to occurrence of event (prior to burning used oil) either register with the Department pursuant to N.J.A.C. 7:27-20.3 or obtain a permit issued by the Department pursuant to N.J.A.C. 7:27-8 or 7:27-22, whichever is applicable. [N.J.A.C. 7:27-20.2(d)]</p>

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
15	Prevention of Accidental Releases: Facilities producing, processing, handling or storing a chemical, listed in the tables of 40 CFR Part 68.130, and present in a process in a quantity greater than the listed Threshold Quantity, shall comply with all applicable provisions of 40 CFR 68. [40 CFR 68]	Other: Comply with 40 CFR 68. [40 CFR 68].	Other: Comply with 40 CFR 68. [40 CFR 68].	Other (provide description): Other. Comply with 40 CFR 68 as described in the Applicable Requirement. [40 CFR 68]

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Subject Item: IS1 Fuel Oil Storage Tanks

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Tank content limited to ultra low sulfur distillate (ULSD) oil. The sulfur content of ULSD shall not exceed 0.0015%. [N.J.A.C. 7:27-22.16(a)]	Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by invoices / bills of lading / certificate of analysis once per bulk fuel shipment. [N.J.A.C. 7:27-22.16(o)]	None.
2	Sulfur Content in Fuel <= 500 ppmw (0.05 % by weight). Maximum allowable sulfur content in No. 2 and lighter fuel oil. NOTE: This requirement is effective starting July 1, 2014 through June 30, 2016. [N.J.A.C. 7:27- 9.2(a)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Sulfur Content in Fuel: Recordkeeping by invoices / bills of lading / certificate of analysis per delivery showing fuel sulfur content. [N.J.A.C. 7:27-22.16(o)]	None.
3	Sulfur Content in Fuel <= 15 ppmw (0.0015 % by weight). Maximum allowable sulfur content in No. 2 and lighter fuel oil. NOTE: This requirement is effective on and after July 1, 2016. [N.J.A.C. 7:27- 9.2(a)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Sulfur Content in Fuel: Recordkeeping by invoices / bills of lading / certificate of analysis per delivery showing fuel sulfur content. [N.J.A.C. 7:27-22.16(o)]	None.
4	Fuel stored in New Jersey that met the applicable maximum sulfur content standard of Tables 1A or 1B of N.J.A.C. 7:27-9.2 at the time it was initially stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in 1B. [N.J.A.C. 7:27- 9.2(a)]	None.	None.	None.
5	The operating temperature shall not be greater than 350 degrees F. [N.J.A.C. 7:27-22.1]	None.	None.	None.
6	The vapor pressure of the liquid, excluding the vapor pressure of water, shall be less than 0.02 psia at the liquid's actual temperature or at 70 degrees F, whichever is higher. [N.J.A.C. 7:27-22.1]	None.	None.	None.
7	The tank shall have no visible emissions, exclusive of water vapor, to the outdoor atmosphere. [N.J.A.C. 7:27-22.1]	None.	None.	None.
8	The tank shall not emit any air contaminants which may cause an odor detectable outside the property boundaries of the facility. [N.J.A.C. 7:27-22.1]	None.	None.	None.

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<b>Ref.#</b>	<b>Applicable Requirement</b>	<b>Monitoring Requirement</b>	<b>Recordkeeping Requirement</b>	<b>Submittal/Action Requirement</b>
9	The tank(s) shall be subject to the NSPS requirements to maintain a record of the contents of the tank, the period of storage of these contents, and the maximum true vapor pressure of the liquid stored. The tank shall not be subject to any other NESHAPS, MACT, or NSPS air pollution control standards. [N.J.A.C. 7:27-22.1]	None.	None.	None.
10	The tank's potential to emit each TXS and each HAP shall not exceed the de minimis reporting thresholds as specified in N.J.A.C. 7:27-22, Appendix. [N.J.A.C. 7:27-22.1]	None.	None.	None.
11	The percentage by weight of all HAPs collectively in the raw material stored in the tank shall be less than 1.0 percent. [N.J.A.C. 7:27-22.1]	None.	None.	None.
12	The owner or operator shall have readily available upon Department request a statement certified in accordance with N.J.A.C. 7:27-1.39, signed by the responsible official, as defined at N.J.A.C. 7:27-1.4, that: (1) specifies the contents of the tank; (2) affirms that the tank meets the applicable requirements of Ref. #6 to #12 above; and (3) attests that the tank is in compliance with all other applicable state or federal air pollution requirements. [N.J.A.C. 7:27-22.1]	None.	None.	None.
13	Comply, as applicable, with the requirements of NSPS Subpart Kb, 40 CFR 60.116b(a) and (b). [40 CFR 60]	None.	None.	None.

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**Subject Item: IS3 Sulfuric Acid Storage Tank - (1) 20,000 gal tank**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Tank content limited to sulfuric acid. [N.J.A.C. 7:27-22.16(a)]	Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by invoices / bills of lading / certificate of analysis once per bulk fuel shipment. [N.J.A.C. 7:27-22.16(o)]	None.
2	The operating temperature shall not be greater than 350 degrees F. [N.J.A.C. 7:27-22.1]	None.	None.	None.
3	The vapor pressure of the liquid, excluding the vapor pressure of water, shall be less than 0.02 psia at the liquid's actual temperature or at 70 degrees F, whichever is higher. [N.J.A.C. 7:27-22.1]	None.	None.	None.
4	The tank shall have no visible emissions, exclusive of water vapor, to the outdoor atmosphere. [N.J.A.C. 7:27-22.1]	None.	None.	None.
5	The tank shall not emit any air contaminants which may cause an odor detectable outside the property boundaries of the facility. [N.J.A.C. 7:27-22.1]	None.	None.	None.
6	The tank(s) shall not be subject to any NESHAPS, MACT, or NSPS air pollution control standards, excluding the NSPS requirements to maintain a record of the contents of the tank, the period of storage of these contents, and the maximum true vapor pressure of the liquid stored. [N.J.A.C. 7:27-22.1]	None.	None.	None.
7	The tank's potential to emit each TXS and each HAP shall not exceed the de minimis reporting thresholds as specified in N.J.A.C. 7:27-22, Appendix. [N.J.A.C. 7:27-22.1]	None.	None.	None.
8	The percentage by weight of all HAPs collectively in the raw material stored in the tank shall be less than 1.0 percent. [N.J.A.C. 7:27-22.1]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	The owner or operator shall have readily available upon Department request a statement certified in accordance with N.J.A.C. 7:27-1.39, signed by the responsible official, as defined at N.J.A.C. 7:27-1.4, that: (1) specifies the contents of the tank; (2) affirms that the tank meets the applicable requirements of Ref. #2 to #8 above; and (3) attests that the tank is in compliance with all other applicable state or federal air pollution requirements. [N.J.A.C. 7:27-22.1]	None.	None.	None.
10	Sulfuric Acid Emissions from this storage tank must be included in the total annual sulfuric acid emissions calculations for the entire facility. The total facility-wide sulfuric acid emissions must comply with the emission cap in GR1 of the permit. [N.J.A.C. 7:27-22.16(a)]	<p>Sulfuric acid emissions from this storage tank shall be determined each month using EPA Tanks 4.0.9d software.</p> <p>A consecutive 12 month value shall be determined by adding the current months emissions to the total emissions from the previous 11 consecutive months.</p> <p>The consecutive 12 month value shall then be added to the total emissions from the rest of the facility to determine compliance with the facility wide emission cap in GR 1. Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). [N.J.A.C. 7:27-22.16(o)]</p>	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]	None.

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**Subject Item: GR1 Emissions**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	<p>NOx (Total) &lt;= 139.08 tons/yr based on a consecutive 12 month period, rolling one month basis. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7:27-18.2(a)] and. [40 CFR 52.21]</p>	<p>NOx (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual emissions of total NOx from the facility shall include NOx emitted by the two turbines and duct burners, one auxiliary boiler, one emergency diesel generator and one fire water pump. The annual emissions shall be calculated as follows:</p> <p>NOx (total) tons/month = Cumulative monthly NOx emissions (tons/month) derived from each combustion turbine CEMS system + (0.66 lbs/hr x monthly operating hours for auxiliary boiler / 2000 lb/ton) + (18.53 lbs/hr x monthly operating hours for Emergency Diesel Generator / 2000 lbs/ton) + (1.55 lbs/hr x monthly operating hours for diesel Fire Water Pump / 2000 lbs/ton).</p> <p>NOx (total) tons/year = is computed by adding the NOx tons/month for a given month to the NOx in tons in the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>NOx (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Add total monthly emissions for a given month to total monthly emissions from the previous 11 months. Record annual emissions. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
2	CO <= 483.62 tons/yr based on a consecutive 12 month period, rolling one month basis. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	<p>CO: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual emissions of total CO from the facility shall include CO emitted by the two turbines and duct burners, one auxiliary boiler, one emergency diesel generator and one fire water pump. The annual emissions shall be calculated as follows:</p> <p>CO (total) tons/month= Cumulative monthly CO emissions (tons/month) derived from each combustion turbine CEMS system + (2.45 lbs/hr x monthly operating hours for auxiliary boiler / 2000 lb/ton) + (11.56 lbs/hr x monthly operating hours for Emergency Diesel Generator / 2000 lbs/ton) + (1.55 lbs/hr x monthly operating hours for diesel Fire Water Pump / 2000 lbs/ton).</p> <p>CO (total) tons/year = is computed by adding the CO tons/month for a given month to the CO in tons in the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>CO: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Add total monthly emissions for a given month to total monthly emissions from the previous 11 months. Record annual emissions. [N.J.A.C. 7:27-22.16(o)]</p>	None.



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	<p>VOC (Total) &lt;= 34.98 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>Annual VOC(total) emissions from the facility shall include VOC emitted by the two turbines and duct burners, one auxiliary boiler, one emergency generator and one fire pump.</p> <p>[N.J.A.C. 7:27-22.16(a)] and [N.J.A.C. 7:27-18.2(a)]</p>	<p>VOC (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>The annual emissions shall be calculated as follows (See Recordkeeping Requirement for definition of variables):</p> $\text{VOC (total) tons/month} = [ \{ (1020 \text{ MMBtu/MMscf}) \times [(X1 \text{ lbs/MMBtu} \times Y1 \text{ MMscf/month}) + (X2 \text{ lbs/MMBtu} \times Y2 \text{ MMscf/month}) + (0.004 \text{ lbs/MMBtu} \times Y3 \text{ MMscf/month})] \} + [(42.4 \text{ lb/hr} \times YC \text{ hr/month}) + (25.3 \text{ lb/hr} \times YW \text{ hr/month}) + (27.1 \text{ lb/month} \times YH \text{ hr/month}) + (14 \text{ lb/hr} \times YSD \text{ hr/month})] \} / 2000 \text{ lbs/ton} ] + [(2.62 \text{ lbs/hr} \times \text{monthly emergency generator operating hours}) + (0.22 \text{ lbs/hr} \times \text{monthly fire pump operating hours})] / 2000 \text{ lbs/ton}$ <p>VOC (total) tons/year = VOC(total) tons/month for a given month + VOC(total) tons/month for the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>VOC (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.</p> <p>Definition of variables in VOC compliance equation (see Monitoring Requirement)                      X1 = the average lb/MMBtu emission rate, for each turbine with duct burner on, determined by the most recent stack test                      X2 = the average lb/MMBtu emission rate, for each turbine with duct burner off, determined by the most recent stack test (X1 and X2 shall be the average of all valid stack test runs)                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off                      Y3 = the monthly MMscf of gas consumed by the auxiliary boiler (Y1 and Y2 shall not include fuel consumption during start-up and shut down; Y3 shall include fuel consumption during start-up and shut down)                      YC = the total hours, during the month, that the turbine operated in cold start-up mode                      YW = the total hours, during the month, that the turbine operated in warm start-up mode                      YH = the total hours, during the month, that the turbine operated in hot start-up mode                      YSD = the total hours, during the month, that the turbine operated in shut down mode (All variables shall be determined separately for each piece of equipment). [N.J.A.C. 7:27-22.16(o)]</p>	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
4	<p>SO2 &lt;= 19.7 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>Annual emissions of total SO2 from the facility shall include SO2 emitted by the two turbines and duct burners and one auxiliary boiler. [N.J.A.C. 7:27-22.16(a)]</p>	<p>SO2: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>The annual emissions shall be calculated as follows:</p> $SO2(\text{total}) \text{ tons/month} = [(X1 \text{ lbs/MMBtu} \times 1020 \text{ MMBtu/MMscf} \times Y1 \text{ MMscf}) + (X2 \text{ lbs/MMBtu} \times 1020 \text{ MMBtu/MMscf} \times Y2 \text{ MMscf}) + (X3 \text{ lbs/MMBtu} \times 1020 \text{ MMBtu/MMscf} \times Y3 \text{ MMscf})] / 2000 \text{ lbs/ton}$ <p>Where:                      X1 = the lb/MMBtu emission rate, for each turbine with duct burner on, based on the most recent monthly natural gas sulfur test                      X2 = the lb/MMBtu emission rate, for each turbine with duct burner off, based on the most recent monthly natural gas sulfur test                      X3 = the lb/MMBtu emission rate, for the auxiliary boiler, based on the most recent monthly natural gas sulfur test                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off                      Y3 = the monthly MMscf of gas consumed by the auxiliary boiler                      (Y1, Y2 and Y3 shall include fuel consumption during start-up and shut down)                      (X1, X2, Y1 and Y2 shall be determined for each turbine separately)</p> <p>SO2 (total) tons/year = SO2(total) tons/month for a given month + SO2(total) tons/month for the preceding 11 months.</p> <p>Note: The SO2 emissions from emergency diesel generator and fire water pump are below reporting thresholds of 0.05 lb/hr. [N.J.A.C. 7:27-22.16(o)]</p>	<p>SO2: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	<p>TSP &lt;= 67.09 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>Annual TSP(total) emissions from the facility shall include TSP emitted by the two turbines and duct burners, one auxiliary boiler, one emergency generator, one fire pump and one cooling tower. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>TSP: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>The annual emissions shall be calculated as follows:</p> $\text{TSP(total) tons/month} = [(X1 \text{ lbs/MMBtu} \times 1020 \text{ MMBtu/MMscf} \times Y1 \text{ MMscf}) + (X2 \text{ lbs/MMBtu} \times 1020 \text{ MMBtu/MMscf} \times Y2 \text{ MMscf}) + (0.0033 \text{ lbs/MMBtu} \times 1020 \text{ MMBtu/MMscf} \times \text{monthly MMscf of gas consumed by the auxiliary boiler}) + (0.59 \text{ lbs/hr} \times \text{monthly emergency generator operating hours}) + (0.08 \text{ lbs/hr} \times \text{monthly fire pump operating hours}) + (2.29 \text{ lb/hr} \times \text{monthly cooling tower operating hours}) / 2000 \text{ lbs/ton}]$ <p>Where:                      X1 = the average lb/MMBtu emission rate, for each turbine with duct burner on, determined by the most recent stack test                      X2 = the average lb/MMBtu emission rate, for each turbine with duct burner off, determined by the most recent stack test                      (X1 and X2 shall be the average of all valid stack test runs)                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off                      (Y1 and Y2 shall include fuel consumption during start-up and shut down)                      (X1, X2, Y1 and Y2 shall be determined for each turbine separately)</p> <p>TSP (total) tons/year = TSP(total) tons/month for a given month + TSP(total) tons/month for the preceding 11 months.                      [N.J.A.C. 7:27-22.16(o)]</p>	<p>TSP: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.                      [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	<p>PM-10 (Total) &lt;= 101.26 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>Annual PM-10(total) emissions from the facility shall include PM-10 emitted by the two turbines and duct burners, one auxiliary boiler, one emergency generator, one fire pump and one cooling tower.</p> <p>[N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>PM-10 (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>The annual emissions shall be calculated as follows:</p> <p>PM-10(total) tons/month = [(X1 lbs/MMBtu x 1020 MMBtu/MMscf x Y1 MMscf) + (X2 lbs/MMBtu x 1020 MMBtu/MMscf x Y2 MMscf) + (0.005 lbs/MMBtu x 1020 MMBtu/MMscf x monthly MMscf of gas consumed by the auxiliary boiler) + (0.66 lbs/hr x monthly emergency generator operating hours) + (0.09 lbs/hr x monthly fire pump operating hours) + (1.33 lb/hr x monthly cooling tower operating hours) / 2000 lbs/ton]</p> <p>Where:                      X1 = the average lb/MMBtu emission rate, for each turbine with duct burner on, determined by the most recent stack test                      X2 = the average lb/MMBtu emission rate, for each turbine with duct burner off, determined by the most recent stack test                      (X1 and X2 shall be the average of all valid stack test runs)                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off                      (Y1 and Y2 shall include fuel consumption during start-up and shut down)                      (X1, X2, Y1 and Y2 shall be determined for each turbine separately)</p> <p>PM-10 (total) tons/year = PM-10(total) tons/month for a given month + PM-10(total) tons/month for the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-10 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	<p>PM-2.5 (Total) &lt;= 97.6 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>Annual PM-2.5(total) emissions from the facility shall include PM-2.5 emitted by the two turbines and duct burners, one auxiliary boiler, one emergency generator, one fire pump and one cooling tower. [N.J.A.C. 7:27-22.16(a)]</p>	<p>PM-2.5 (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>The annual emissions shall be calculated as follows:</p> <p>PM-2.5(total) tons/month = [(X1 lbs/MMBtu x 1020 MMBtu/MMscf x Y1 MMscf) + (X2 lbs/MMBtu x 1020 MMBtu/MMscf x Y2 MMscf) + (0.005 lbs/MMBtu x 1020 MMBtu/MMscf x monthly MMscf of gas consumed by the auxiliary boiler) + (0.66 lbs/hr x monthly emergency generator operating hours) + (0.09 lbs/hr x monthly fire pump operating hours) + (0.47 lb/hr x monthly cooling tower operating hours) / 2000 lbs/ton]</p> <p>Where:                      X1 = the average lb/MMBtu emission rate, for each turbine with duct burner on, determined by the most recent stack test                      X2 = the average lb/MMBtu emission rate, for each turbine with duct burner off, determined by the most recent stack test (X1 and X2 shall be the average of all valid stack test runs)                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off (Y1 and Y2 shall include fuel consumption during start-up and shut down)                      (X1, X2, Y1 and Y2 shall be determined for each turbine separately)</p> <p>PM-2.5 (total) tons/year = PM-2.5(total) tons/month for a given month + PM-2.5(total) tons/month for the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-2.5 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	<p>SO3 and H2SO4, as converted and expressed as H2SO4 &lt;= 10.55 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>NOTE: This includes emissions from the turbines, duct burners, auxiliary boiler (U1) and sulfuric acid tank (IS3).</p> <p>[N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>SO3 and H2SO4, as converted and expressed as H2SO4: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions of total sulfuric acid (H2SO4) from the facility shall include H2SO4 emitted by the two turbines and duct burners, the auxiliary boiler and the sulfuric acid storage tank. The annual emissions shall be calculated as follows:</p> <p>Sulfuric Acid (Total) tons/month = (0.0006 lbs/MMBtu x 1020 Btu/cft x sum of actual MMcf of gas consumed per month for two combustion turbines firing natural gas with duct burner on / 2000 lbs/ton) + (0.0006 lbs/MMBtu x 1020 Btu/cft x sum of actual MMcf of gas consumed per month for two combustion turbines firing natural gas with duct burner off/2000 lbs/ton) + [(0.00008 lbs/MMBtu boiler emission rate) * (1020 MMBtu/MMScf) * (total amount of natural gas (MMScf) combusted during the month by the auxilliary boiler) / (2000 lbs/ton)] + sulfuric acid emissions from storage tank (determined using EPA Tanks 4.0.9 software).</p> <p>SO3 and H2SO4: (Total) tons/year: shall be calculated by adding the SO3 and H2SO4 tons/month for a given month to the SO3 and H2SO4 in tons in the preceding 11 calendar months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>SO3 and H2SO4, as converted and expressed as H2SO4: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	<p>Ammonia &lt;= 119 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines. This limit assumes steady state operation of each turbine for 8500hr/yr (at ISO conditions). [N.J.A.C. 7:27-22.16(a)]</p>	<p>Ammonia: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions of total Ammonia from the facility shall include Ammonia emitted by the two turbines (CC) and duct burners (DB) and shall be calculated as follows:</p> <p>Ammonia tons/month = [(Total Ammonia emitted during the month by two combustion turbines / duct burners operating simultaneously (tons / month) measured by continuous process monitoring system)] + [(Total Ammonia emitted during the month by two combustion turbines operating without duct burner (tons / month) measured by continuous process monitoring system)]</p> <p>Ammonia tons/year = (Total Ammonia (tons/month) for a given month) + (Total Ammonia (tons/month) for the preceding 11 calendar months). [N.J.A.C. 7:27-22.16(o)]</p>	<p>Ammonia: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	<p>Methane <math>\leq</math> 152.78 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes steady state operation of each turbine for 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Methane: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions of total Methane from the facility shall include Methane emitted by the two turbines (CC), duct burners (DB) and one auxiliary boiler and shall be calculated as follows:</p> <p>Methane tons/month = [(18.3 lbs/hr turbine with db emission rate) x (total hours of operation during the month for two combustion turbines with duct burners operating simultaneously) / (2000 lb/ton)] + [(17.9 lbs/hr turbine emission rate) x (total hours of operation during the month for two combustion turbines without duct burners) / (2000 lb/ton)] + [(0.0023 lbs/MMBtu boiler emission rate) * (1020 MMBtu/MMScf) * (total amount of natural gas (MMScf) combusted during the month by the auxiliary boiler) / (2000 lbs/ton)]</p> <p>Note: The Methane emissions from emergency diesel generator and fire water pump are below reporting thresholds of 0.05 lb/hr. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Methane: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Add total monthly emissions for a given month to total monthly emissions from the previous 11 months. Record annual emissions. [N.J.A.C. 7:27-22.16(o)]</p>	None.
11	<p>Total HAPs <math>\leq</math> 8.22 tons/yr. Based on the sum of all HAPS emissions, including those above and those below the reporting thresholds in Appendix B of N.J.A.C.7:27-22. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Total HAPs: Monitored by calculations annually, based on a 12 calendar month period. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Total HAPs: Recordkeeping by manual logging of parameter or storing data in a computer data system annually. [N.J.A.C. 7:27-22.16(o)]</p>	None.
12	<p>Acrolein <math>\leq</math> 0.06 tons/yr. Based on operation of both turbines for 8500 hr/yr and operation of both duct burners for 1800 hr/yr. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.
13	<p>Benzene <math>\leq</math> 0.23 tons/yr. Based on operation of both turbines for 8500 hr/yr and operation of both duct burners for 1800 hr/yr. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
14	Formaldehyde <= 2.15 tons/yr. Based on operation of both turbines for 8500 hr/yr and operation of both duct burners for 1800 hr/yr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
15	Toluene <= 2.51 tons/yr. Based on operation of both turbines for 8500 hr/yr and operation of both duct burners for 1800 hr/yr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
16	NOx and VOC Emission Offsets 181.2 tons of NOx offsets, and 45.5 tons of VOC (total) offsets that meet the criteria established in N.J.A.C. 7:27-18.1 et. seq. for NOx and VOC (total) emissions, have been acquired by the facility. NOTE: These emission offsets were acquired from sources less than 100 miles away from the proposed Newark Energy Center Site.  THIS REQUIREMENT HAS BEEN SATISFIED (BOP140001). [N.J.A.C. 7:27-18.3(c)1]	None.	None.	Submit documentation of compliance: Once initially. Obtain emission offsets and submit Purchase Agreement to the Chief, Bureau of Air Quality Permitting, and REO, prior to initial startup of the facility.  The permittee shall submit an Administrative Amendment application to NJDEP to apply emission reduction credits to offset emission increases prior to initial start-up of the turbines. [N.J.A.C. 7:27-18.18(c)1]

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**Subject Item: GR2 GHG**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	<p>Greenhouse gases as CO<sub>2</sub>e: ≤ 2,160,278 tons per 12 consecutive month period for the entire facility.</p> <p>From operating permit BOP160001.</p> <p>Based on the sum of annual GHG emission limits for all combustion equipment in the permit ((2) turbines, (2) duct burners, (1) auxilliary boiler, (1) emergency generator and (1) emergency fire pump)</p> <p>[N.J.A.C. 7:27-22.16(a)] and [40 CFR 52.21]</p>	<p>Greenhouse gases as CO<sub>2</sub>e: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Facility wide annual CO<sub>2</sub>e emissions (CO<sub>2</sub>e (total) tons/year) shall be calculated by adding the total monthly CO<sub>2</sub>e emissions from all combustion equipment at the facility for a given month to total monthly CO<sub>2</sub>e emissions from all combustion equipment at the facility for the previous 11 months as follows:</p> <p>Monthly emissions of total CO<sub>2</sub>e from the facility = Monthly CO<sub>2</sub>e emitted by the (2) turbines and duct burners + Monthly CO<sub>2</sub>e emitted by the auxiliary boiler + Monthly CO<sub>2</sub>e emitted by the emergency diesel generator + Monthly CO<sub>2</sub>e emitted by the fire water pump. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Greenhouse gases as CO<sub>2</sub>e: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
2	<p>Greenhouse gases as CO<sub>2</sub>e: &lt;= 2,157,125 tons per year for the two turbines and two duct burners.</p> <p>From operating permit BOP160001.</p> <p>Based on the following Emission Factors: CO<sub>2</sub> (40 CFR 75, Equation G-4) - CT and DB: 119 lbMMBtu Methane (AP-42, table 3.1-2a) - CT: 0.0086 lb/MMBtu; DB: 0.00225 lb/MMBtu Nitrous Oxide (AP-42, table 1.4-2) - CT: 0.003lb/MMBtu; DB: 0.00216 lb/MMBtu</p> <p>The following Global Warming Potentials (40 CFR 98, table A-1) Methane: 25; Nitrous Oxide: 298</p> <p>The following maximum heat inputs: Turbines: 2320 MMBtu/hr Duct Burners: 211 MMBtu/hr</p> <p>And combustion of natural gas for: Turbines: 6700 hours each Duct Burners: 1800 hours each</p> <p>[N.J.A.C. 7:27-22.16(a)] and [40 CFR 52.21]</p>	<p>Greenhouse gases as CO<sub>2</sub>e: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>CO<sub>2</sub>e tons/year shall be calculated by adding the total CO<sub>2</sub>e tons/month emissions from the (2) turbines and (2) duct burners for a given month to the total CO<sub>2</sub>e tons/month emissions from the (2) turbines and (2) duct burners for the previous 11 months.</p> <p>CO<sub>2</sub>e tons/month = (119 lb/MMBtu x 1020 MMBtu/MMScf x (CTGas + DBGas) MMScf/month / 2000 lbs/ton) + ( 25 x 0.0086 lb/MMBtu x 1020 MMBtu/MMScf x CTGas MMScf/month / 2000 lbs/ton) + ( 25 x 0.00225 lb/MMBtu x 1020 MMBtu/MMScf x DBGas MMScf/month / 2000 lbs/ton) + ( 298 x 0.003 lb/MMBtu x 1020 MMBtu/MMScf x CTGas MMScf/month / 2000 lbs/ton) + ( 298 x 0.00216 lb/MMBtu x 1020 MMBtu/MMScf x DBGas MMScf/month / 2000 lbs/ton)</p> <p>Where: CTGas = total MMScf of gas consumed by the (2) combustion turbines (CT) during the month, including fuel consumed during start-up and shut down. DBGas = total MMScf of gas consumed by the (2) duct burners (DB) during the month, including fuel consumed during start-up and shut down. * See "Applicable Requirement" for Emission Factors and Global Warming Potentials. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Greenhouse gases as CO<sub>2</sub>e: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.</p> <p>Record annual emissions each calendar month. See calculation under "monitoring requirement" for annual emissions. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	<p>The turbine net heat Rate at base load without Duct Burner shall be <math>\leq 7,522</math> Btu/kWh (HHV) at ISO conditions, based on higher heating value of the fuel.</p> <p>[N.J.A.C. 7:27-22.16(a)] and [40 CFR 52.21]</p>	<p>Monitored by calculations once initially</p> $\text{Btu/kW-hr} = X (\text{Scf/hr}) * Y (\text{Btu/Scf}) / Z (\text{kW})$ <p>Where:  X = Total MMScf of gas consumed during the hour.  Y = Total British thermal units per Scf of gas, based on higher heating value of gas.  Z = Total kiloWatts of power output to grid.  [N.J.A.C. 7:27-22.16(o)]</p>	<p>Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>
4	<p>CO<sub>2</sub> <math>\leq 887</math> lb/MW-hr (gross output) for each combustion turbine and its associated duct burner. [N.J.A.C. 7:27-22.16(a)] and [40 CFR 52.21]</p>	<p>CO<sub>2</sub>: Monitored by stack emission testing once initially. Please see stack testing requirements at U1 OS Summary. [N.J.A.C. 7:27-22.16(o)]</p>	<p>CO<sub>2</sub>: Recordkeeping by stack test results once initially. Please see stack testing requirements at U1 OS Summary. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Stack Test - Submit protocol, conduct test and submit results: Once initially. Please see stack testing requirements at U1 OS Summary. [N.J.A.C. 7:27-22.16(o)]</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	<p>CO2 &lt;= 887 lb/MW-hr (gross output) for each combustion turbine and its associated duct burner. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>CO2: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>lb CO2/MWh for each combustion turbine / duct burner shall be determined as follows:</p> <p>(1) Determine total hourly CO2 mass emissions (lbs/hr) emitted by each turbine/duct burner during each operating hour of the month, using the following equation:  <math display="block">\text{CO2 lb/hr} = (119 \text{ lb/MMBtu} \times 1020 \text{ MMBtu/MMScf} \times (\text{CTGas} + \text{DBGas}) \text{ MMScf/hr})</math>                     Where:                      CTGas = total MMScf of gas consumed by the combustion turbine (CT) during the hour, including fuel consumed during start-up and shut down.                      DBGas = total MMScf of gas consumed by the duct burner (DB) during the hour, including fuel consumed during start-up and shut down.                      Natural Gas Emission Factor (lb/MMBtu):                      CO2 (40 CFR 75, Equation G-4) - CT and DB: 119</p> <p>(2) Determine total gross electric output from the turbine/duct burner, in terms of MWh, for each operating hour of the month.</p> <p>(3) Add the hourly CO2 mass emissions (lb/hr) for the entire month, and add the hourly gross output (MW) for the entire month.</p> <p>(4) Divide the total CO2 mass emissions calculated for the entire month (lb/hr) by the total hourly gross output calculated for the entire month (MW) to determine the total lb/MWhr for that month.</p> <p>(5) Add the CO2 lb/MWhr emission rate for that month to the sum of the CO2 lb/MWhr emission rate for the previous 11 calendar months and divide the total by 12 to determine the 12-month rolling average.                      [N.J.A.C. 7:27-22.16(o)]</p>	<p>CO2: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.                      [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	<p>Greenhouse gases as CO<sub>2</sub>e: &lt;=2,885 tons per year for the Auxiliary Boiler.</p> <p>From operating permit BOP160001.</p> <p>Based on the following Emission Factors:                      CO<sub>2</sub> (40 CFR 75, Equation G-4) - 119 lbMMBtu                      Methane (AP-42, table 1.4-2) - 0.00225 lb/MMBtu                      Nitrous Oxide (AP-42, table 1.4-2) - 0.00063 lb/MMBtu</p> <p>The following Global Warming Potentials (40 CFR 98, table A-1)                      Methane: 25; Nitrous Oxide: 298</p> <p>A maximum heat input of 60.6 MMBtu/hr</p> <p>And combustion of natural gas for 800 hour/year</p> <p>[N.J.A.C. 7:27-22.16(a)] and [40 CFR 52.21]</p>	<p>Greenhouse gases as CO<sub>2</sub>e: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>CO<sub>2</sub>e tons/year shall be calculated by adding the total CO<sub>2</sub>e tons/month emissions from the auxilliary boiler for a given month to the total CO<sub>2</sub>e tons/month emissions from the auxilliary boiler for the previous 11 months.</p> <p>CO<sub>2</sub>e tons/month = (119 lb/MMBtu x 1020 MMBtu/MMScf x ABGas MMScf/month / 2000 lbs/ton) + (25 x 0.00225 lb/MMBtu x 1020 MMBtu/MMScf x ABGas MMScf/month / 2000 lbs/ton) + (298 x 0.00063 lb/MMBtu x 1020 MMBtu/MMScf x ABGas MMScf/month / 2000 lbs/ton)</p> <p>Where:                      ABGas = total MMScf of gas consumed by the auxilliary boiler (AB) during the month, including fuel consumed during start-up and shut down.                      * See "Applicable Requirement" for Emission Factors and Global Warming Potentials. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Greenhouse gases as CO<sub>2</sub>e: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.</p> <p>Record annual emissions each calendar month. See calculation under "monitoring requirement" for annual emissions.                      [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	<p>Greenhouse gases as CO2e: &lt;=234 tons per year for emergency generator.</p> <p>From operating permit BOP160001.</p> <p>Based on the following Emission Factors: CO2 (40 CFR 75, Equation G-4) - 162 lbMMBtu Methane (AP-42, table 3.1-4) - 0.0081 lb/MMBtu Nitrous Oxide (Climate Registry General Reporting Protocol (GRP) (Emission Factors by Fuel Type and Sector)) - 0.00132 lb/MMBtu</p> <p>The following Global Warming Potentials (40 CFR 98, table A-1) Methane: 25; Nitrous Oxide: 298</p> <p>A maximum heat input of 14.36 MMBtu/hr</p> <p>And combustion of diesel fuel for 200 hour/year</p> <p>[N.J.A.C. 7:27-22.16(a)] and [40 CFR 52.21]</p>	<p>Greenhouse gases as CO2e: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>CO2e tons/year shall be calculated by adding the total CO2e tons/month emissions from the emergency generator for a given month to the total CO2e tons/month emissions from the emergency generator for the previous 11 months.</p> <p>CO2e tons/month = (162 lb/MMBtu x 139,000 MMBtu/MMGal x EG MMGal/month / 2000 lbs/ton) + (25 x 0.0081 lb/MMBtu x 139,000 MMBtu/MMGal x EG MMGal/month / 2000 lbs/ton) + (298 x 0.00132 lb/MMBtu x 139,000 MMBtu/MMGal x EG MMGal/month / 2000 lbs/ton)</p> <p>EG = total gallons of ULSD consumed by the emergency generator (EG) during the month, including fuel consumed during startup and shut down.</p> <p>* See "Applicable Requirement" for Emission Factors and Global Warming Potentials. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Greenhouse gases as CO2e: Recordkeeping by manual logging of parameter or storing data in a computer data system annually. Record annual emissions. (See monitoring requirement). [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	<p>Greenhouse gases as CO<sub>2</sub>e: ≤33.6 tons per year for fire water pump engine.</p> <p>From operating permit BOP160001.</p> <p>Based on the following Emission Factors:                      CO<sub>2</sub> (40 CFR 75, Equation G-4) - 162 lbMMBtu                      Methane (AP-42, table 3.1-4) - 0.0081 lb/MMBtu                      Nitrous Oxide (Climate Registry General Reporting Protocol (GRP) (Emission Factors by Fuel Type and Sector)) - 0.00132 lb/MMBtu</p> <p>The following Global Warming Potentials (40 CFR 98, table A-1)                      Methane: 25; Nitrous Oxide: 298</p> <p>A maximum heat input of 2.06 MMBtu/hr</p> <p>And combustion of diesel fuel for 200 hour/year</p> <p>[N.J.A.C. 7:27-22.16(a)] and [40 CFR 52.21]</p>	<p>Greenhouse gases as CO<sub>2</sub>e: Monitored by calculations annually, based on a 12 calendar month period.</p> <p>CO<sub>2</sub>e tons/year shall be calculated by adding the total CO<sub>2</sub>e tons/month emissions from the fire pump for a given month to the total CO<sub>2</sub>e tons/month emissions from the fire pump for the previous 11 months.</p> <p>CO<sub>2</sub>e tons/month = (162 lb/MMBtu x 139,000 MMBtu/MMGal x EG MMGal/month / 2000 lbs/ton) + (25 x 0.0081 lb/MMBtu x 139,000 MMBtu/MMGal x EG MMGal/month / 2000 lbs/ton) + (298 x 0.00132 lb/MMBtu x 139,000 MMBtu/MMGal x EG MMGal/month / 2000 lbs/ton)</p> <p>EG = total gallons of ULSD consumed by the emergency generator (EG) during the month, including fuel consumed during startup and shut down.</p> <p>* See "Applicable Requirement" for Emission Factors and Global Warming Potentials. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Greenhouse gases as CO<sub>2</sub>e: Recordkeeping by manual logging of parameter or storing data in a computer data system annually. Record annual emissions. (See monitoring requirement). [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>



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**Emission Unit:** U1 2 Turbines, 2 HRSGs, and Aux. Boiler

**Operating Scenario:** OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	<p>Initial Stack Test Requirement for Turbines: Conduct a comprehensive stack test at emission points PT1 and PT2, as applicable, within 180 days of initial start up of the turbine to demonstrate compliance with the NOx, CO, VOC, SO2, TSP, PM-10, PM-2.5, CO2 and Ammonia emission limits while firing natural gas.</p> <p>Stack testing shall be conducted every quarter that the turbine is operated to demonstrate compliance with the PM-10 and PM2.5 limits per reference # 3</p> <p>Three tests shall be conducted at worst-case permitted operating conditions achievable on the day of testing, under the corresponding test conditions, such as ambient (relative humidity and temperature) conditions, with regard to meeting the applicable emission standards, but without creating an unsafe condition.</p> <p>The permittee shall submit the turbine load performance curve with the protocol and all data necessary to substantiate the ambient conditions with the test report. The testing shall be conducted in accordance with the protocol approved by EMS.</p> <p>The initial performance test for compliance with NOx emission limits, as per NSPS KKKK, must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Alternatively, the testing might be performed at the highest achievable load point, if at least 75 percent of peak load cannot be achieved. [40CFR60.4400] [N.J.A.C. 7:27-22.16(a)]</p>	<p>Monitored by stack emission testing once initially. Unless otherwise approved in the stack test protocol or by the Department, each test run shall be 60 minutes in sampling duration. Compliance period shall be as specified in the monitoring requirement for each applicable emission limit. Stack tests shall be conducted for NOx, CO, VOC, SO2, TSP, PM-10, PM-2.5, CO2 and Ammonia emissions while firing natural gas.</p> <p>In accordance with N.J.A.C 7:27-19.15(a)2, any NOx testing conducted pursuant to this section shall be conducted concurrently with CO testing. The applicable NOx emission limits in N.J.A.C 7:27-19 will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C 7:27-16.9 or any other permit limit for CO, whichever is more stringent, is also met. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Recordkeeping by stack test results once initially. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule.</p> <p>Submit a stack test protocol to the Environmental Measurement Section (EMS) at PO Box 437, Trenton, NJ 08625 no later than 60 days after the initial start-up of the turbine. Within 30 days of protocol approval, the permittee must contact EMS at 609-530-4041 to schedule a mutually acceptable test date. The stack test must be conducted within 180 days of the initial start-up of the turbine.</p> <p>A full stack test report must be submitted to EMS and a certified summary test report, as described in the protocol, must be submitted to the Regional Enforcement Office within 45 days after performing the stack test pursuant to N.J.A.C. 7:27-22.19(d). The test results must be certified by a licensed professional engineer or certified industrial hygienist.</p> <p>The test results shall be reported in lb/hr, lb/MMBTU (HHV), lb/Mw-hr and ppmvd @ 15% O2 as applicable. [N.J.A.C. 7:27-22.18(e)], and. [N.J.A.C. 7:27-22.18(h)]. [N.J.A.C. 7:27-22.18(h)]</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
2	<p>Renewal Stack Test Requirement for Turbines: Conduct a comprehensive stack test at emission points PT1 and PT2, as applicable, at least 18 months prior to the expiration of the approved operating permit to demonstrate compliance with the NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, TSP, PM-10 and PM-2.5 emission limits while burning natural gas.</p> <p>Stack testing shall be conducted every quarter to demonstrate compliance with the PM-10 and PM<sub>2.5</sub> limits per reference # 3</p> <p>Three tests shall be conducted at worst-case permitted operating conditions achievable on the day of testing, under the corresponding test conditions, such as ambient (relative humidity and temperature) conditions, with regard to meeting the applicable emission standards, but without creating an unsafe condition.</p> <p>The permittee shall submit the turbine load performance curve with the protocol and all data necessary to substantiate the ambient conditions with the test report. The testing shall be conducted in accordance with the protocol approved by EMS.</p> <p>The permittee may propose to use CEMS data to satisfy this stack testing requirement for NO<sub>x</sub> and CO pursuant to REF #4 below. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Monitored by stack emission testing prior to permit expiration date. Unless otherwise approved in the stack test protocol or by the Department, each test run shall be 60 minutes in sampling duration. Compliance period shall be as specified in the monitoring requirement for each applicable emission limit. Stack tests shall be conducted for for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub>, TSP, PM-10, and PM-2.5 emissions while combusting natural gas.</p> <p>In accordance with N.J.A.C 7:27-19.15(a)2, any NO<sub>x</sub> testing conducted pursuant to this section shall be conducted concurrently with CO testing. The applicable NO<sub>x</sub> emission limits in N.J.A.C 7:27-19 will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C 7:27-16.9 or any other permit limit for CO, whichever is more stringent, is also met. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Recordkeeping by stack test results prior to permit renewal. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule Submit a stack test protocol to the Environmental Measurement Section (EMS) at PO Box 437, Trenton, NJ 08625 at least 30 months prior to the expiration of the approved operating permit. Within 30 days of protocol approval, the permittee must contact EMS at 609-530-4041 to schedule a mutually acceptable test date.</p> <p>A full stack test report must be submitted to EMS and a certified summary test report, as described in the protocol, must be submitted to the Regional Enforcement Office within 45 days after performing the stack test pursuant to N.J.A.C. 7:27-22.19(d). The test results must be certified by a licensed professional engineer or certified industrial hygienist.</p> <p>The test results shall be reported in lb/hr, lb/MMBTU (HHV), lb/Mw-hr and ppmvd @ 15% O<sub>2</sub> as applicable.</p> <p>[N.J.A.C. 7:27-22.18(e)], and. [N.J.A.C. 7:27-22.18(h)]</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	<p>PM-10 and PM-2.5 Quarterly Stack Test Requirement for Turbines: Conduct a comprehensive stack test at emission point PT1 and PT2, as applicable, once during every quarter that the turbine is operated to demonstrate compliance with the PM-10 and PM-2.5 emission limits while burning natural gas. Each stack test performed pursuant to REF #1 or #2 above shall satisfy this requirement for the quarter in which that test was performed.</p> <p>If 8 consecutive quarterly stack tests each demonstrate emissions of less than 80 percent of the permit limit, the permittee may request a reduction in the frequency of this stack testing by submitting a significant modification application, along with quarterly test results.</p> <p>Three tests shall be conducted at worst-case permitted operating conditions achievable on the day of testing, under the corresponding test conditions, such as ambient (relative humidity and temperature) conditions, with regard to meeting the applicable emission standards, but without creating an unsafe condition.</p> <p>The permittee shall submit the turbine load performance curve with the protocol and all data necessary to substantiate the ambient conditions with the test report. All quarterly stack testing shall be performed pursuant to the stack test protocol approved by the Department pursuant to REF #1, unless a modified protocol is approved by the Department thereafter. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Monitored by stack emission testing at the approved frequency of once each quarter that equipment is operated.</p> <p>Unless otherwise approved in the stack test protocol or by the Department, each test run shall be 60 minutes in sampling duration. Compliance period shall be as specified in the monitoring requirement for each applicable emission limit. Stack tests shall be conducted for PM-10 and PM-2.5 emissions while combusting natural gas. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Stack Test - The permittee shall contact EMS at 609-530-4041 to schedule a mutually acceptable test date for the next quarterly stack test within 60 days of performing each stack test.</p> <p>A full stack test report must be submitted to EMS and a certified summary test report, as described in the protocol, must be submitted to the Regional Enforcement Office within 45 days after performing the stack test pursuant to N.J.A.C. 7:27-22.19(d). The test results must be certified by a licensed professional engineer or certified industrial hygienist.</p> <p>The test results shall be reported in lb/hr [N.J.A.C. 7:27-22.18(e)], and. [N.J.A.C. 7:27-22.18(h)]</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
4	<p>Renewal Stack Testing Alternative for Turbines: The permittee may propose to use CEMS data to satisfy the renewal stack testing requirements, for NOx and CO (see REF #2), with EMS approval. Such alternative shall be proposed in the stack testing protocol. In order for EMS to approve using CEMS data at the time of the stack test, the CEMS must be certified and be in compliance with all daily, quarterly and annual quality assurance requirements. The CEMS shall monitor and record emissions in units identical to those required by the applicable stack testing requirements of this permit. CEMS data, if allowed by this permit, shall be taken at the same worst case conditions as described for stack testing. [N.J.A.C. 7:27-22.16(a)]</p>	None.	<p>Other: Maintain certification of CEMS and obtain approval to use CEMS in lieu of renewal stack testing from EMS through stack test protocol approval.[N.J.A.C. 7:27-22.16(o)].</p>	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	<p>Continuous Emission Monitoring System (CEMS) for NOx, CO and O2 for Turbines:</p> <p>Continuous emission monitors and continuous emission data recorders shall be installed and operated, calibrated and maintained to measure and record the concentration of NOx, CO and O2 emitted from emission point PT1 and PT2, as applicable. Continuous Emission Monitoring (CEM) system must comply with USEPA performance and siting specifications (40 CFR Part 60, Appendix B). Emissions shall be monitored during all operation of the turbine.</p> <p>The Permittee shall submit an equipment protocol to the Department in accordance with the NJDEP Technical Manual 1005 for review and approval.</p> <p>The permittee shall submit a Performance Specification Test (PST) protocol to the Department for review and approval.</p> <p>The permittee shall conduct a PST test using a protocol approved by the Department for all continuous emissions monitors (CEMS).</p> <p>The permittee shall submit the results of any required PST test to the Department for review and approval. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Monitored by continuous emission monitoring system continuously. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Submit an equipment protocol: Within 60 days from the date of the approved permit to the Department for review and approval.</p> <p>Submit CEM performance specification test (PST) protocol within 90 days of the approved permit to the Department for review and approval. If the turbine is not constructed by this date then the permittee shall submit the PST protocol 90 days prior to the first fire in the turbine.</p> <p>Contact the Department within 30 days after the approval of the monitoring protocol and schedule a date for conducting the PST.</p> <p>Install the approved CEM equipment 30 days prior to the first fire in the turbine.</p> <p>Perform the PST prior to any required source emissions testing and within 90 days after the later of the following events:</p> <ul style="list-style-type: none"> <li>i. Installation of the CEMS;</li> <li>ii The commencement of operation of the equipment being monitored; or</li> <li>iii. Department approval of the testing protocol.</li> </ul> <p>Submit to the Department a PST report documenting the results of the CEM certification test program within 30 days of the completion of each required CEM PST.</p> <p>The permittee shall not commence combustion in the turbine prior to approval of all monitoring equipment. [N.J.A.C. 7:27-22.16(o)]</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	<p>Continuous Process Monitoring System for Ammonia for Turbines:</p> <p>Continuous process monitor and continuous process data recorder shall be installed and operated, calibrated and maintained to measure and record the concentration of Ammonia emitted from emission point PT1 and PT2, as applicable. Emissions shall be monitored during all operation of the turbine.</p> <p>The Permittee shall submit an equipment protocol to the Department in accordance with the NJDEP Technical Manual 1005 for review and approval. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Other: Monitored by continuous process monitoring system continuously.[N.J.A.C. 7:27-22.16(o)].</p>	<p>Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Submit an equipment protocol: Within 60 days from the date of the approved permit to the Department for review and approval.</p> <p>Install the approved continuous process monitor equipment 30 days prior to the initial start up of the combustion turbine.</p> <p>The permittee shall not commence combustion in the turbine prior to approval of all monitoring equipment. [N.J.A.C. 7:27-22.16(o)]</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	<p>Initial Stack Test Requirement for Boiler: Conduct a comprehensive stack test at emission point PT3, within 180 days of initial start up of the boiler to demonstrate compliance with the NOx, CO, VOC, TSP, PM-10 and PM-2.5 emission limits while firing natural gas.</p> <p>Three tests shall be conducted at worst-case permitted operating conditions achievable on the day of testing, under the corresponding test conditions, such as ambient (relative humidity and temperature) conditions, with regard to meeting the applicable emission standards, but without creating an unsafe condition.</p> <p>The permittee shall submit all data necessary to substantiate the ambient conditions with the test report. The testing shall be conducted in accordance with the protocol approved by Chief, EMS. [N.J.A.C. 7:27-22.16(a)] NON-COMPLIANT AT TIME OF PERMIT ISSUANCE. SEE COMPLIANCE SCHEDULE IN PART G.</p>	<p>Monitored by stack emission testing once initially. Unless otherwise approved in the stack test protocol or by the Department, each test run shall be 60 minutes in sampling duration. Compliance period shall be as specified in the monitoring requirement for each applicable emission limit. Stack tests shall be conducted for NOx, CO, VOC, TSP, PM-10 and PM-2.5 emissions while combusting natural gas.</p> <p>In accordance with N.J.A.C 7:27-19.15(a)2, any NOx testing conducted pursuant to this section shall be conducted concurrently with CO testing. The applicable NOx emission limits in N.J.A.C 7:27-19 will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C 7:27-16.9 or any other permit limit for CO, whichever is more stringent, is also met. [N.J.A.C. 7:27-22.16(o)] NON-COMPLIANT AT TIME OF PERMIT ISSUANCE. SEE COMPLIANCE SCHEDULE IN PART G.</p>	<p>Recordkeeping by stack test results once initially. [N.J.A.C. 7:27-22.16(o)] NON-COMPLIANT AT TIME OF PERMIT ISSUANCE. SEE COMPLIANCE SCHEDULE IN PART G.</p>	<p>Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Submit a stack test protocol to the Environmental Measurement Section (EMS) at PO Box 437, Trenton, NJ 08625 no later than 60 days after the initial start-up of the boiler. Within 30 days of protocol approval, the permittee must contact EMS at 609-530-4041 to schedule a mutually acceptable test date. The stack test must be conducted within 180 days of the initial start-up of the boiler.</p> <p>A full stack test report must be submitted to EMS and a certified summary test report, as described in the protocol, must be submitted to the Regional Enforcement Office within 45 days after performing the stack test pursuant to N.J.A.C. 7:27-22.19(d). The test results must be certified by a licensed professional engineer or certified industrial hygienist.</p> <p>The test results shall be reported in lb/hr, lb/MMBTU (HHV), and ppmvd @ 15% O2 as applicable.</p> <p>[N.J.A.C. 7:27-22.18(e)], and. [N.J.A.C. 7:27-22.18(h)] NON-COMPLIANT AT TIME OF PERMIT ISSUANCE. SEE COMPLIANCE SCHEDULE IN PART G.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	<p>Turbines: The Owner or Operator shall adjust the combustion process in accordance with the procedure set forth at N.J.A.C. 7:27-19.16, in order to optimize the emission of NOx, CO and VOC. Adjustment of the combustion process shall be carried out according to manufacturer's recommended procedures and maintenance schedules for each turbine. [N.J.A.C. 7:27-16.9(f)2, N.J.A.C. 7:27-19.5(e)2] &amp; [N.J.A.C. 7:27-19.16(g)]</p>	<p>Monitored by continuous emission monitoring system upon performing combustion adjustment Or Periodic Emission Monitoring. [N.J.A.C. 7:27-19.16(h)]</p>	<p>Recordkeeping by data acquisition system (DAS) / electronic data storage upon performing combustion adjustment or manual logging of parameter upon performing combustion adjustment. The records should be kept in a permanent form suitable for inspections.</p> <p>The owner or operator shall record the following information for each adjustment:</p> <ol style="list-style-type: none"> <li>1. The date of the adjustment and the times at which it began and ended;</li> <li>2. The name, title and affiliation of the person who performed the procedure and adjustment;</li> <li>3. The type of procedure and maintenance performed;</li> <li>4. The concentration of NOx, CO and O2 measured before and after the adjustment was made; and</li> <li>5. The type and amount of fuel used since the last combustion adjustment was performed. [N.J.A.C. 7:27-19.16(h)]</li> </ol>	<p>None.</p>



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	<p>Boiler: Adjust the combustion process annually in the same quarter of each calendar year, in accordance with the procedures for combustion adjustment monitoring specified in NJDEP Technical Manual 1005 and the procedure at N.J.A.C. 7:27-19.16(a).</p> <ol style="list-style-type: none"> <li>1. Inspect the burner, and clean or replace any components of the burner as necessary.</li> <li>2. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern consistent with the manufacturer's specifications.</li> <li>3. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly</li> <li>4. Minimize total emissions of NOx and CO consistent with the manufacturer's specifications.</li> <li>5. Measure the concentrations in the effluent stream of NOx, CO and O2 in ppmvd, before and after the adjustment is made; and</li> <li>6. Convert the emission values of the NOx, CO and O2 concentrations measured pursuant to (a)5 above to pounds per million BTU (lb/MMBtu) according to the following formula:</li> </ol> $\text{lb/MMBtu} = \text{ppmvd} \times \text{MW} \times \text{F dry factor} \times \text{O2 correction factor} / 387,000,000$ <p>Where: ppmvd is the concentration in parts per million by volume, dry basis, of NOx or CO MW is the Molecular Weight for: NOx = 46 lb/lb-mole; CO = 28 lb/lb-mole F dry factor for: Natural gas = 8,710 dscf/MM BTU Residual or fuel oil = 9,190 dscf/MM BTU O2 correction factor: (20.9%) + (20.9% - O2 measured), where O2 measured is % oxygen on a dry basis. [N.J.A.C. 7:27-16.8(c)(3)(ii)], &amp; [N.J.A.C. 7:27-19.7(g)3]</p>	<p>Monitored by periodic emission monitoring upon performing combustion adjustment. [N.J.A.C. 7:27-19.16(a)]</p>	<p>Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event or manual logging of parameter. The owner or operator of the equipment or source operation adjusted pursuant to [N.J.A.C. 7:27-19.16(a)] shall ensure that each adjustment is recorded in a log book or computer data system and retained for a minimum of five years, to be made readily accessible to the Department upon request. Such record shall contain the following information for each adjustment:</p> <ol style="list-style-type: none"> <li>1. The date of the adjustment and the times at which it began and ended;</li> <li>2. The name, title and affiliation of the person who made the adjustment;</li> <li>3. The NOx and CO concentrations in the effluent stream, in ppmvd, before and after each actual adjustment was made;</li> <li>4. The concentration of O2 (in percent dry basis) at which the CO and NOx concentrations were measured pursuant to N.J.A.C. 7:27-19.16(a)5;</li> <li>5. A description of any corrective action taken;</li> <li>6. Results from any subsequent tests performed after taking any corrective action, including concentrations and converted emission values in pounds per million BTU (lb/MMBtu);</li> <li>7. The type and amount of fuel used over the 12 months prior to the annual adjustment; and</li> <li>8. Any other information which the Department or the EPA has required as a condition of approval of any permit or certificate issued for the equipment or source operation.</li> </ol> <p>[N.J.A.C. 7:27-19.16(b)]</p>	<p>Submit a report: Annually. The owner or operator shall ensure that an annual combustion process adjustment report is submitted electronically to the Department (Regional Enforcement Office listed on the first page of the Operating Permit) within 45 days after the adjustment of the combustion process is completed in the format the Department specifies at its website. The report shall contain the following information:</p> <ol style="list-style-type: none"> <li>1. The concentration of NOx and CO in the effluent stream in ppmvd, and O2, in percent dry basis, measured before and after the adjustment of the combustion process;</li> <li>2. The converted emission values in lb/MMBTU for the measurements taken before and after the adjustment of the combustion process;</li> <li>3. A description of any corrective action taken as part of the combustion adjustment; and</li> <li>4. The type and amount of fuel used over the 12 months prior to the annual adjustment.</li> </ol> <p>[N.J.A.C. 7:27-19.16(c)]</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	Boiler: The owner or operator of the adjusted equipment or source operation shall ensure that the operating parameter settings are established and recorded after the combustion process is adjusted and that the adjusted equipment or source operation is maintained to operate consistent with the annual adjustment. [N.J.A.C. 7:27-19.16(e)]	Other: Monitored by the operating parameter settings that are established after the combustion process is adjusted in order to operate consistent with the annual adjustment. [N.J.A.C. 7:27-19.16(e)].	Other: The owner or operator shall record the operating parameter settings that are established after the combustion process is adjusted and retain until the next annual adjustment, to be made readily accessible to the Department upon request.. [N.J.A.C. 7:27-19.16(e)].	None.
11	Turbines and Boiler: An exceedance of an emission limit that occurs during an adjustment of the combustion process under N.J.A.C. 7:27-19.16(g) is not a violation of this subchapter if it occurs as a result of the adjustment. After the combustion adjustment has been completed, the maximum emission rate of any contaminant shall not exceed the maximum allowable emission rate applicable under this subchapter or under an operating permit issued pursuant to N.J.A.C. 7:27-22 or an applicable certificate issued pursuant to N.J.A.C. 7:27-8. [N.J.A.C. 7:27-19.16(f)]	None.	None.	None.
12	Turbine fuel is limited to natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
13	Duct Burner fuel is limited to natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by invoices / bills of lading / certificate of analysis per delivery. [N.J.A.C. 7:27-22.16(o)]	None.
14	Auxiliary boiler fuel is limited to natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by invoices / bills of lading / certificate of analysis per delivery. [N.J.A.C. 7:27-22.16(o)]	None.
15	Sulfur Content in Fuel $\leq$ 0.0042 gr/dscf in natural gas. [N.J.A.C. 7:27-22.16(a)]	Sulfur Content in Fuel: Monitored by fuel sampling (e.g. gas) each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Fuel sampling and analysis may be done either by the permittee or by the natural gas supplier. [N.J.A.C. 7:27-22.16(0)]	Sulfur Content in Fuel: Recordkeeping by certified lab analysis results each month during operation. [N.J.A.C. 7:27-22.16(o)]	upon request by the Department or USEPA Submit a report: Other. [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	Natural Gas Usage $\leq$ 39,458 MMft <sup>3</sup> /yr per 365 consecutive day period, rolling one day basis. This fuel limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes operation of each turbine for 8500 hr/yr, each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr. [N.J.A.C. 7:27-22.16(a)]	Natural Gas Usage: Monitored by fuel flow/firing rate instrument continuously, based on a consecutive 365 day period (rolling 1 day basis). The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Natural Gas Usage: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.
17	Turbines (each): Hours of Operation While Firing Natural Gas $\leq$ 8,500 hr/yr. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Natural Gas: Monitored by hour/time monitor continuously, based on a consecutive 12 month period (rolling 1 month basis). The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation While Firing Natural Gas: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. [N.J.A.C. 7:27-22.16(o)]	None.
18	Duct Burners (each): Hours of Operation While Firing Natural Gas $\leq$ 1,800 hr/yr. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Natural Gas: Monitored by hour/time monitor continuously, based on a consecutive 12 month period (rolling 1 month basis). The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation While Firing Natural Gas: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. [N.J.A.C. 7:27-22.16(o)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
19	Auxilliary Boiler: Hours of Operation While Firing Natural Gas <= 800 hr/yr. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Natural Gas: Monitored by hour/time monitor continuously, based on a consecutive 12 month period (rolling 1 month basis). The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation While Firing Natural Gas: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. [N.J.A.C. 7:27-22.16(o)]	None.
20	The permittee shall operate and maintain Dry Low NOx Burners, as per manufacturer's requirements, at all times, including periods of start-up and shut down. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency in a permanently bound log book or readily accessible computer memories. The permittee shall maintain Dry Low NOx Burner manufacturer's specifications, and operation and maintenance manual (OM&M) on-site. [N.J.A.C. 7:27-22.16(o)]	None.
21	The Selective Catalytic Reduction system shall be used to reduce Nitrogen Oxides (NOx) resulting from combustion in the turbine, at the recommended manufacturer's operating flue gas flowrate range, such that NOx (Total) emissions as established for the turbines in this permit are met. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency. The permittee shall maintain SCR system manufacturer's documentation, specifications, operation and maintenance manual on-site. [N.J.A.C. 7:27-22.16(o)]	None.
22	The SCR (CD101 and CD201) shall be operated and reagent shall be injected at all times that the turbine is operating, except during periods of start-up and shutdown as defined in this permit. [N.J.A.C. 7:27-22.16(a)]	Monitored by hour/time monitor continuously. The permittee shall continuously monitor the time and duration of any operation of the combustion turbine and the SCR system. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. The permittee shall continuously record the time and duration of any operation of the combustion turbine and the SCR system. [N.J.A.C. 7:27-22.16(o)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
23	Temperature upstream of SCR (CD101 and CD201) $\geq$ 400 degrees Fahrenheit, except during startups or shutdowns. [N.J.A.C. 7:27-22.16(a)]	Monitored by temperature instrument continuously, based on a 1 hour block average. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.
24	NOx Control Efficiency $\geq$ 90 % (design value). [N.J.A.C. 7:27-22.16(a)]	None.	NOx Control Efficiency: Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency. The permittee shall keep SCR manufacturer's documentation, as-built performance guarantee and operation and maintenance manual on-site. [N.J.A.C. 7:27-22.16(o)]	None.
25	The Catalytic Oxidizers (CD102 and CD202) shall be used to destroy carbon monoxide (CO) and volatile organic compounds (VOC) resulting from the combustion of fuel in the turbine at the recommended manufacturer's operating flue gas flowrate range. The minimum CO destruction efficiency shall be 90% (design value) except during startup or shutdown, such that CO and VOC (Total) emission limits, as established in this permit, are met. [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by document of construction [N.J.A.C. 7:27-22.16(o)].	Other: The permittee shall maintain Catalytic Oxidizer system manufacturer's documentation, specifications, and operation & maintenance manual (O&M) on-site. [N.J.A.C. 7:27-22.16(o)].	None.
26	The Catalytic Oxidizers (CD102 and CD202) shall be operated at all times that the turbine is operating except during start-up and shutdown. [N.J.A.C. 7:27-22.16(a)]	Monitored by hour/time monitor continuously, based on an instantaneous determination. The permittee shall record the time and duration of the operation of both the gas turbine and the oxidation catalyst unit. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. The permittee shall continuously record the time and duration of the operation of both the gas turbine and the oxidation catalyst unit. [N.J.A.C. 7:27-22.16(o)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
27	Temperature at Exit of Catalyst $\geq$ 350 and Temperature at Exit of Catalyst $\leq$ 800 degrees F , except during turbine startup/shutdown periods. Applicable to the Catalytic Oxidizers (CD102 and CD202). [N.J.A.C. 7:27-22.16(a)]	Temperature at Exit of Catalyst: Monitored by temperature instrument continuously, based on a 1 hour block average. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Temperature at Exit of Catalyst: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.
28	The Catalytic Oxidizers (CD102 and CD202) array(s) shall be maintained and replaced in accordance with the recommendations and schedules of the manufacturer, based on usage rate.  The SCR (CD101 and CD201) catalyst shall be maintained and replaced in accordance with the recommendations and schedules of the manufacturer, based on NOx emission levels indicated through CEM/stack testing. [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by documentation of construction. [N.J.A.C. 7:27-22.16(o)].	Other: Record keeping by manual logging of parameter or storing data in computer system. The permittee shall maintain the catalyst maintenance and replacement records on-site. [N.J.A.C. 7:27-22.16(o)].	None.
29	The permittee shall submit an Excess Emission Monitoring Performance Report to the appropriate Regional Enforcement Office (REO) for review and approval. This report shall be submitted to the REO whether or not an emission exceedance has occurred. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system at no required frequency. [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): Every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
30	The owner or operator shall develop a QA/QC plan for all CEMS/COMS required by this permit prepared in accordance with the NJDEP Technical Manual 1005 posted on the AQPP webpage at <a href="http://www.state.nj.us/dep/aqpp">http://www.state.nj.us/dep/aqpp</a> . [N.J.A.C. 7:27-22.16(a)]	Other: The QA/QC coordinator shall be responsible for reviewing the QA/QC plan on an annual basis. [N.J.A.C. 7:27-22.16(o)].	Other: Maintain readily accessible records of the QA/QC plan including QA date and quarterly reports. [N.J.A.C. 7:27-22.16(o)].	None.
31	All N.J.A.C. 7:27 -22.16(a) steady state emission limits specified in this permit for the turbines are not applicable during startup and shutdown. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
32	<p>NOx (Total) &lt;= 137.07 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes 50 cold turbine start ups, 250 warm turbine start ups, 300 turbine shut downs and steady state operation of each turbine for the remainder of 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.2(a)] and. [40 CFR 52.21]</p>	<p>NOx (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Calculate by using following equation:</p> <p>NOx tons/month = [(Total NOx emitted during the month by two combustion turbines / duct burners operating simultaneously (tons / month) measured by CEMs system)] + [(Total NOx emitted during the month by two combustion turbines operating without duct burner (tons / month) measured by CEMs system)] + [(0.0170 lbs/MMBtu boiler emission rate) * (1020 MMBtu/MMScf) * (total amount of natural gas (MMScf) combusted during the month by the auxilliary boiler) / (2000 lbs/ton)]</p> <p>NOx tons/year = (Total NOx (tons/month) for a given month) + (Total NOx (tons/month) for the preceding 11 calendar months). [N.J.A.C. 7:27-22.16(o)]</p>	<p>NOx (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
33	<p>CO &lt;= 482.3 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes 50 cold turbine start ups, 250 warm turbine start ups, 300 turbine shut downs and steady state operation of each turbine for the remainder of 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>CO: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Calculate by using following equation:</p> <p>Co tons/month = [(Total CO emitted during the month by two combustion turbines / duct burners operating simultaneously (tons / month) measured by CEMs system)] + [(Total CO emitted during the month by two combustion turbines operating without duct burner (tons / month) measured by CEMs system)] + [(0.0370 lbs/MMBtu boiler emission rate) * (1020 MMBtu/MMScf) * (total amount of natural gas (MMScf) combusted during the month by the auxilliary boiler) / (2000 lbs/ton)]</p> <p>CO tons/year = (Total CO (tons/month) for a given month) + (Total CO (tons/month) for the preceding 11 calendar months). [N.J.A.C. 7:27-22.16(o)]</p>	<p>CO: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
34	<p>VOC (Total) &lt;= 34.7 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes 50 cold turbine start ups, 250 warm turbine start ups, 300 turbine shut downs and steady state operation of each turbine for the remainder of 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr. [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.2(a)]</p>	<p>VOC (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions from the two turbines and duct burners and one auxiliary boiler shall be calculated as follows (See Recordkeeping Requirement for definition of variables):</p> $\text{VOC tons/month} = \{ \{ (1020 \text{ MMBtu/MMscf}) \times [(X1 \text{ lbs/MMBtu} \times Y1 \text{ MMscf/month}) + (X2 \text{ lbs/MMBtu} \times Y2 \text{ MMscf/month}) + (0.004 \text{ lbs/MMBtu} \times Y3 \text{ MMscf/month})] \} + [(42.4 \text{ lb/hr} \times YC \text{ hr/month}) + (25.3 \text{ lb/hr} \times YW \text{ hr/month}) + (27.1 \text{ lb/month} \times YH \text{ hr/month}) + (14 \text{ lb/hr} \times YSD \text{ hr/month})] \} / 2000 \text{ lbs/ton}$ <p>VOC tons/year = VOC tons/month for a given month + VOC tons/month for the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>VOC (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.</p> <p>Definition of variables in VOC compliance equation (see Monitoring Requirement)                      X1 = the average lb/MMBtu emission rate, for each turbine with duct burner on, determined by the most recent stack test                      X2 = the average lb/MMBtu emission rate, for each turbine with duct burner off, determined by the most recent stack test (X1 and X2 shall be the average of all valid stack test runs)                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off                      Y3 = the monthly MMscf of gas consumed by the auxiliary boiler                      (Y1 and Y2 shall not include fuel consumption during start-up and shut down; Y3 shall include fuel consumption during start-up and shut down)                      YC = the total hours, during the month, that the turbine operated in cold start-up mode                      YW = the total hours, during the month, that the turbine operated in warm start-up mode                      YH = the total hours, during the month, that the turbine operated in hot start-up mode                      YSD = the total hours, during the month, that the turbine operated in shut down mode (All variables shall be determined separately for each piece of equipment)                      . [N.J.A.C. 7:27-22.16(o)]</p>	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
35	<p>SO2 &lt;= 19.7 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes steady state operation of each turbine for 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr.</p> <p>*Based on the maximum rolling 12 month average value of sulfur content in Transco's natural gas measured during 2010 - 2011 monthly samples (0.3775 grains/100dscf). [N.J.A.C. 7:27-22.16(a)]</p>	<p>SO2: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions from the two turbines and duct burners and one auxiliary boiler shall be calculated as follows:</p> <p>SO2 tons/month = [(X1 lbs/MMBtu x 1020 MMBtu/MMscf x Y1 MMscf) + (X2 lbs/MMBtu x 1020 MMBtu/MMscf x Y2 MMscf) + (X3 lbs/MMBtu x 1020 MMBtu/MMscf x Y3 MMscf) / 2000 lbs/ton]</p> <p>Where:                      X1 = the lb/MMBtu emission rate, for each turbine with duct burner on, based on the most recent monthly natural gas sulfur test                      X2 = the lb/MMBtu emission rate, for each turbine with duct burner off, based on the most recent monthly natural gas sulfur test                      X3 = the lb/MMBtu emission rate, for the auxiliary boiler, based on the most recent monthly natural gas sulfur test                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off                      Y3 = the monthly MMscf of gas consumed by the auxiliary boiler                      (Y1, Y2 and Y3 shall include fuel consumption during start-up and shut down)                      (X1, X2, Y1 and Y2 shall be determined for each turbine separately)</p> <p>SO2 tons/year = SO2 tons/month for a given month + SO2 tons/month for the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>SO2: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.                      [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
36	<p>TSP &lt;= 57.28 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes steady state operation of each turbine for 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>TSP: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions from the two turbines and duct burners and one auxiliary boiler shall be calculated as follows:</p> <p>TSP tons/month = [(X1 lbs/MMBtu x 1020 MMBtu/MMscf x Y1 MMscf) + (X2 lbs/MMBtu x 1020 MMBtu/MMscf x Y2 MMscf) + (0.0033 lbs/MMBtu x 1020 MMBtu/MMscf x monthly MMscf of gas consumed by the auxiliary boiler) / 2000 lbs/ton]</p> <p>Where:                      X1 = the average lb/MMBtu emission rate, for each turbine with duct burner on, determined by the most recent stack test                      X2 = the average lb/MMBtu emission rate, for each turbine with duct burner off, determined by the most recent stack test (X1 and X2 shall be the average of all valid stack test runs)                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off (Y1 and Y2 shall include fuel consumption during start-up and shut down)                      (X1, X2, Y1 and Y2 shall be determined for each turbine separately)</p> <p>TSP tons/year = TSP tons/month for a given month + TSP tons/month for the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>TSP: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
37	<p>PM-10 (Total) &lt;= 95.52 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes steady state operation of each turbine for 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>PM-10 (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions from the two turbines and duct burners and one auxiliary boiler shall be calculated as follows:</p> <p>PM-10 tons/month = [(X1 lbs/MMBtu x 1020 MMBtu/MMscf x Y1 MMscf) + (X2 lbs/MMBtu x 1020 MMBtu/MMscf x Y2 MMscf) + (0.005 lbs/MMBtu x 1020 MMBtu/MMscf x monthly MMscf of gas consumed by the auxiliary boiler) / 2000 lbs/ton]</p> <p>Where:                      X1 = the average lb/MMBtu emission rate, for each turbine with duct burner on, determined by the most recent stack test                      X2 = the average lb/MMBtu emission rate, for each turbine with duct burner off, determined by the most recent stack test                      (X1 and X2 shall be the average of all valid stack test runs)                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off                      (Y1 and Y2 shall include fuel consumption during start-up and shut down)                      (X1, X2, Y1 and Y2 shall be determined for each turbine separately)</p> <p>PM-10 tons/year = PM-10 tons/month for a given month + PM-10 tons/month for the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-10 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
38	<p>PM-2.5 (Total) &lt;= 95.52 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes steady state operation of each turbine for 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr.                      . [N.J.A.C. 7:27-22.16(a)]</p>	<p>PM-2.5 (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions from the two turbines and duct burners and one auxiliary boiler shall be calculated as follows:</p> <p>PM-2.5 tons/month = [(X1 lbs/MMBtu x 1020 MMBtu/MMscf x Y1 MMscf) + (X2 lbs/MMBtu x 1020 MMBtu/MMscf x Y2 MMscf) + (0.005 lbs/MMBtu x 1020 MMBtu/MMscf x monthly MMscf of gas consumed by the auxiliary boiler) / 2000 lbs/ton]</p> <p>Where:                      X1 = the average lb/MMBtu emission rate, for each turbine with duct burner on, determined by the most recent stack test                      X2 = the average lb/MMBtu emission rate, for each turbine with duct burner off, determined by the most recent stack test (X1 and X2 shall be the average of all valid stack test runs)                      Y1 = the monthly MMscf of gas consumed by the turbine with duct burner on                      Y2 = the monthly MMscf of gas consumed by the turbine with duct burner off (Y1 and Y2 shall include fuel consumption during start-up and shut down)                      (X1, X2, Y1 and Y2 shall be determined for each turbine separately)</p> <p>PM-2.5 tons/year = PM-2.5 tons/month for a given month + PM-2.5 tons/month for the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-2.5 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
39	<p>Ammonia &lt;= 119 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines. This limit assumes steady state operation of each turbine for 8500hr/yr (at ISO conditions). [N.J.A.C. 7:27-22.16(a)]</p>	<p>Ammonia: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Calculate by using following equation:</p> <p>Ammonia tons/month = [(Total Ammonia emitted during the month by two combustion turbines / duct burners operating simultaneously (tons / month) measured by continuous process monitoring system)] + [(Total Ammonia emitted during the month by two combustion turbines operating without duct burner (tons / month) measured by continuous process monitoring system)]</p> <p>Ammonia tons/year = (Total Ammonia (tons/month) for a given month) + (Total Ammonia (tons/month) for the preceding 11 calendar months). [N.J.A.C. 7:27-22.16(o)]</p>	<p>Ammonia: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
40	<p>SO3 and H2SO4, as converted and expressed as H2SO4 &lt;= 10.55 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler. This limit assumes steady state operation of each turbine for 8500hr/yr (at ISO conditions). This limit also assumes operation of each duct burner for 1800 hr/yr and the auxiliary boiler for 800 hr/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>SO3 and H2SO4, as converted and expressed as H2SO4: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions of total H2SO4 from U1 shall include sulfuric acid (H2SO4) emitted by the two turbines and duct burners and the auxiliary boiler. The annual emissions shall be calculated as follows:</p> <p>Sulfuric Acid tons/month = [(0.0006 lbs/MMBtu turbine/db emission rate) * (1020 MMBtu/MMScf) * (total amount of natural gas (MMScf) combusted during the month by two combustion turbines / duct burners operating simultaneously) / (2000 lbs/ton)] + [(0.0006 lbs/MMBtu turbine emission rate) * (1020 MMBtu/MMScf) * (total amount of natural gas (MMScf) combusted during the month by two combustion turbines operating without duct burners) / (2000 lbs/ton)] + [(0.00008 lbs/MMBtu boiler emission rate) * (1020 MMBtu/MMScf) * (total amount of natural gas (MMScf) combusted during the month by the auxilliary boiler) / (2000 lbs/ton)]</p> <p>Sulfuric Acid tons/year = (Total Sulfuric Acid (tons/month) for a given month) + (Total Sulfuric Acid (tons/month) for the preceding 11 calendar months). [N.J.A.C. 7:27-22.16(o)]</p>	<p>SO3 and H2SO4, as converted and expressed as H2SO4: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>

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41	<p>CO2: &lt;= 2,140,185 tons/yr, based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler.</p> <p>From operating permit BOP160001.</p> <p>Based on CO2 emission factor of 119 lb/MMBtu (from 40 CFR 75, equation G-4).</p> <p>[N.J.A.C. 7:27-22.16(a)] and</p> <p>The following maximum heat inputs:                      Turbines: 2079.97 MMBtu/hr (from initial PSD permit)                      Duct Burners: 168 MMBtu/hr (from initial PSD permit)                      Auxilliary Boiler: 60.6 MMBtu/hr (maximum permitted heat input)</p> <p>And combustion of natural gas for:                      Turbines: 6700 hours each                      Duct Burners: 1800 hours each                      Auxilliary Boiler: 800 hours [40 CFR 52.21]</p>	<p>CO2: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions from the two turbines and duct burners and one auxiliary boiler shall be calculated as follows:</p> <p>CO2 tons/year shall be calculated by adding the total CO2 tons/month emissions from the (2) turbines, (2) duct burners and (1) auxilliary boiler for a given month to the total CO2 tons/month emissions from the (2) turbines, (2) duct burners and (1) auxilliary boiler for the previous 11 months.</p> <p>CO2 tons/month = (119 lb/MMBtu x 1020 MMBtu/MMScf x (CTGas + DBGas + ABGas) MMScf/month / 2000 lbs/ton)</p> <p>Where:                      CTGas = total MMScf of gas consumed by the combustion turbines (CT) during the month, including fuel consumed during start-up and shut down.                      DBGas = total MMScf of gas consumed by the duct burners (DB) during the month, including fuel consumed during start-up and shut down.                      ABGas = total MMScf of gas consumed by the auxilliary boiler (AB) during the month, including fuel consumed during start-up and shut down.</p> <p>CO2 emission factor of 119 lb/MMBtu (from 40 CFR 75, equation G-4). [N.J.A.C. 7:27-22.16(o)]</p>	<p>CO2: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.</p> <p>Record annual emissions each calendar month. See calculation under "monitoring requirement" for annual emissions. [N.J.A.C. 7:27-22.16(o)]</p>	None.



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
42	<p>Methane <math>\leq</math> 152.78 tons/yr based on a consecutive 12 month period, rolling one month basis.</p> <p>This emission limit applies to the combined operation of (2) combustion turbines, (2) duct burners and the auxiliary boiler.</p> <p>From operating permit BOP160001.</p> <p>Based on the following CH4 emission factors: Turbine: 0.0086 lb/MMBtu (AP-42, Table 3.1-2a) Duct Burner: 2.3 lb/MMScf (AP-42, Table 1.4-2)</p> <p>The following maximum heat inputs: Turbines: 2079.97 MMBtu/hr (from initial PSD permit) Duct Burners: 168 MMBtu/hr (from initial PSD permit) Auxilliary Boiler: 60.6 MMBtu/hr (maximum permitted heat input)</p> <p>And combustion of natural gas for: Turbines: 6700 hours each Duct Burners: 1800 hours each Auxilliary Boiler: 800 hours [N.J.A.C. 7:27-22.16(a)]</p>	<p>Methane: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Annual emissions from the two turbines and duct burners and one auxiliary boiler shall be calculated as follows:</p> <p>Methane tons/month = [(18.3 lbs/hr turbine/db emission rate) x (total hours of operation during the month for two combustion turbines / duct burners operating simultaneously) / (2000 lb/ton)] + [(17.9 lbs/hr turbine emission rate) x (total hours of operation during the month for two combustion turbines without duct burners) / (2000 lb/ton)] + [(0.0023 lbs/MMBtu boiler emission rate) * (1020 MMBtu/MMScf) * (total amount of natural gas (MMScf) combusted during the month by the auxilliary boiler) / (2000 lbs/ton)]</p> <p>Methane tons/year = (Total Methane (tons/month) for a given month) + (Total Methane (tons/month) for the preceding 11 calendar months). [N.J.A.C. 7:27-22.16(o)]</p>	<p>Methane: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Add total monthly emissions for a given month to total monthly emissions from the previous 11 months. Record annual emissions. [N.J.A.C. 7:27-22.16(o)]</p>	None.
43	<p>HAPs (Total) <math>\leq</math> 8.22 tons/yr. Based on the sum of all HAPS emissions, including those above and those below the reporting thresholds in Appendix B of N.J.A.C.7:27-22. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.
44	<p>Acrolein <math>\leq</math> 0.06 tons/yr. Based on operation of both turbines for 8500 hr/yr and operation of both duct burners for 1800 hr/yr. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.
45	<p>Benzene <math>\leq</math> 0.23 tons/yr. Based on operation of both turbines for 8500 hr/yr and operation of both duct burners for 1800 hr/yr. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.

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46	Formaldehyde <= 2.15 tons/yr. Based on operation of both turbines for 8500 hr/yr and operation of both duct burners for 1800 hr/yr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
47	Toluene <= 2.51 tons/yr. Based on operation of both turbines for 8500 hr/yr and operation of both duct burners for 1800 hr/yr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
48	Comply with 40 CFR 60 Subpart A (applicable to turbines and boiler) and Subpart KKKK (applicable to the turbines) and Subpart Dc (applicable to the boiler). [40 CFR 60]	Other: Comply with 40 CFR 60 Subpart A & KKKK.[40 CFR 60].	Other: Comply with 40 CFR 60 Subpart A & KKKK.[40 CFR 60].	Other (provide description): As per the approved schedule Comply with 40 CFR 60 Subpart A & KKKK. [40 CFR 60]
49	All requests, reports, applications, submittals, and other communications to the Administrator pursuant to Part 60 shall be submitted in duplicate to the Regional Office of US Environmental Protection Agency. Submit information to: Director, Division of Enforcement & Compliance Assistance, US EPA, Region 2, 290 Broadway, New York, NY 10007-1866. [40 CFR 60.4(a)]	None.	None.	Submit a report: As per the approved schedule to EPA Region 2 as required by 40 CFR 60. [40 CFR 60.4(a)]
50	Copies of all information submitted to EPA pursuant to 40 CFR Part 60, must also be submitted to the appropriate Regional Enforcement Office of NJDEP. [40 CFR 60.4(b)]	None.	None.	Submit a report: As per the approved schedule to the appropriate Regional Enforcement Office of NJDEP as required by 40 CFR 60.  Submit to: Northern Regional Office New Jersey Department of Environmental Protection 7 Ridgedale Avenue Cedar Knolls, NJ 07927 [40 CFR 60.4(b)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
51	The owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, of the date of construction or reconstruction of an affected facility as defined under 40 CFR Part 60 Subpart A. Notification shall be postmarked no later than 30 days after such date. [40 CFR 60.7(a)(1)]	None.	None.	Submit notification: Upon occurrence of event to EPA Region 2 and the appropriate Regional Enforcement Office of NJDEP as required by 40 CFR 60.7 [40 CFR 60.7(a)(1)]
52	The owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, of the actual date of initial startup of an affected facility postmarked within 15 days after such date. [40 CFR 60.7(a)(3)]	None.	None.	Submit notification: Upon occurrence of event to EPA Region 2 and the appropriate Regional Enforcement Office of NJDEP as required by 40 CFR 60.7 [40 CFR 60.7(a)(3)]
53	The owner or operator subject to the provisions of 40 CFR Part 60 shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in section 60.14(e). The notification shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of facility before and after the change and the expected completion date of the change. Notification shall be postmarked within 60 days or as soon as practicable before any change is commenced. The Administrator may request additional relevant information subsequent to this notice. [40 CFR 60.7(a)(4)]	None.	None.	Submit notification: Upon occurrence of event to EPA Region 2 and the appropriate Regional Enforcement Office of NJDEP as required by 40 CFR 60.7 [40 CFR 60.7(a)(4)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
54	The owner or operator shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility, any malfunction of air pollution control equipment or any periods during which continuous monitoring system or monitoring device is inoperative. [40 CFR 60.7(b)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The records should be kept in a permanent form suitable for inspections. [40 CFR 60.7(b)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): Semi-annually beginning on the 30th day of the 6th month following initial performance tests. The report shall contain the information required in 40 CFR 60.7(b) and be postmarked by the 30th day following the end of each six-month period. The report shall be submitted to the EPA Region 2 Administrator and the appropriate Regional Enforcement Office of NJDEP and be in the format specified at 40 CFR Part 60.7(c) and 40 CFR Part 60.7(d). [40 CFR 60.7(c)]
55	Each owner or operator required to install a continuous monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form (see section 60.7(d)) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. [40 CFR 60.7(c)]	None.	Other: Written reports of excess emissions shall include the following information: (1) The magnitude of excess emissions computed in accordance with section 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period and excess emissions. The process operating time during the reporting period. (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted. (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments. (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report. [40 CFR 60.7(c)].	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): Semi-annually beginning on the 30th day of the 6th month following initial performance tests. The report shall be postmarked by the 30th day following the end of each six-month period. The report shall be submitted to the EPA Region 2 Administrator and the appropriate Regional Enforcement Office of NJDEP and be in the format specified at 40 CFR Part 60.7(c) and 40 CFR Part 60.7(d). [40 CFR 60.7(c)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
56	The owner or operator shall maintain a file, suitable for inspection, of all monitoring measurements as indicated in Recordkeeping Requirement column. [40 CFR 60.7(f)]	None.	Other: The file shall include all measurements (including continuous monitoring system, monitoring device, and performance testing measurements), all continuous monitoring system performance evaluations, all continuous monitoring system or monitoring device calibration checks, all adjustments/maintenance performed on these systems or devices, and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the dates of the record, except as prescribed in 40 CFR 60.7(f)(1) through (3). Sources subject to 40 CFR 70, are required to retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application, per 40 CFR 70.6(a)(3)(ii)(B). [40 CFR 60.7(f)].	None.
57	Within 60 days after achieving the maximum production rate at which the affected facility will operate, but not later than 180 days after initial startup of the facility, the owner or operator shall conduct performance test(s) and shall furnish the Administrator a written report of the results. [40 CFR 60.8(a)]	None.	None.	Submit a report: At a common schedule agreed upon by the operator and the Administrator. The owner or operator shall submit results of the performance test(s) to the Administrator. [40 CFR 60.8(a)]
58	The owner or operator shall conduct performance tests and data reduced in accordance with the test methods and procedures contained in each applicable subpart, unless otherwise specified and approved by the Administrator. [40 CFR 60.8(b)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
59	Performance tests shall be conducted under conditions the Administrator specifies to the plant operator based on representative performance of the affected facility. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of the performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. [40 CFR 60.8(c)]	None.	None.	None.
60	The owner or operator shall provide the Administrator at least 30 days prior notice of any performance test and shall provide adequate performance testing facilities as specified in 40 CFR Part 60.8(e). [40 CFR 60.8(d)]	None.	None.	None.
61	Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. [40 CFR 60.8(f)]	None.	None.	None.
62	Compliance with NSPS standards specified in this permit, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in NSPS. [40 CFR 60.11(a)]	None.	None.	None.
63	The owner or operator shall demonstrate compliance with NSPS opacity standards specified in 40 CFR Part 60. [40 CFR 60.11(b)]	Monitored by visual determination once initially, based on 6 minute blocks. Testing shall be conducted using Reference Method 9 in Appendix A of NSPS. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-min averages) for the performance test. [40 CFR 60.11(b)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator shall maintain records of opacity of emissions based on Method 9 observations. [40 CFR 60.11(e)(2)]	Submit a report: At a common schedule agreed upon by the operator and the Administrator. The owner or operator shall submit results of Method 9 observation data to the Administrator. [40 CFR 60.11(e)(2)]

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<b>Ref.#</b>	<b>Applicable Requirement</b>	<b>Monitoring Requirement</b>	<b>Recordkeeping Requirement</b>	<b>Submittal/Action Requirement</b>
64	The NSPS opacity standard shall apply at all times except during periods of startup, shutdown, malfunctions and as otherwise specified in the applicable standard. [40 CFR 60.11(c)]	None.	None.	None.
65	At all times, including periods of start-up, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operation and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]	None.	None.	None.
66	For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in 40 CFR Part 60.8. If no performance test is required to be performed, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. [40 CFR 60.11(e)(1)]	None.	None.	Submit notification: As per the approved schedule. The owner or operator shall notify the Administrator of the anticipated date for conducting the opacity observation. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during the performance test. The notification shall be postmarked not less than 30 days prior to such a date. [40 CFR 60.7(a)(6)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
67	No owner or operator subject to NSPS standards in Part 60, shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. [40 CFR 60.12]	None.	None.	None.
68	All continuous emission monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests specified under 40 CFR Part 60.8. The owner or operator shall follow manufacturer's written recommendations for installation, operation and calibration of the device. [40 CFR 60.13(b)]	During any performance test required under 40 CFR Part 60.8 or within 30 days thereafter, the owner or operator shall conduct a performance evaluation of the continuous emission monitoring system in accordance with applicable performance specification in Appendix B of 40 CFR Part 60. Monitored by other method (provide description) upon occurrence of event. [40 CFR 60.13(c)]	None.	Within 60 days of completion of the performance test, furnish the Administrator two or, upon request, more copies of the results of the performance evaluation. Submit a report: As per the approved schedule. [40 CFR 60.13(c)(2)]
69	The owner or operator shall perform zero and span adjustments daily for continuous emission monitors and continuous opacity monitors following procedures outlined in 40 CFR Part 60.13(d)1 & 2. [40 CFR 60.13(d)]	None.	Other: Maintain records in accordance with 40 CFR 60.7(f). [40 CFR 60.13(d)].	None.
70	Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all continuous monitoring systems referenced by 40 CFR 60.13(c) measuring emissions except opacity shall be in continuous operation. They shall complete a minimum of one cycle of operation (sampling, analyzing and data recording) for each successive 15-minute period. [40 CFR 60.13(e)(2)]	Other: See Applicable Requirement. [40 CFR 60.13(e)(2)].	Other: See Applicable Requirement. [40 CFR 60.13(e)(2)].	None.



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
71	All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of Appendix B of 40 CFR Part 60 shall be used. [40 CFR 60.13(f)]	None.	None.	None.
72	The owner or operator of all continuous monitoring systems (other than opacity) shall reduce all data to 1-hour averages for time periods. One-hour period is defined in 40 CFR 60.2 as any 60-minute period commencing on the hour. For a full operating hour, 1-hour averages shall be computed from at least four valid data points, i.e., one data point in each of the 15-minute quadrants of the hour. For a partial operating hour (any clock hour with less than 60 minutes of unit operation), the owner or operator shall follow all the procedures specified at 40 CFR 60.13(h)(2) to compute 1-hour averages. Data recorded during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. The owners and operators complying with the requirements in 40 CFR 60.7(f)(1) or (2) must include any data recorded during periods of monitor breakdown or malfunction in the data averages. Either arithmetic or integrated averaging of all data may be used to calculate the hourly averages. The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O <sub>2</sub> or ng/J of pollutant). [40 CFR 60.13(h)(2)]	None.	Other: See Applicable Requirement. [40 CFR 60.13(h)].	None.

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73	All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in the applicable subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subpart to specify the emission limit. [40 CFR 60.13(h)(3)]	None.	None.	None.
74	Changes in time periods for submittal of information and postmark deadlines set forth in this subpart, may be made only upon approval by the Administrator and shall follow procedures outlined in 40 CFR Part 60.19. [40 CFR 60.19]	None.	None.	None.
75	NOx (Total) <= 15 ppmvd @ 15% O2 OR NOx (total)<= 0.43 lb/MW-hr of useful output. This limit applies to a turbine that has heat input at peak load greater than 850 MMBtu/hr (HHV) firing natural gas and commenced construction, modification or reconstruction after February 18, 2005. [40 CFR 60.4320(a)]	NOx (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The owner or operator shall conduct an initial performance test as required in 40 CFR 60.8. The subsequent testing shall only be conducted if choosing to comply with 40 CFR 60.4340(a). Test methods and procedures shall be consistent with the requirements of 40 CFR 60.4400 or, if a NOx diluent CEMS is installed, consistent with 40 CFR 60.4405. The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Alternatively, the testing might be performed at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. For turbines with supplemental duct burner NOx measurements shall be taken after the duct burner, which has to be in operation during the performance test. [40 CFR 60.4400]	NOx (Total): Recordkeeping by stack test results at the approved frequency. [40 CFR 60.4460]	Submit a report: As per the approved schedule. The owner or operator shall submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. [40 CFR 60.4375(b)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
76	NOx (Total) <= 96 ppmvd @ 15% O2 OR NOx (total)<= 4.7 lb/MW-hr of useful output. This limit applies to a turbine that has output greater than 30 MW and whether turbine operating at less than 75 percent of peak load or turbine operating at temperature less than 0 degrees F. [40 CFR 60.4320(a)]	NOx (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The owner or operator shall conduct an initial performance test as required in 40 CFR 60.8. The subsequent testing shall only be conducted if choosing to comply with 40 CFR 60.4340(a). Test methods and procedures shall be consistent with the requirements of 40 CFR 60.4400 or, if a NOx diluent CEMS is installed, consistent with 40 CFR 60.4405. The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Alternatively, the testing might be performed at the highest achievable load point, if at least 75 percent of peak load cannot be achieved in practice. For turbines with supplemental duct burner NOx measurements shall be taken after the duct burner, which has to be in operation during the performance test. [40 CFR 60.4400]	NOx (Total): Recordkeeping by stack test results at the approved frequency. [40 CFR 60.4460]	Submit a report: As per the approved schedule. The owner or operator shall submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test. [40 CFR 60.4375(b)]
77	If there are two or more turbines that are connected to a single generator, each turbine must meet the NOx emission limit for the appropriate size of a turbine. [40 CFR 60.4320(b)]	None.	None.	None.
78	SO2 <= 0.06 lb/MMBTU. No owner or operator shall burn any fuel which contains total potential sulfur emissions in excess of specified limit. If the turbine simultaneously fires multiple fuels, each fuel must meet this requirement. [40 CFR 60.4330(a)(2)]	SO2: Monitored by grab sampling once initially. Test methods and procedures shall be consistent with 40 CFR 60.4415(a)(1). The fuel analyses may be performed by the owner or operator, the fuel vendor, or any other qualified agency. [40 CFR 60.4360]	None.	Submit a report: Once initially. The permittee shall furnish the Administrator and NJDEP a written report of the results of fuel analyses. The permittee shall demonstrate that the potential sulfur emissions from each type of fuel do not exceed potential sulfur emissions of 0.060 lb SO2 per MMBtu heat input. [40 CFR 60.8(a)]

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79	The owner or operator shall operate and maintain the subject stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction. [40 CFR 60.4333(a)]	None.	None.	None.
80	If the subject turbine is equipped with heat recovery unit and utilizes a common steam header with one or more combustion turbines the permittee shall determine compliance with the applicable NOx emission limits by measuring the emissions combined with the emissions from the other unit(s) utilizing the common heat recovery unit. [40 CFR 60.4333(b)(1)]	None.	None.	None.
81	To demonstrate continuous compliance with NOx limit, the owner or operator of the turbine that does not use water or steam injection may, as alternative to performing annual performance tests as described in 40 CFR 60.4340(a), install, certify, maintain, and operate a continuous emission monitoring system (CEMS) consisting of a NOx monitor and a diluent gas O2 or CO2 monitors to determine the hourly NOx emission rate in ppm or lb/MMBtu as described in 40 CFR 60.4335(b) and 60.4345. [40 CFR 60.4340(b)(1)]	Monitored by continuous emission monitoring system continuously. The continuous emission monitoring system as described in 40 CFR 60.4335(b) shall be consistent with the requirements of 40 CFR 60.4335(b) and 40 CFR 60.4345. [40 CFR 60.4345]	Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [40 CFR 60.4345]	None.
82	The permittee shall install and certify each NOx diluent CEMS in accordance with Performance Specifications 2 (PS2) as described in appendix B to 40 CFR 60. The 7 day calibration drift should be based on unit operating days, not calendar days. Upon the Bureau of Technical Services of NJDEP approval, Procedure 1 in appendix F to 40 CFR 60 is not required. The relative accuracy test audit (RATA) shall be performed on a lb/MMBtu basis. [40 CFR 60.4345(a)]	Monitored by continuous emission monitoring system continuously. During each full unit operating hour, both the NOx monitor and the diluent monitor must complete a minimum of one cycle of operation (Sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour, as specified in 40 CFR 60.13(e)(2). The permittee shall follow procedure described in 40 CFR 60.4345(b) for partial unit operating hours. [40 CFR 60.4345(b)]	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. The permittee shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment. For NOx CEMS and fuel flow meters, the QA program and plan described in section 1 of appendix B to 40 CFR 75 may, with state approval, satisfy this requirement. [40 CFR 60.4345(e)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
83	The permittee shall install and certify a NOx diluent CEMS in accordance with appendix A to 40 CFR 75. The relative accuracy test audit (RATA) shall be performed on a lb/MMBtu basis. [40 CFR 60.4345(a)]	Monitored by continuous emission monitoring system continuously. During each full unit operating hour, both the NOx monitor and the diluent monitor must complete a minimum of one cycle of operation (Sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour, as specified in 40 CFR 60.13(e)(2). The permittee shall follow procedure described in 40 CFR 60.4345(b) for partial unit operating hours. [40 CFR 60.4345(b)]	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. The permittee shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment. For NOx CEMS and fuel flow meters, the QA program and plan described in section 1 of appendix B to 40 CFR 75 may, with state approval, satisfy this requirement. [40 CFR 60.4345(e)]	None.
84	The permittee shall install, calibrate, maintain, and operate each fuel flowmeter in accordance with the manufacturer's instructions or, with NJDEP approval, in accordance with the requirements of appendix D to 40 CFR 75. [40 CFR 60.4345(c)]	Monitored by fuel flow/firing rate instrument continuously. Each fuel flowmeter shall be installed, calibrated, maintained and operated according to the manufacturer's instructions. Alternatively, with the NJDEP approval, fuel flowmeters that meet the installation, certification, and quality assurance requirements of appendix D to 40 CFR 75 are acceptable. [40 CFR 60.4345(c)]	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. The permittee shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment. For NOx CEMS and fuel flow meters, the QA program and plan described in section 1 of appendix B to 40 CFR 75 may, with state approval, satisfy this requirement. [40 CFR 60.4345(e)]	None.
85	The permittee shall install, calibrate, maintain, and operate each watt meter, steam flow meter, and each pressure or temperature measurement device in accordance with the manufacturer's instructions. [40 CFR 60.4345(d)]	Monitored by other method (provide description) continuously. The gross electrical output of the unit in megawatt-hours shall be monitored by watt meter (or (meters) and shall be installed, calibrated, maintained and operated according to the manufacturer's instructions. [40 CFR 60.4345(d)]	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. The permittee shall develop and keep on-site a quality assurance (QA) plan for all of the continuous monitoring equipment. [40 CFR 60.4345(e)]	None.
86	The owner or operator may elect not to monitor the total sulfur content of the fuel combusted in the turbine if the fuel is demonstrated not to exceed potential sulfur emissions of 0.060 lb SO <sub>2</sub> /MMBtu heat input for units located in continental areas. [40 CFR 60.4365]	Other: The required demonstration that the total sulfur content of the fuel does not exceed potential sulfur emissions of 0.060 lb SO <sub>2</sub> /MMBtu shall be made using a current valid purchase contract, tariff sheet or transportation contract specifying that in continental areas the maximum total sulfur content for oil use is 0.05 weight percent (500 ppmw) and for natural gas use is 20 grains of sulfur or less per 100 standard cubic feet. [40 CFR 60.4365(a)].	Recordkeeping by fuel certification receipts at the approved frequency The owner or operator shall keep copies of valid purchase contracts, tariff sheets or transportation contracts specifying that in continental areas the maximum total sulfur content for oil use is 0.05 weight percent (500 ppmw) and for natural gas use is 20 grains of sulfur or less per 100 standard cubic feet. [40 CFR 60.4365]	Demonstrate compliance: Once initially. The owner or operator shall submit the required determination to the Administrator using the sources of information described in 40 CFR 60.4365(a) showing the maximum total sulfur content for continental areas for oil use at 0.05 weight percent or less and for natural gas at 20 grains of sulfur or less per 100 standard cubic feet or to demonstrate that fuel has potential sulfur emissions of less than 0.060 lb SO <sub>2</sub> /MMBtu heat input. [40 CFR 60.4365(a)]

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87	The owner or operator shall submit reports of excess emissions and monitor downtime in accordance with 40 CFR 60.7(c) for Nitrogen oxides. Excess emissions shall be reported for all periods of unit operation, including startup, shutdown and malfunction. An excess emissions as defined in 40 CFR 60.4380(b)1 is any unit operating period in which the 4-hour (for simple cycle turbines) or 30-day rolling average NOx emission rate exceeds the applicable emission limit in 40 CFR 60.4320. A period of monitor downtime is any unit operating hour in which the data for any of the following parameters are either missing or invalid: NOx concentration, CO2 or O2 concentration, fuel flow rate, steam flow rate, steam temperature, steam pressure, or megawatts. The steam flow rate, steam temperature, and steam pressure are only required if used for compliance demonstration. [40 CFR 60.4380(b)]	Other: For the purposes of identifying excess emissions based on data from the continuous emission monitoring equipment the permittee shall follow procedures described in 40 CFR 60.4350(a), (b), (c), (e), (f), (g), and (h). If a NOx diluent CEMS meets the requirements of 40 CFR 75, the only quality assured data from the CEMS shall be used to identify excess emissions. Periods where the missing data substitution procedures in subpart D of 40 CFR 75 are applied are to be reported as monitor downtime. [40 CFR 60.4350].	None.	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): Semi-annually beginning on the 30th day of the 6th month following initial performance tests. All reports required under 40 CFR 60.7(c) must be postmarked by the 30th day following the end of each 6-month period. [40 CFR 60.4395]
88	For Auxilliary Boiler: The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by 40 CFR 60.7. This notification shall include information specified in 40 CFR 60.48c(a)1 through (a)4. [40 CFR 60.48c(a)]	None.	None.	Submit a report: Upon occurrence of event. [40 CFR 60.48c(a)]
89	For Auxilliary Boiler: The owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f), fuels not subject to an emission standard (excluding opacity), or a mixture of these fuels shall record and maintain records of the amount of each fuel combusted during each calendar month. [40 CFR 60.48c(g)(2)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [40 CFR 60.48c(g)(2)]	None.
90	For Auxilliary Boiler: The owner or operator shall maintain all required records for a period of two years following the date of such record. [40 CFR 60.48c(i)]	None.	None.	None.

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91	For Auxilliary Boiler: The permittee shall submit to the Administrator all reports required under 40 CFR 60.40, et. seq. each six-month period. [40 CFR 60.48c(j)]	None.	None.	Submit a report: Semi-annually beginning on the 30th day of the 6th month following initial performance tests. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period. [40 CFR 60.48c(j)]
92	CSAPR: The permittee shall comply with all the attached requirements of Cross-State Air Pollution Rule (CSAPR) for the CSAPR NOx Annual Trading Program, CSAPR NOx Ozone Season Trading Program, and CSAPR SO2 Group 1 Trading Program applicable to this affected unit. See CSAPR Attachment (appendix I). [40 CFR 97]	Other: See the monitoring requirements in the CSAPR Attachment (Appendix I).[40 CFR 97].	Other: See the recordkeeping requirements in the CSAPR Attachment (Appendix I).[40 CFR 97].	Other (provide description): Other See the submittal requirements in the CSAPR Attachment (Appendix I). [40 CFR 97]

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**Emission Unit:** U1 2 Turbines, 2 HRSGs, and Aux. Boiler

**Operating Scenario:** OS1 Combustion Turbine (CT) 1 firing natural gas at full load without supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 1, OS2 Combustion Turbine (CT) 2 firing natural gas at full load without supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 2

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Smoke emissions from stationary combustion turbines no greater than 20% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Opacity <= 10 %. Smoke emissions from stationary combustion turbines no greater than 10% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Particulate Emissions <= 232 lb/hr. Particulate emission limit from the combustion of natural gas based on rated heat input of 2,320 MMBtu/hr (HHV) for one turbine. [N.J.A.C. 7:27- 4.2(a)]	Particulate Emissions: Monitored by stack emission testing once initially and prior to permit renewal, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Particulate Emissions: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]
4	CO <= 250 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(b)]	CO: Monitored by continuous emission monitoring system continuously, based on one calendar day. Compliance shall be based upon the average of emissions over one calendar day, not including periods of equipment downtime. (See "Continuous Emission Monitoring System for NOx, CO and O2 for Turbines" in OS Summary). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
5	CO <= 250 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(b)]	CO: Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]



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6	VOC (Total) <= 50 ppmvd @ 15% O <sub>2</sub> . VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(c)]	VOC (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results upon occurrence of event. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]
7	NO <sub>x</sub> (Total) <= 0.75 lb/MW-hr (net). NO <sub>x</sub> RACT emission limit applies during all periods of natural gas combustion during which net useful energy is being produced by the turbine. [N.J.A.C. 7:27-19.5(g)]	NO <sub>x</sub> (Total): Monitored by continuous emission monitoring system continuously, based on a calendar day (in ozone season) or 30 day rolling (at other times) average. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	NO <sub>x</sub> (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
8	NO <sub>x</sub> (Total) <= 0.75 lb/MW-hr (net). NO <sub>x</sub> RACT emission limit applies during all periods of natural gas combustion during which net useful energy is being produced by the turbine. [N.J.A.C. 7:27-19.5(g)]	NO <sub>x</sub> (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(0)]	NO <sub>x</sub> (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]
9	NO <sub>x</sub> (Total) <= 2 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7:27-18.3(b)(1)] and. [40 CFR 52.21]	NO <sub>x</sub> (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NO <sub>x</sub> (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
10	NO <sub>x</sub> (Total) <= 2 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7:27-18.3(b)(1)] and. [40 CFR 52.21]	NO <sub>x</sub> (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	NO <sub>x</sub> (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
11	NOx (Total) <= 0.0073 lb/MMBTU (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load (HHV) at 59 degrees Fahrenheit (2,079.97 MMBtu/hr)). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
12	NOx (Total) <= 0.0073 lb/MMBTU (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load (HHV) at 59 degrees Fahrenheit (2,079.97 MMBtu/hr)). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	NOx (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
13	NOx (Total) <= 16.8 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
14	NOx (Total) <= 16.8 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	NOx (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
15	CO <= 2 ppmvd @ 15% O2. Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]

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<b>Ref.#</b>	<b>Applicable Requirement</b>	<b>Monitoring Requirement</b>	<b>Recordkeeping Requirement</b>	<b>Submittal/Action Requirement</b>
16	CO <= 2 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
17	CO <= 0.0044 lb/MMBTU (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load (HHV) at 59 degrees Fahrenheit (2,079.97 MMBtu/hr)). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
18	CO <= 0.0044 lb/MMBTU (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load (HHV) at 59 degrees Fahrenheit (2,079.97 MMBtu/hr)). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
19	CO <= 10.2 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
20	CO <= 10.2 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]

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21	VOC (Total) <= 1 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	VOC (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]
22	VOC (Total) <= 0.001 lb/MMBTU (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load (HHV) at 59 degrees Fahrenheit (2,079.97 MMBtu/hr)). [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	VOC (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]
23	VOC (Total) <= 2.9 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	VOC (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]
24	SO <sub>2</sub> <= 2.8 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]	SO <sub>2</sub> : Monitored by stack emission testing once initially and prior to permit renewal, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	SO <sub>2</sub> : Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-21.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]
25	TSP <= 6.6 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	TSP: Monitored by stack emission testing once initially and prior to permit renewal, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	TSP: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]
26	PM-10 (Total) <= 11 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	PM-10 (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 3). [N.J.A.C. 7:27-22.16(o)]	PM-10 (Total): Recordkeeping by stack test results at the approved frequency. (See U1, OS Summary, Ref. #1, 2 & 3). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 3). [N.J.A.C. 7:27-22.16(o)]

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27	<p>PM-10 (Total) &lt;= 11 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>PM-10 (Total): Monitored by calculations each hour during operation. The permittee shall demonstrate compliance with the lb/hr emission limit each hour during turbine operation using the following calculation:</p> <p>PM10 (Total) = (*lbs/MMBtu for CC Unit1 with DB Unit1 off x maximum heat input (MMBtu/hr) of the natural gas consumed during that hour by CC Unit1 with DB Unit1 off); or</p> <p>PM10 (Total) = (*lbs/MMBtu for CC Unit2 with DB Unit2 off x maximum heat input (MMBtu/hr) of the natural gas consumed during that hour by CC Unit2 with DB Unit2 off)</p> <p>*lbs/MMBtu emission factor shall be the maximum stack test result (average of 3 valid stack test runs) obtained during any valid stack test that was performed within the previous 12 months, for each turbine. [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-10 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency. Maintain a record of calculated lb/MMBtu emission factor and lb/hr emission rate calculated during each hour of operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>
28	<p>PM-2.5 (Total) &lt;= 11 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]</p>	<p>PM-2.5 (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 &amp; 3). [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-2.5 (Total): Recordkeeping by stack test results at the approved frequency. (See U1, OS Summary, Ref. #1, 2 &amp; 3). [N.J.A.C. 7:27-22.16(o)]</p>	<p>Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 &amp; 3). [N.J.A.C. 7:27-22.16(o)]</p>

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29	PM-2.5 (Total) <= 11 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]	<p>PM-2.5 (Total): Monitored by calculations each hour during operation. The permittee shall demonstrate compliance with the lb/hr emission limit each hour during turbine operation using the following calculation:</p> <p>PM2.5 (Total) = (*lbs/MMBtu for CC Unit1 with DB Unit1 off x maximum heat input (MMBtu/hr) of the natural gas consumed during that hour by CC Unit1 with DB Unit1 off); or</p> <p>PM2.5(Total) = (*lbs/MMBtu for CC Unit2 with DB Unit2 off x maximum heat input (MMBtu/hr) of the natural gas consumed during that hour by CC Unit2 with DB Unit2 off)</p> <p>*lbs/MMBtu emission factor shall be the maximum stack test result (average of 3 valid stack test runs) obtained during any valid stack test that was performed within the previous 12 months, for each turbine. [N.J.A.C. 7:27-22.16(o)]</p>	PM-2.5 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency. Maintain a record of calculated lb/MMBtu emission factor and lb/hr emission rate calculated during each hour of operation. [N.J.A.C. 7:27-22.16(o)]	None.
30	Ammonia <= 5 ppmvd @ 15% O2. Based on manufacturer guarantee / SOTA. [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by continuous process monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #6).[N.J.A.C. 7:27-22.16(o)].	Ammonia: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #6). [N.J.A.C. 7:27-22.16(o)]	None.
31	Ammonia <= 5 ppmvd @ 15% O2. Based on manufacturer guarantee / SOTA. [N.J.A.C. 7:27-22.16(a)]	Ammonia: Monitored by stack emission testing once initially, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]	Ammonia: Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]
32	Ammonia <= 16 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by continuous process monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #6).[N.J.A.C. 7:27-22.16(o)].	Ammonia: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #6). [N.J.A.C. 7:27-22.16(o)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
33	Ammonia <= 16 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]	Ammonia: Monitored by stack emission testing once initially, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]	Ammonia: Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]
34	Sulfuric Acid Mist Emissions <= 1.36 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at -8 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
35	Methane <= 20 lb/hr (maximum emission limit). From operating permit BOP160001.  Based on CH4 emission factor of 0.0086 lb/MMBtu (AP-42, Table 3.1-2a) and a maximum heat input (from initial PSD permit) of 2319.83 MMBtu/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
36	Acrolein <= 0.0068 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
37	Benzene <= 0.0278 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
38	Formaldehyde <= 0.2552 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
39	Toluene <= 0.3016 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
40	Turbine fuel is limited to natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by invoices / bills of lading / certificate of analysis per delivery. [N.J.A.C. 7:27-22.16(o)]	None.
41	Maximum Gross Heat Input <= 2,320 MMBTU/hr (HHV) per turbine firing natural gas. [N.J.A.C. 7:27-22.16(a)]	Maximum Gross Heat Input: Monitored by fuel flow/firing rate instrument continuously. [N.J.A.C. 7:27-22.16(o)]	Maximum Gross Heat Input: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.

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**Emission Unit:** U1 2 Turbines, 2 HRSGs, and Aux. Boiler

**Operating Scenario:** OS3 Combustion Turbine (CT) 1 firing natural gas at full load with supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 1, OS4 Combustion Turbine (CT) 2 firing natural gas at full load with supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 2

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Smoke emissions from stationary combustion turbines no greater than 20% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Opacity <= 10 %. Smoke emissions from stationary combustion turbines no greater than 10% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Particulate Emissions <= 253.1 lb/hr. Particulate emission limit from the combustion of natural gas based on rated heat input of 2,320 MMBtu/hr (HHV) for one turbine and 211 MMBtu/hr (HHV) for one duct burner [Total 2531 MMBtu/hr (HHV)]. [N.J.A.C. 7:27- 4.2(a)]	Particulate Emissions: Monitored by stack emission testing once initially and prior to permit renewal, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Particulate Emissions: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]
4	CO <= 250 ppmvd @ 15% O2. VOC RACT rule emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(b)]	CO: Monitored by continuous emission monitoring system continuously, based on one calendar day. Compliance shall be based upon the average of emissions over one calendar day, not including periods of equipment downtime. (See "Continuous Emission Monitoring System for NOx, CO and O2 for Turbines" in OS Summary). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
5	CO <= 250 ppmvd @ 15% O2. VOC RACT rule emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(b)]	CO: Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]



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6	VOC (Total) <= 50 ppmvd @ 15% O <sub>2</sub> . VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(c)]	VOC (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results upon occurrence of event. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]
7	NO <sub>x</sub> (Total) <= 0.75 lb/MW-hr (net). NO <sub>x</sub> RACT emission limit applies during all periods of natural gas combustion during which net useful energy is being produced by the turbine. [N.J.A.C. 7:27-19.5(g)]	NO <sub>x</sub> (Total): Monitored by continuous emission monitoring system continuously, based on a calendar day (in ozone season) or 30 day rolling (at other times) average. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	NO <sub>x</sub> (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
8	NO <sub>x</sub> (Total) <= 0.75 lb/MW-hr (net). NO <sub>x</sub> RACT emission limit applies during all periods of natural gas combustion during which net useful energy is being produced by the turbine. [N.J.A.C. 7:27-19.5(g)]	NO <sub>x</sub> (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(0)]	NO <sub>x</sub> (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, REF #1 & #2). [N.J.A.C. 7:27-22.16(o)]
9	NO <sub>x</sub> (Total) <= 2 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7:27-18.3(b)(1)] and. [40 CFR 52.21]	NO <sub>x</sub> (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NO <sub>x</sub> (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
10	NO <sub>x</sub> (Total) <= 2 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7:27-18.3(b)(1)] and. [40 CFR 52.21]	NO <sub>x</sub> (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	NO <sub>x</sub> (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
11	NOx (Total) <= 0.0073 lb/MMBTU (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load (HHV) at 59 degrees Fahrenheit (2,079.97 MMBtu/hr)). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
12	NOx (Total) <= 0.0073 lb/MMBTU (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load (HHV) at 59 degrees Fahrenheit (2,079.97 MMBtu/hr)). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	NOx (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
13	NOx (Total) <= 16.5 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 73 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
14	NOx (Total) <= 16.5 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 73 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	NOx (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
15	CO <= 2 ppmvd @ 15% O2. Based on manufacturer guarantee / SOTA. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	CO <= 2 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee / SOTA. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
17	CO <= 0.0045 lb/MMBTU. Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
18	CO <= 0.0045 lb/MMBTU. Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
19	CO <= 10 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 73 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
20	CO <= 10 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 73 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 4). [N.J.A.C. 7:27-22.16(o)]
21	VOC (Total) <= 2 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	VOC (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
22	VOC (Total) <= 0.0025 lb/MMBTU. Based on manufacturer guarantee. [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	VOC (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]
23	VOC (Total) <= 5.7 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 73 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	VOC (Total): Monitored by stack emission testing once initially and prior to permit renewal, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & 2). [N.J.A.C. 7:27-22.16(o)]
24	SO2 <= 2.5 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 73 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]	SO2: Monitored by stack emission testing once initially and prior to permit renewal, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]	SO2: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-21.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]
25	TSP <= 7.9 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 105 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	TSP: Monitored by stack emission testing once initially and prior to permit renewal, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]	TSP: Recordkeeping by stack test results once initially and prior to permit renewal. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1 & #2). [N.J.A.C. 7:27-22.16(o)]
26	PM-10 (Total) <= 13.2 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 105 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	PM-10 (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, #2 & #3). [N.J.A.C. 7:27-22.16(o)]	PM-10 (Total): Recordkeeping by stack test results at the approved frequency. (See U1, OS Summary, Ref. #1, #2 & #3). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, 2 & 3). [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
27	<p>PM-10 (Total) &lt;= 13.2 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 105 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]</p>	<p>PM-10 (Total): Monitored by calculations each hour during operation. The permittee shall demonstrate compliance with the lb/hr emission limit each hour during turbine operation using the following calculation:</p> <p>PM10 (Total) = (*lbs/MMBtu for CC Unit1 with DB Unit1 on x maximum heat input (MMBtu/hr) of the natural gas consumed during that hour by CC Unit1 with DB Unit1 on); or</p> <p>PM10 (Total) = (*lbs/MMBtu for CC Unit2 with DB Unit2 on x maximum heat input (MMBtu/hr) of the natural gas consumed during that hour by CC Unit2 with DB Unit2 on)</p> <p>*lbs/MMBtu emission factor shall be the maximum stack test result (average of 3 valid stack test runs) obtained during any valid stack test that was performed within the previous 12 months, for each turbine. [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-10 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency. Maintain a record of calculated lb/MMBtu emission factor and lb/hr emission rate calculated during each hour of operation. [N.J.A.C. 7:27-22.16(o)]</p>	<p>None.</p>
28	<p>PM-2.5 (Total) &lt;= 13.2 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 105 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]</p>	<p>PM-2.5 (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #1, #2 &amp; #3). [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-2.5 (Total): Recordkeeping by stack test results at the approved frequency. (See U1, OS Summary, Ref. #1, #2 &amp; #3). [N.J.A.C. 7:27-22.16(o)]</p>	<p>Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1, #2 &amp; #3). [N.J.A.C. 7:27-22.16(o)]</p>

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
29	PM-2.5 (Total) $\leq$ 13.2 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 105 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]	<p>PM-2.5 (Total): Monitored by calculations each hour during operation. The permittee shall demonstrate compliance with the lb/hr emission limit each hour during turbine operation using the following calculation:</p> <p>PM2.5 (Total) = (*lbs/MMBtu for CC Unit1 with DB Unit1 on x maximum heat input (MMBtu/hr) of the natural gas consumed during that hour by CC Unit1 with DB Unit1 on); or</p> <p>PM2.5 (Total) = (*lbs/MMBtu for CC Unit2 with DB Unit2 on x maximum heat input (MMBtu/hr) of the natural gas consumed during that hour by CC Unit2 with DB Unit2 on)</p> <p>*lbs/MMBtu emission factor shall be the maximum stack test result (average of 3 valid stack test runs) obtained during any valid stack test that was performed within the previous 12 months, for each turbine. [N.J.A.C. 7:27-22.16(o)]</p>	PM-2.5 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency. Maintain a record of calculated lb/MMBtu emission factor and lb/hr emission rate calculated during each hour of operation. [N.J.A.C. 7:27-22.16(o)]	None.
30	Ammonia $\leq$ 5 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee / SOTA. [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by continuous process monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #6). [N.J.A.C. 7:27-22.16(o)].	Ammonia: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #6). [N.J.A.C. 7:27-22.16(o)]	None.
31	Ammonia $\leq$ 5 ppmvd @ 15% O <sub>2</sub> . Based on manufacturer guarantee / SOTA. [N.J.A.C. 7:27-22.16(a)]	Ammonia: Monitored by stack emission testing once initially, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]	Ammonia: Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]
32	Ammonia $\leq$ 15 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 50 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by continuous process monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #6). [N.J.A.C. 7:27-22.16(o)].	Ammonia: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #6). [N.J.A.C. 7:27-22.16(o)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
33	Ammonia <= 15 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 50 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)]	Ammonia: Monitored by stack emission testing once initially, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]	Ammonia: Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #1). [N.J.A.C. 7:27-22.16(o)]
34	Sulfuric Acid Mist Emissions <= 1.33 lb/hr (maximum emission limit). Based on manufacturer guarantee. This emission limit is based on the worst case operating condition (100% load at 70 degrees Fahrenheit). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
35	Methane <= 18.6 lb/hr (maximum emission limit). From operating permit BOP160001.  Based on the following CH4 emission factors: Turbine: 0.0086 lb/MMBtu (AP-42, Table 3.1-2a) Duct Burner: 0.00225 lb/MMBtu (AP-42, Table 1.4-2)  The following maximum heat inputs (from initial PSD permit): Turbine: 2126.61 MMBtu/hr Duct Burner: 119 MMBtu/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
36	Acrolein <= 0.0061 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
37	Benzene <= 0.0253 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
38	Formaldehyde <= 0.2424 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
39	Toluene <= 0.2709 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
40	Turbine fuel is limited to natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by invoices / bills of lading / certificate of analysis per delivery. [N.J.A.C. 7:27-22.16(o)]	None.

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<b>Ref.#</b>	<b>Applicable Requirement</b>	<b>Monitoring Requirement</b>	<b>Recordkeeping Requirement</b>	<b>Submittal/Action Requirement</b>
41	Duct Burner fuel is limited to natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by invoices / bills of lading / certificate of analysis per delivery. [N.J.A.C. 7:27-22.16(o)]	None.
42	Maximum Gross Heat Input <= 2,320 MMBTU/hr (HHV) per turbine firing natural gas. [N.J.A.C. 7:27-22.16(a)]	Maximum Gross Heat Input: Monitored by fuel flow/firing rate instrument continuously. [N.J.A.C. 7:27-22.16(o)]	Maximum Gross Heat Input: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.
43	Maximum Gross Heat Input <= 211 MMBTU/hr (HHV) per duct burner firing natural gas. [N.J.A.C. 7:27-22.16(a)]	Maximum Gross Heat Input: Monitored by fuel flow/firing rate instrument continuously. [N.J.A.C. 7:27-22.16(o)]	Maximum Gross Heat Input: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.



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**Emission Unit:** U1 2 Turbines, 2 HRSGs, and Aux. Boiler

**Operating Scenario:** OS5 Combustion Turbine (CT) 1 Cold start-up, OS6 Combustion Turbine (CT) 2 Cold start-up

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Smoke emissions from stationary combustion turbines no greater than 20% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Opacity <= 10 %. Smoke emissions from stationary combustion turbines no greater than 10% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Particulate Emissions <= 232 lb/hr. Particulate emission limit from the combustion of natural gas based on rated heat input of 2,320 MMBtu/hr (HHV) for one turbine (without duct burner operating). [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
4	CO <= 250 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(b)]	CO: Monitored by continuous emission monitoring system continuously, based on one calendar day. Compliance shall be based upon the average of emissions over one calendar day, not including periods of equipment downtime. (See "Continuous Emission Monitoring System for NOx, CO and O2 for Turbines" in OS Summary). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
5	VOC (Total) <= 50 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(c)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	NOx (Total) <= 0.75 lb/MW-hr (net). NOx RACT emission limit applies during all periods of natural gas combustion during which net useful energy is being produced by the turbine. [N.J.A.C. 7:27-19.5(g)]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a calendar day (in ozone season) or 30 day rolling (at other times) average. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
7	Start-up Period: Start-up is defined as the period of time from initiation of combustion of fuel in the combustion turbine until it achieves steady-state operation at a load of 52.9% of maximum operating load.  A Cold Start-up is defined as a start-up which occurs after the turbine has been shut down for 72 hours or more. The duration of a cold start-up shall not exceed 201 minutes.  The exemption from N.J.A.C. 7:27-22.16(a) emission limits during cold start-up shall not exceed 201 minutes. [N.J.A.C. 7:27-22.16(a)]	Start-up Period: Monitored by hour/time monitor continuously, based on an instantaneous determination.  Monitor the duration of any period during which the turbine is not operated in order to determine the type of start-up that follows (cold, warm or hot).  Monitor the duration of each period of start up in order to demonstrate compliance with the maximum duration for that type of start-up. [N.J.A.C. 7:27-22.16(o)]	Start-up Period: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event.  Record the duration of any period during which the turbine is not operated in order to document the type of start-up that follows (cold, warm or hot).  Record the duration of each period of start up in order to document compliance with the maximum duration for that type of start-up. [N.J.A.C. 7:27-22.16(o)]	None.
8	Maximum number of Cold startups shall not exceed 50 in any 365 day period. [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by observation upon occurrence of event, based on a consecutive 365 day period (rolling 1 day basis)[N.J.A.C. 7:27-22.16(o)].	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event Maintain a record of total cold start-ups, warm start-ups, hot start-ups, and shutdowns. [N.J.A.C. 7:27-22.16(o)]	None.
9	NOx (Total) <= 140.6 lb/hr per turbine during cold start-up. [N.J.A.C. 7:27-22.16(a)]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding calendar quarter (the calendar quarters begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	CO <= 723 lb/hr per turbine during cold start-up. [N.J.A.C. 7:27-22.16(a)]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding calendar quarter (the calendar quarters begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
11	VOC (Total) <= 42.4 lb/hr per turbine during cold start-up. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Testing of the emergency generator shall not occur during start-up or shut down of any turbine [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.
13	Testing of the fire pump shall not occur during startup or shut down of any turbine. [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.

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**Emission Unit:** U1 2 Turbines, 2 HRSGs, and Aux. Boiler

**Operating Scenario:** OS7 Combustion Turbine (CT) 1 Warm start-up, OS8 Combustion Turbine (CT) 2 Warm start-up

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Smoke emissions from stationary combustion turbines no greater than 20% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Opacity <= 10 %. Smoke emissions from stationary combustion turbines no greater than 10% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Particulate Emissions <= 232 lb/hr. Particulate emission limit from the combustion of natural gas based on rated heat input of 2,320 MMBtu/hr (HHV) for one turbine (without duct burner operating). [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
4	CO <= 250 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(b)]	CO: Monitored by continuous emission monitoring system continuously, based on one calendar day. Compliance shall be based upon the average of emissions over one calendar day, not including periods of equipment downtime. (See "Continuous Emission Monitoring System for NOx, CO and O2 for Turbines" in OS Summary). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
5	VOC (Total) <= 50 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(c)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	NOx (Total) <= 0.75 lb/MW-hr (net). NOx RACT emission limit applies during all periods of natural gas combustion during which net useful energy is being produced by the turbine. [N.J.A.C. 7:27-19.5(g)]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a calendar day (in ozone season) or 30 day rolling (at other times) average. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
7	<p>Start-up Period: Start-up is defined as the period of time from initiation of combustion of fuel in the combustion turbine until it achieves steady-state operation at a load of 52.9% of maximum operating load.</p> <p>A Warm Start-up is defined as a start-up which occurs after the turbine has been shut down for at least 8 hours but less than 72 hours. The duration of a cold start-up shall not exceed 95 minutes.</p> <p>The exemption from N.J.A.C. 7:27-22.16(a) emission limits during hot start-up shall not exceed 95 minutes. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Start-up Period: Monitored by hour/time monitor continuously, based on an instantaneous determination.</p> <p>Monitor the duration of any period during which the turbine is not operated in order to determine the type of start-up that follows (cold, warm or hot).</p> <p>Monitor the duration of each period of start up in order to demonstrate compliance with the maximum duration for that type of start-up. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Start-up Period: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event.</p> <p>Record the duration of any period during which the turbine is not operated in order to document the type of start-up that follows (cold, warm or hot).</p> <p>Record the duration of each period of start up in order to document compliance with the maximum duration for that type of start-up. [N.J.A.C. 7:27-22.16(o)]</p>	None.
8	Maximum combined number of warm or hot start-ups shall not exceed 250 in any 365 day period. [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by observation upon occurrence of event, based on a consecutive 365 day period (rolling 1 day basis)[N.J.A.C. 7:27-22.16(o)].	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event Maintain a record of total cold start-ups, warm start-ups, hot start-ups, and shutdowns. [N.J.A.C. 7:27-22.16(o)]	None.
9	NOx (Total) <= 96.8 lb/hr per turbine during hot or warm start-up. [N.J.A.C. 7:27-22.16(a)]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding calendar quarter (the calendar quarters begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	CO <= 437.7 lb/hr per turbine during warm start-up. [N.J.A.C. 7:27-22.16(a)]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding calendar quarter (the calendar quarters begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
11	VOC (Total) <= 25.3 lb/hr per turbine during warm start-up. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Testing of the emergency generator shall not occur during start-up or shut down of any turbine [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.
13	Testing of the fire pump shall not occur during startup or shut down of any turbine. [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.

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**Emission Unit:** U1 2 Turbines, 2 HRSGs, and Aux. Boiler

**Operating Scenario:** OS9 Combustion Turbine (CT) 1 Hot start-up, OS10 Combustion Turbine (CT) 2 Hot start-up

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Smoke emissions from stationary combustion turbines no greater than 20% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Opacity <= 10 %. Smoke emissions from stationary combustion turbines no greater than 10% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Particulate Emissions <= 232 lb/hr. Particulate emission limit from the combustion of natural gas based on rated heat input of 2,320 MMBtu/hr (HHV) for one turbine (without duct burner operating). [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
4	CO <= 250 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(b)]	CO: Monitored by continuous emission monitoring system continuously, based on one calendar day. Compliance shall be based upon the average of emissions over one calendar day, not including periods of equipment downtime. (See "Continuous Emission Monitoring System for NOx, CO and O2 for Turbines" in OS Summary). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
5	VOC (Total) <= 50 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(c)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	NOx (Total) <= 0.75 lb/MW-hr (net). NOx RACT emission limit applies during all periods of natural gas combustion during which net useful energy is being produced by the turbine. [N.J.A.C. 7:27-19.5(g)]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a calendar day (in ozone season) or 30 day rolling (at other times) average. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
7	Start-up Period: Start-up is defined as the period of time from initiation of combustion of fuel in the combustion turbine until it achieves steady-state operation at a load of 52.9% of maximum operating load.  A Hot Start-up is defined as a start-up which occurs when the turbine has been shut down for less than 8 hours. The duration of a hot start-up shall not exceed 39 minutes.  The exemption from N.J.A.C. 7:27-22.16(a) emission limits during hot start-up shall not exceed 39 minutes. [N.J.A.C. 7:27-22.16(a)]	Start-up Period: Monitored by hour/time monitor continuously, based on an instantaneous determination.  Monitor the duration of any period during which the turbine is not operated in order to determine the type of start-up that follows (cold, warm or hot).  Monitor the duration of each period of start up in order to demonstrate compliance with the maximum duration for that type of start-up. [N.J.A.C. 7:27-22.16(o)]	Start-up Period: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event.  Record the duration of any period during which the turbine is not operated in order to document the type of start-up that follows (cold, warm or hot).  Record the duration of each period of start up in order to document compliance with the maximum duration for that type of start-up. [N.J.A.C. 7:27-22.16(o)]	None.
8	Maximum combined number of warm or hot start-ups shall not exceed 250 in any 365 day period. [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by observation upon occurrence of event, based on a consecutive 365 day period (rolling 1 day basis)[N.J.A.C. 7:27-22.16(o)].	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event Maintain a record of total cold start-ups, warm / hot start-ups, and shutdowns. [N.J.A.C. 7:27-22.16(o)]	None.
9	NOx (Total) <= 95.2 lb/hr per turbine during hot start-up. [N.J.A.C. 7:27-22.16(a)]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding calendar quarter (the calendar quarters begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	CO <= 553.2 lb/hr per turbine during hot or warm start-up. [N.J.A.C. 7:27-22.16(a)]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding calendar quarter (the calendar quarters begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
11	VOC (Total) <= 27.1 lb/hr per turbine during hot or warm start-up. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Testing of the emergency generator shall not occur during start-up or shut down of any turbine [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.
13	Testing of the fire pump shall not occur during startup or shut down of any turbine. [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.

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**Emission Unit:** U1 2 Turbines, 2 HRSGs, and Aux. Boiler

**Operating Scenario:** OS11 Combustion Turbine (CT) 1 Shut Down, OS12 Combustion Turbine (CT) 2 Shut Down

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Smoke emissions from stationary combustion turbines no greater than 20% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Opacity <= 10 %. Smoke emissions from stationary combustion turbines no greater than 10% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Particulate Emissions <= 232 lb/hr. Particulate emission limit from the combustion of natural gas based on rated heat input of 2,320 MMBtu/hr (HHV) for one turbine (without duct burner operating). [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
4	CO <= 250 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(b)]	CO: Monitored by continuous emission monitoring system continuously, based on one calendar day. Compliance shall be based upon the average of emissions over one calendar day, not including periods of equipment downtime. (See "Continuous Emission Monitoring System for NOx, CO and O2 for Turbines" in OS Summary). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
5	VOC (Total) <= 50 ppmvd @ 15% O2. VOC RACT emission limit applies during all operation of the turbine. [N.J.A.C. 7:27-16.9(c)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	NOx (Total) <= 0.75 lb/MW-hr (net). NOx RACT emission limit applies during all periods of natural gas combustion during which net useful energy is being produced by the turbine. [N.J.A.C. 7:27-19.5(g)]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a calendar day (in ozone season) or 30 day rolling (at other times) average. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding quarter year (the quarter years begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
7	Shutdown Period: Shutdown is defined as the period of time from initial lowering of the combustion turbine fuel input, with the intent to cease generation of electrical power output, until the cessation of turbine operation. The duration of shut down shall not exceed 18 minutes.  The exemption from N.J.A.C. 7:27-22.16(a) emission limits during shut down shall not exceed 18 minutes. [N.J.A.C. 7:27-22.16(a)]	Shutdown Period: Monitored by hour/time monitor continuously, based on an instantaneous determination.  Monitor the duration of each period of shut down in order to demonstrate compliance with the maximum duration of shut down. [N.J.A.C. 7:27-22.16(o)]	Shutdown Period: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event.  Record the duration of each period of shut down in order to document compliance with the maximum duration of shut down. [N.J.A.C. 7:27-22.16(o)]	None.
8	Maximum number of shut downs shall not exceed 300 in any 365 day period. [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by observation upon occurrence of event, based on a consecutive 365 day period (rolling 1 day basis)[N.J.A.C. 7:27-22.16(o)].	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event Maintain a record of total cold start-ups, warm / hot start-ups, and shutdowns. [N.J.A.C. 7:27-22.16(o)]	None.
9	NOx (Total) <= 25 lb/hr per turbine during shut down. [N.J.A.C. 7:27-22.16(a)]	NOx (Total): Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding calendar quarter (the calendar quarters begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	CO <= 546 lb/hr per turbine during shut down. [N.J.A.C. 7:27-22.16(a)]	CO: Monitored by continuous emission monitoring system continuously, based on a 3 hour rolling average based on a 1 hour block average. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. (See U1, OS Summary, Ref. #5). [N.J.A.C. 7:27-22.16(o)]	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): On or before every April 30, July 30, October 30, and January 30 for the preceding calendar quarter (the calendar quarters begin on January 1, April 1, July 1, and October 1) electronically through the NJDEP online EEMPR web portal. [N.J.A.C. 7:27-22.16(o)]
11	VOC (Total) <= 14 lb/hr per turbine during shut down. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Testing of the emergency generator shall not occur during start-up or shut down of any turbine [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.
13	Testing of the fire pump shall not occur during startup or shut down of any turbine. [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.

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**Emission Unit:** U1 2 Turbines, 2 HRSGs, and Aux. Boiler

**Operating Scenario:** OS13 Auxiliary Boiler firing natural gas.

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity: No visible emissions. As specified in N.J.A.C. 7:27-3.2(c), this provision does not apply to smoke which is visible for a period of time of not longer than three (3) minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 3.2(a)]	None.	None.	None.
2	Particulate Emissions $\leq$ 12.1 lb/hr. Particulate emission limit from the combustion of natural gas based on rated heat input of 60.6 MMBtu/hr (HHV) for boiler. [N.J.A.C. 7:27- 4.2(a)]	Particulate Emissions: Monitored by stack emission testing once initially, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Particulate Emissions: Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]
3	VOC (Total) $\leq$ 50 ppmvd @ 7% O <sub>2</sub> . VOC RACT emission limit applies during all operation of the boiler. [N.J.A.C. 7:27-16.8(b)1]	VOC (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]
4	CO $\leq$ 100 ppmvd @ 7% O <sub>2</sub> . VOC RACT emission limit applies during all operation of the boiler. [N.J.A.C. 7:27-16.8(b)2]	CO: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]
5	NO <sub>x</sub> (Total) $\leq$ 0.05 lb/MMBTU. NO <sub>x</sub> RACT emission limit for natural gas combustion, applies during all operation of the boiler. [N.J.A.C. 7:27-19.7(i)2]	NO <sub>x</sub> (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	NO <sub>x</sub> (Total): Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]
6	NO <sub>x</sub> (Total) $\leq$ 0.606 lb/hr. Maximum emission rate based on manufacturer guaranteed emission factor (0.010 lb/MMBtu) and maximum heat input (60.6 MMBtu/hr). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1) and. [40 CFR 52.21] NON-COMPLIANT AT TIME OF PERMIT ISSUANCE. SEE COMPLIANCE SCHEDULE IN PART G.	NO <sub>x</sub> (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)] NON-COMPLIANT AT TIME OF PERMIT ISSUANCE. SEE COMPLIANCE SCHEDULE IN PART G.	NO <sub>x</sub> (Total): Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)] NON-COMPLIANT AT TIME OF PERMIT ISSUANCE. SEE COMPLIANCE SCHEDULE IN PART G.	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)] NON-COMPLIANT AT TIME OF PERMIT ISSUANCE. SEE COMPLIANCE SCHEDULE IN PART G.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	CO $\leq$ 2.24 lb/hr. Maximum emission rate based on manufacturer guaranteed emission factor (0.037 lb/MMBtu) and maximum heat input (60.6 MMBtu/hr). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	CO: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]
8	VOC (Total) $\leq$ 0.242 lb/hr. Maximum emission rate based on manufacturer guaranteed emission factor (0.004 lb/MMBtu) and maximum heat input (60.6 MMBtu/hr). [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	VOC (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]
9	SO <sub>2</sub> $\leq$ 0.075 lb/hr. Maximum emission rate based on AP-42 emission factor (AP-42, table 1.4-2) and maximum heat input (60.6 MMBtu/hr). [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
10	TSP $\leq$ 0.2 lb/hr (PM filterable). Maximum emission rate based on manufacturer's PM-10 / PM-2.5 emission factor (0.005 lb/MMBtu) and manufacturer guidance which indicates that filterable particulate emissions are expected to be about 66% of the total (filterable + condensable) particulates for the auxiliary boiler. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	TSP: Monitored by stack emission testing once initially, based on each of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	TSP: Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27-22.16(o)]
11	PM-10 (Total) $\leq$ 0.303 lb/hr. Maximum emission rate based on manufacturer guaranteed emission factor (0.005 lb/MMBtu) and maximum heat input (60.6 MMBtu/hr). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	PM-10 (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	PM-10 (Total): Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]
12	PM-2.5 (Total) $\leq$ 0.303 lb/hr. Maximum emission rate based on manufacturer guaranteed emission factor (0.005 lb/MMBtu) and maximum heat input (60.6 MMBtu/hr). [N.J.A.C. 7:27-22.16(a)]	PM-2.5 (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	PM-2.5 (Total): Recordkeeping by stack test results once initially. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. (See U1, OS Summary, Ref. #7). [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	SO3 and H2SO4, as converted and expressed as H2SO4 <= 0.00573 lb/hr. Maximum emission rate based on 5% conversion of SO2 to SO3 (on a molar basis). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
14	Methane <= 0.137 lb/hr. Maximum emission rate based on AP-42 emission factor (AP-42, table 1.4-2) and maximum heat input (60.6 MMBtu/hr). [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
15	Auxiliary boiler fuel is limited to natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by invoices / bills of lading / certificate of analysis per delivery. [N.J.A.C. 7:27-22.16(o)]	None.
16	Maximum Gross Heat Input <= 60.6 MMBTU/hr (HHV). Maximum hourly heat input while firing natural gas. [N.J.A.C. 7:27-22.16(o)]	Maximum Gross Heat Input: Monitored by fuel flow/firing rate instrument continuously. [N.J.A.C. 7:27-22.16(o)]	Maximum Gross Heat Input: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.
17	Natural Gas Usage <= 47.5 MMft <sup>3</sup> /yr per 365 consecutive day period, rolling one day basis. This fuel limit applies to the auxiliary boiler only. This limit assumes combustion of natural gas for 800 hr/yr in the boiler. [N.J.A.C. 7:27-22.16(a)]	Natural Gas Usage: Monitored by fuel flow/firing rate instrument continuously, based on a consecutive 365 day period (rolling 1 day basis). The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Natural Gas Usage: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.
18	Hours of Operation While Firing Natural Gas <= 800 hr/yr. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Natural Gas: Monitored by hour/time monitor continuously, based on a consecutive 12 month period (rolling 1 month basis). The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Natural Gas: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. [N.J.A.C. 7:27-22.16(a)]	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

<b>Ref.#</b>	<b>Applicable Requirement</b>	<b>Monitoring Requirement</b>	<b>Recordkeeping Requirement</b>	<b>Submittal/Action Requirement</b>
19	Testing of emergency generator shall not occur during start-up or shutdown of the boiler. [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.
20	Testing of the fire pump shall not occur during start-up or shutdown of the boiler. [N.J.A.C. 7:27-22.16(o)]	None.	None.	None.



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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Emission Unit: U2 Cooling Tower

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Particulate Emissions $\leq$ 0.201 lb/hr based on 0.02 grains per SCF. [N.J.A.C. 7:27-6.2(a)]	None.	None.	None.
2	Opacity $\leq$ 20 %. No Person shall cause, suffer, allow or permit particles to be emitted from any stack or chimney into the outdoor air the shade or appearance of which is greater than 20 percent opacity, exclusive of condensed water vapor, except for a period of not longer than three minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 6.2(d)]	None.	None.	None.
3	TSP $\leq$ 9.74 tons/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	TSP: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). (See GR 1). [N.J.A.C. 7:27-22.16(o)]	TSP: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]	None.
4	PM-10 (Total) $\leq$ 5.66 tons/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	PM-10 (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). (See GR 1). [N.J.A.C. 7:27-22.16(o)]	PM-10 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]	None.
5	PM-2.5 (Total) $\leq$ 2 tons/yr. [N.J.A.C. 7:27-22.16(a)]	PM-2.5 (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). (See GR 1). [N.J.A.C. 7:27-22.16(o)]	PM-2.5 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27-22.16(o)]	None.
6	Water treatment chemicals containing hexavalent chromium shall not be added to the circulating water [N.J.A.C. 7:27-22.16(a)]	None.	Other: Keep records of raw materials used in recirculation water.[N.J.A.C. 7:27-22.16(o)].	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	<p>Cooling water chemicals shall be limited to:</p> <p>"sodium hypochlorite (biocide) "sulfuric acid (pH control) "sodium bromide</p> <p>The facility shall provide the Department by certified letter the list and amount of any other cooling water chemicals that are used in future in the cooling tower. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Other: By review of process records showing materials/chemicals added/mixed.[N.J.A.C. 7:27-22.16(o)].</p>	<p>Other: Maintain process records showing list of materials/chemicals added/mixed.[N.J.A.C. 7:27-22.16(o)].</p>	None.
8	<p>Total Material Transferred &lt;= 2,267 tons/yr of chemical additives for the cooling towers. Maximum throughput rate based on operating permit BOP140005. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Total Material Transferred: Monitored by material feed/flow monitoring continuously. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Total Material Transferred: Recordkeeping by manual logging of parameter or storing data in a computer data system each week during operation in a permanently bound log book or readily accessible computer memory showing type of raw materials and amount of each chemical added during the previous 12 consecutive months. [N.J.A.C. 7:27-22.16(o)]</p>	None.
9	<p>This source shall be equipped with high efficiency drift eliminators. The quantity of drift shall be less than 0.0005% of the circulating water flow. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

**Emission Unit:** U2 Cooling Tower  
**Operating Scenario:** OS1 Cooling Tower

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Cooling tower circulation water flow rate $\leq$ 220,870 gallons per minute (gpm) per cooling tower, based on operating permit application. [N.J.A.C. 7:27-22.16(a)]	Monitored by other method (provide description) continuously, based on 1 minute intervals. Continuously monitor the recirculation flow rate using the Distributed Control System (DCS). The DCS shall calculate and display the cooling tower circulation flow rate each minute, using the pump output rating (GPM) and the operating time. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. Record the pump operation and the calculated flow rate in the Data Historian each minute during operation. [N.J.A.C. 7:27-22.16(o)]	None.
2	Total Dissolved Solids (TDS) concentration in the cooling tower circulating water $\leq$ 4,150 mg/liter. [N.J.A.C. 7:27-22.16(a)]	Monitored by grab sampling each month during operation for analysis of circulating water. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Maintain records of circulating water analysis. [N.J.A.C. 7:27-22.16(o)]	None.
3	TSP $\leq$ 2.29 lb/hr. From Operating Permit BOP110001. [N.J.A.C. 7:27-22.16(a)] and [40 CFR 52.21]	TSP: Monitored by calculations each month during operation :  TSP (lb/hr) = 0.000501 x D x C x TDS; where:  D = fraction of circulating water lost to drift = 0.0005% C = circulating water rate (gal/min) = 220,870 gal/min (based on maximum capacity of cooling tower) TDS = total dissolved solids concentration in circulating water (mg/l)  A sample of the circulating water will be taken a minimum of every month and analyzed for TDS. [N.J.A.C. 7:27-22.16(o)]	TSP: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation  Records shall be maintained on site for a period of five (5) years after the date of each record and made available to the representatives of the Department upon request. [N.J.A.C. 7:27-22.16(o)]	Submit a report: Annually on January 31 for the preceding calendar year. The report shall be submitted to the NJDEP Northern Regional Enforcement Office.  The report must contain:  1. A log of the total dissolved solids concentration of the circulating water flow. A sample will be taken and recorded during Cooling Tower operation a minimum of every month in which the Cooling Tower operates;  2. The calculated maximum hourly particulate emissions in pounds per hour;  3. The calculated maximum cumulative particulates emissions in tons per year; and  4. Description of any maintenance procedures applied to the cooling tower. [N.J.A.C. 7:27-21.16(o)]

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
4	PM-10 (Total) $\leq$ 1.33 lb/hr. From Operating Permit BOP110001. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	PM-10 (Total): Monitored by calculations each month during operation :  PM-10 (lb/hr) = 0.000501 x D x C x TDS x A; where:  D = fraction of circulating water lost to drift = 0.0005%, C = circulating water rate (gal/min) = 220,870 gal/min (based on maximum capacity of cooling tower), TDS = total dissolved solids concentration in circulating water (mg/l), A = PM-10 fraction.  A sample of the circulating water will be taken a minimum of every month and analyzed for TDS. [N.J.A.C. 7:27-22.16(o)]	PM-10 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation  Records shall be maintained on site for a period of five (5) years after the date of each record and made available to the representatives of the Department upon request. [N.J.A.C. 7:27-22.16(o)]	Submit a report: Annually on January 31 for the preceding calendar year. The report shall be submitted to the NJDEP Northern Regional Enforcement Office.  The report must contain:  1. A log of the total dissolved solids concentration of the circulating water flow. A sample will be taken and recorded during Cooling Tower operation a minimum of every month in which the Cooling Tower operates;  2. The calculated maximum hourly particulate emissions in pounds per hour;  3. The calculated maximum cumulative particulates emissions in tons per year; and  4. Description of any maintenance procedures applied to the cooling tower. [N.J.A.C. 7:27-22.16(o)]

**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	PM-2.5 (Total) $\leq$ 0.47 lb/hr. Based on initial operating permit application. [N.J.A.C. 7:27-22.16(a)]	<p>PM-2.5 (Total): Monitored by calculations each month during operation :</p> <p>PM-2.5 (lb/hr) = 0.000501 x D x C x TDS x A; where:</p> <p>D = fraction of circulating water lost to drift = 0.0005%,  C = circulating water rate (gal/min) = 220,870 gal/min (based on maximum capacity of cooling tower),  TDS = total dissolved solids concentration in circulating water (mg/l),  A = PM-2.5 fraction</p> <p>A sample of the circulating water will be taken a minimum of every month and analyzed for TDS. [N.J.A.C. 7:27-22.16(o)]</p>	<p>PM-2.5 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation</p> <p>Records shall be maintained on site for a period of five (5) years after the date of each record and made available to the representatives of the Department upon request. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Submit a report: Annually on January 31 for the preceding calendar year. The report shall be submitted to the NJDEP Northern Regional Enforcement Office.</p> <p>The report must contain:</p> <ol style="list-style-type: none"> <li>1. A log of the total dissolved solids concentration of the circulating water flow. A sample will be taken and recorded during Cooling Tower operation a minimum of every month in which the Cooling Tower operates;</li> <li>2. The calculated maximum hourly particulate emissions in pounds per hour;</li> <li>3. The calculated maximum cumulative particulates emissions in tons per year; and</li> <li>4. Description of any maintenance procedures applied to the cooling tower. [N.J.A.C. 7:27-22.16(o)]</li> </ol>
6	pH: pH $\geq$ 6.0 and pH $\leq$ 10.5 Acceptable pH range from operating permit BOP140005. If pH drops below this range, an alarm shall sound and the sulfuric acid feed shall be locked out. [N.J.A.C. 7:27-22.16(o)]	pH: Monitored by pH instrument continuously, based on an instantaneous determination. The pH of the cooling tower water shall be monitored by a continuous dual channel pH monitor with an alarm and sulfuric acid feed lock out system which are activated when the pH goes below this range. [N.J.A.C. 7:27-22.16(o)]	pH: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. Maintain a record of the pH of the cooling tower water and a record of any instance where the pH goes outside of the permitted range. [N.J.A.C. 7:27-22.16(o)]	None.
7	Oxidation Reduction Potential $\geq$ 175 and Oxidation Reduction Potential $\leq$ 600 millivolts. [N.J.A.C. 7:27-22.16(a)]	Oxidation Reduction Potential: Monitored by oxidation/reduction potential meter continuously. The ORP of the cooling tower water shall be monitored by a continuous ORP meter with an alarm system which is activated when the ORP goes below this range. [N.J.A.C. 7:27-22.16(o)]	Oxidation Reduction Potential: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. Maintain a record of the ORP of the cooling tower water and a record of any instance where the ORP goes outside of the permitted range. [N.J.A.C. 7:27-22.16(o)]	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Emission Unit: U3 1.5 MW Emergency Generator

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	NOx (Total) <= 1.85 tons/yr. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7:27-18.2(a) and. [40 CFR 52.21]	None.	None.	None.
2	CO <= 1.16 tons/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
3	VOC (Total) <= 0.26 tons/yr. [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.2(a)]	None.	None.	None.
4	TSP <= 0.06 tons/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
5	PM-10 (Total) <= 0.07 tons/yr [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
6	PM-2.5 (Total) <= 0.07 tons/yr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	<p>The emergency generator shall be located at the facility and produce mechanical or thermal energy, or electrical power exclusively for use at the facility. This emergency generator shall be operated only:</p> <ol style="list-style-type: none"> <li>1. During the performance of normal testing and maintenance procedures, as recommended in writing by the manufacturer and/or as required in writing by a Federal or State law or regulation,</li> <li>2. When there is power outage or the primary source of mechanical or thermal energy fails because of an emergency, or</li> <li>3. When there is a voltage reduction issued by PJM and posted on the PJM internet website (www.pjm.com) under the "emergency procedures" menu. [N.J.A.C. 7:27-19.1]</li> </ol>	<p>Monitored by hour/time monitor continuously. The owner or operator shall install and operate a totalizing, non-resettable hour meter to monitor the total hours of operation of the generator during each year. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency. The owner or operator shall maintain on site and record in a logbook or computer data system, the following information:</p> <ol style="list-style-type: none"> <li>1. Once per month, the total operating time from the generator's hour meter.</li> <li>2. For each time the emergency generator is specifically operated for testing or maintenance:                             <ol style="list-style-type: none"> <li>i. The reason for its operation;</li> <li>ii. The date(s) of operation and the start up and shut down time;</li> <li>iii. The total operating time for testing or maintenance based on the generator's hour meter; and</li> <li>iv. The name of the operator; and</li> </ol> </li> <li>3. If a voltage reduction is the reason for the use of the emergency generator, a copy of the voltage reduction notification from PJM or other documentation of the voltage reduction.</li> </ol> <p>The owner or operator of an emergency generator shall maintain the above records for a period no less than five years after the record was made and shall make the records readily available to the Department or the EPA upon request. [N.J.A.C. 7:27-19.11(a)] and. [N.J.A.C. 7:27-19.11(b)]</p>	<p>None.</p>

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	<p>Emergency generators shall not be used:</p> <p>1. In a circumstance other than an emergency, except during normal testing and maintenance;</p> <p>2. For normal testing and maintenance on days when the Department forecasts air quality anywhere in New Jersey to be "unhealthy for sensitive groups," "unhealthy," or "very unhealthy" or "hazardous" unless required in writing by a Federal or State law or regulation. Procedures for determining the air quality forecasts for New Jersey are available at the Department air quality web site at <a href="http://www.state.nj.us/dep/aqpp/aqforecast">http://www.state.nj.us/dep/aqpp/aqforecast</a>; and</p> <p>3. As a source of energy or power after the primary energy or power source has become operable again. If the primary energy or power source is under the control of the owner or operator of the emergency generator, the owner or operator shall make a reasonable, timely effort to repair the primary energy or power source. [N.J.A.C. 7:27-19.2(d)]</p>	<p>Other: The Permittee shall check the air quality forecast for New Jersey available at the Department air quality website at <a href="http://www.state.nj.us/dep/aqpp/aqforecast">http://www.state.nj.us/dep/aqpp/aqforecast</a> prior to operating during testing and maintenance periods. [N.J.A.C. 7:27-22.16(o)].</p>	None.	<p>Submit a report: Upon occurrence of event. The permittee shall report any non-compliance in writing within 3 working days after the event to the Regional Enforcement Office. [N.J.A.C. 7:27-22.16(o)]</p>
9	<p>The duration of a testing event is restricted to 30 minutes. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.
10	<p>The emergency generator shall not be tested at the same time as the fire pump. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.
11	<p>The emergency generator shall not be tested during the startup or shutdown of the turbines or the boiler. [N.J.A.C. 7:27-22.16(a)]</p>	None.	None.	None.



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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
12	Hours of Operation While Firing Diesel <= 200 hr/yr (ULSD). The maximum annual operating hours for normal testing and maintenance shall not exceed 100 hours/yr. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Diesel: Monitored by hour/time monitor continuously. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation While Firing Diesel: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The owner or operator shall maintain onsite and record in a logbook or computer data system the total operating time from the generator's hour meter. [N.J.A.C. 7:27-22.16(o)]	None.
13	The Permittee shall, once per month, record the total operating time from the generator's hour meter. [N.J.A.C. 7:27-19.11]	Monitored by hour/time monitor continuously . [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The Permittee shall maintain on site a record of the total operating time from the generator's hour meter. Once per month. . [N.J.A.C. 7:27-19.11]	None.
14	The owner or operator of a 2007 model year and later emergency generator with the displacement of >= 10 liters per cylinder and less than 30 liters per cylinder must comply with the certification emissions standards for new marine engine in 40 CFR 94.8 for the same displacement and same maximum engine power, as prescribed at 40 CFR 60.4202(e)(1) through (4) as follows: NMHC + NOx <= 4.8 g/HP-hr, CO <= 2.6 g/HP-hr, PM <= 0.15 g/HP-hr. [40 CFR 60.4205(b)]	None.	Other: The owner or operator of a 2007 model year or later engine must keep manufacturer certification showing compliance with the applicable emission standards, for the same model year and maximum engine power. [40 CFR 60.4211].	None.
15	Owners and operators of stationary CI internal combustion engines must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 60.4205 over the entire life of the engine. [40 CFR 60.4206]	None.	Other: The owner or operator shall keep the manufacturer's emission-related written instructions over the entire life of the engine. If the manufacturer's emission-related written instructions are not followed, the owner or operator must keep the results of the performance test(s) demonstrating compliance with the applicable emission limits. [40 CFR 60.4206].	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	Beginning October 1, 2007, the CI internal combustion engines subject to NSPS IIII (manufactured after April 1, 2006 or modified or reconstructed after July 11, 2005) that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a) that contains the following per gallon standards: 500 ppm (0.05 percent) maximum sulfur content and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 60.4207(a)]	Monitored by review of fuel delivery records once per bulk fuel shipment. For each diesel delivery received, the owner or operator shall review written documentation of the delivery to ensure the maximum allowable fuel oil sulfur content and either a minimum cetane index or a maximum aromatic content is not being exceeded. Such written documentation can include, but is not limited to: bill of lading, delivery Invoice, certificate of analysis. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by invoices / bills of lading / certificate of analysis once per bulk fuel shipment. The owner or operator shall keep records of fuel showing oil sulfur content and either a minimum cetane index or a maximum aromatic content for each delivery received. All records must be maintained for a minimum of 2 years following the date of such records per 40 CFR 60.7(f). [N.J.A.C. 7:27-22.16(o)]	None.
17	Beginning October 1, 2010, the CI internal combustion engines with a displacement of less than 30 liters per cylinder subject to NSPS IIII (manufactured after April 1, 2006 or modified or reconstructed after July 11, 2005) that use diesel fuel must purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) that contains the following per gallon standards: 15 ppm (0.0015 percent) maximum sulfur content and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 60.4207(b)]	Monitored by review of fuel delivery records once per bulk fuel shipment. For each diesel delivery received, the owner or operator shall review written documentation of the delivery to ensure the maximum allowable fuel oil sulfur content and either a minimum cetane index or a maximum aromatic content is not being exceeded. Such written documentation can include, but is not limited to: bill of lading, delivery invoice, certificate of analysis. [N.J.A.C. 7:27- 8.13(d)]	Recordkeeping by invoices / bills of lading / certificate of analysis once per bulk fuel shipment. The owner or operator shall keep records of fuel showing oil sulfur content and either a minimum cetane index or a maximum aromatic content for each delivery received. All records must be maintained for a minimum of 2 years following the date of such records per 40 CFR 60.7(f). [N.J.A.C. 7:27- 8.13(d)]	None.
18	After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines, except for engines that have been modified or reconstructed, and except for engines that were removed from one existing location and reinstalled at a new location.. [40 CFR 60.4208]	None.	None.	None.
19	Owners and operators of a stationary CI internal combustion engine equipped with a diesel particulate filter must install a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR 60.4209(b)]	Monitored by pressure measurement device continuously. The backpressure monitor must alert the operator when the diesel particulate filter requires service. The service monitor should be mounted in a location that is clearly visible to the operator during operation. [40 CFR 60.4209(b)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [40 CFR 60.4214(c)]	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
20	The owner or operator that must comply with the emission standards specified in NSPS IIII must operate and maintain the stationary CI internal combustion engine and control device, except as permitted under 40 CFR 60.4211(g), according to the manufacturer's emission-related written instructions. In addition, owners and operators may only change emission-related settings that are permitted by the manufacturer. The owner or operator must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as applicable. If the engine and control device is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or emission-related settings are changed in a way that is not permitted by the manufacturer, the owner or operator must demonstrate compliance as prescribed at 40 CFR 60.4211(g)(1), (2) or (3) depending on the maximum engine power. [40 CFR 60.4211(a)]	None.	Other: The owner or operator shall keep the manufacturer's emission-related written instructions. If not complying with manufacturer's emission-related written instructions or emission-related settings, the owner or operator shall must keep a maintenance plan, records of conducted maintenance, and conduct a performance test(s), as prescribed at 40 CFR 60.4211(g). [40 CFR 60.4211].	None.
21	The owner or operator of a 2007 model year and later stationary CI internal combustion engine complying with the emission standards specified in 40 CFR 60.4204(b) or 40 CFR 60.4205(b), must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b) or 40 CFR 60.4205(b) as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]	None.	Other: The owner or operator must keep documentation from the manufacturer, for the life of the equipment, that the engine is certified to meet the emission standards as applicable, for the same model year and maximum engine power. If the engine and control device is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or emission-related settings are changed in a way that is not permitted by the manufacturer, the owner or operator must demonstrate compliance as prescribed at 40 CFR 60.4211(g)(1), (2) or (3) depending on the maximum engine power. [40 CFR 60.4211(c)].	None.

**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
22	Emergency generators may be operated for the purpose of maintenance checks and readiness testing limited to 100 hours per year, provided that those tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. [40 CFR 60.4211(f)]	Monitored by hour/time monitor continuously. The owner or operator of an emergency stationary internal combustion engine that does not meet the standards applicable to non-emergency engines must install a non-resettable hour meter prior to startup of the engine. [40 CFR 60.4209(a)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator must record the time of operation of the emergency engine and the reason the engine was in operation during that time. Starting with the model year 2011, 2012, or 2013, depending on the maximum engine power as provided in Table 5 in NSPS IIII, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter if the emergency engine does not meet the standards in 40 CFR 60.4204, applicable to non-emergency engines, in the applicable model year. The emergency engine must comply with the labeling requirements in 40 CFR 60.4210(f). [40 CFR 60.4214(b)]	None.
23	A new or reconstructed stationary RICE located at an area HAP source must meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 subpart IIII, for compression ignition engines or 40 CFR 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under 40 CFR 63. [40 CFR 63.6590(c)]	Other: Comply with all applicable provisions at NSPS IIII. [40 CFR 63].	Other: Comply with all applicable provisions at NSPS IIII. [40 CFR 63].	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

**Emission Unit:** U3 1.5 MW Emergency Generator

**Operating Scenario:** OS1 1.5 MW Emergency Generator

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Smoke emissions from stationary internal combustion engines no greater than 20% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Particulate Emissions <= 6.872 lb/hr. Particulate emission limit from the combustion of ULSD based on rated heat input of 14.36 MMBtu/hr (HHV) for emergency generator. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
3	Sulfur Content in Fuel <= 500 ppmw (0.05 % by weight). Maximum allowable sulfur content in No. 2 and lighter fuel oil. NOTE: This requirement is effective starting July 1, 2014 through June 30, 2016. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Sulfur Content in Fuel: Recordkeeping by invoices / bills of lading / certificate of analysis per delivery showing fuel sulfur content. [N.J.A.C. 7:27-22.16(o)]	None.
4	Sulfur Content in Fuel <= 15 ppmw (0.0015 % by weight). Maximum allowable sulfur content in No. 2 and lighter fuel oil. NOTE: This requirement is effective on and after July 1, 2016. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Sulfur Content in Fuel: Recordkeeping by invoices / bills of lading / certificate of analysis per delivery showing fuel sulfur content. [N.J.A.C. 7:27-22.16(o)]	None.
5	Sulfur Content in Fuel <= 0.0015 % by weight. Maximum allowable sulfur content in ULSD. [N.J.A.C. 7:27-22.16(a)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Sulfur Content in Fuel: Recordkeeping by invoices / bills of lading / certificate of analysis per delivery. [N.J.A.C. 7:27-22.16(o)]	None.
6	NOx (Total) <= 18.53 lb/hr. Based on emission factor for tier 2 engines (40 CFR 89.112, Table 1) and a maximum power rating of 1500 kW. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1) and. [40 CFR 52.21]	None.	None.	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	CO <= 11.56 lb/hr. Based on emission factor for tier 2 engines (40 CFR 89.112, Table 1) and a maximum power rating of 1500 kW. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
8	VOC (Total) <= 2.62 lb/hr. Based on emission factor for tier 2 engines (40 CFR 89.112, Table 1) and a maximum power rating of 1500 kW. [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	None.	None.	None.
9	TSP <= 0.59 lb/hr. Based on emission factor for tier 2 engines (40 CFR 89.112, Table 1) a maximum power rating of 1500 kW and AP-42 distribution of particulate matter (AP-42, Table 3.4-2). [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
10	PM-10 (Total) <= 0.66 lb/hr. Based on emission factor for tier 2 engines (40 CFR 89.112, Table 1) and a maximum power rating of 1500 kW. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
11	PM-2.5 (Total) <= 0.66 lb/hr. Based on emission factor for tier 2 engines (40 CFR 89.112, Table 1) and a maximum power rating of 1500 kW. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Emergency generator fuel limited to ultra low sulfur distillate fuel oil (ULSD) [sulfur content <= 15 ppm]. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
13	Hours of Operation While Firing Diesel <= 200 hr/yr (ULSD). [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Diesel: Monitored by hour/time monitor continuously. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation While Firing Diesel: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The owner or operator shall maintain onsite and record in a logbook or computer data system the total operating time from the generator's hour meter. [N.J.A.C. 7:27-22.16(o)]	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
14	Maximum Gross Heat Input $\leq$ 14.36 MMBTU/hr (HHV). [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by manufacturer's design specifications.[N.J.A.C. 7:27-22.16(o)].	Other: Maintain record of manufacturer's design specifications at all times.[N.J.A.C. 7:27-22.16(o)].	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Emission Unit: U4 270 HP Fire Pump

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	NOx (Total) <= 0.16 tons/yr [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7:27-18.2(a)] and. [40 CFR 52.21]	None.	None.	None.
2	CO <= 0.16 tons/yr [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
3	VOC (Total) <= 0.02 tons/yr [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.2(a)]	None.	None.	None.
4	TSP <= 0.008 tons/yr. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
5	PM-10 (Total) <= 0.009 tons/yr [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
6	PM-2.5 (Total) <= 0.009 tons/yr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.



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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	<p>The emergency fire pump shall be located at the facility and be used exclusively to pump water for the purpose of extinguishing fires at the facility. This emergency fire pump shall be operated only:</p> <p>1. During the performance of normal testing and maintenance procedures, as recommended in writing by the manufacturer and/or as required in writing by a Federal or State law or regulation,</p> <p>2. When there is a fire. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Monitored by hour/time monitor continuously. The owner or operator shall install and operate a totalizing, non-resettable hour meter to monitor the total hours of operation of the generator during each year. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Recordkeeping by manual logging of parameter or storing data in a computer data system at the approved frequency. The owner or operator shall maintain on site and record in a logbook or computer data system, the following information:</p> <p>1. Once per month, the total operating time from the fire pump's hour meter.</p> <p>2. For each time the emergency fire pump is specifically operated for testing or maintenance:</p> <ul style="list-style-type: none"> <li>i. The reason for its operation;</li> <li>ii. The date(s) of operation and the start up and shut down time;</li> <li>iii. The total operating time for testing or maintenance based on the fire pump's hour meter; and</li> <li>iv. The name of the operator; and</li> </ul> <p>3. If a voltage reduction is the reason for the use of the emergency fire pump, a copy of the voltage reduction notification from PJM or other documentation of the voltage reduction.</p> <p>The owner or operator of an emergency fire pump shall maintain the above records for a period no less than five years after the record was made and shall make the records readily available to the Department or the EPA upon request. [N.J.A.C. 7:27-19.11(a)] and. [N.J.A.C. 7:27-19.11(b)]</p>	<p>None.</p>

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	Emergency fire pumps shall not be used: 1. In a circumstance other than an emergency, except during normal testing and maintenance; 2. For normal testing and maintenance on days when the Department forecasts air quality anywhere in New Jersey to be "unhealthy for sensitive groups," "unhealthy," or "very unhealthy" or "hazardous" unless required in writing by a Federal or State law or regulation. Procedures for determining the air quality forecasts for New Jersey are available at the Department air quality web site at <a href="http://www.state.nj.us/dep/aqpp/aqforecast">http://www.state.nj.us/dep/aqpp/aqforecast</a> ; and [N.J.A.C. 7:27-19.2(d)]	Other: The Permittee shall check the air quality forecast for New Jersey available at the Department air quality website at <a href="http://www.state.nj.us/dep/aqpp/aqforecast">http://www.state.nj.us/dep/aqpp/aqforecast</a> prior to operating during testing and maintenance periods. [N.J.A.C. 7:27-22.16(o)].	None.	Submit a report: Upon occurrence of event. The permittee shall report any non-compliance in writing within 3 working days after the event to the Regional Enforcement Office. [N.J.A.C. 7:27-22.16(o)]
9	The duration of a testing event is restricted to 30 minutes. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
10	The emergency fire pump shall not be tested at the same time as the emergency generator. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
11	The emergency fire pump shall not be tested during the startup or shutdown of the turbines or the boiler. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Hours of Operation While Firing Diesel <= 200 hr/yr (ULSD). The maximum annual operating hours for normal testing and maintenance shall not exceed 100 hours/yr. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Diesel: Monitored by hour/time monitor continuously. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation While Firing Diesel: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The owner or operator shall maintain onsite and record in a logbook or computer data system the total operating time from the generator's hour meter. [N.J.A.C. 7:27-22.16(o)]	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	The Permittee shall, once per month, record the total operating time from the generator's hour meter. [N.J.A.C. 7:27-19.11]	Monitored by hour/time monitor continuously . [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The Permittee shall maintain on site a record of the total operating time from the generator's hour meter. Once per month. . [N.J.A.C. 7:27-19.11]	None.
14	The owner or operator of a fire pump engine with a displacement of less than 30 liters per cylinder must comply with the emissions standards in table 4 to NSPS IIII for the same model year and nameplate engine power as follows: NMHC + NO <sub>x</sub> ≤ 3.0 g/HP-hr, CO ≤ 2.6 g/HP-hr, PM ≤ 0.15 g/HP-hr. [40 CFR 60.4205(c)]	None.	Other: The owner or operator must keep documentation demonstrating compliance with the applicable emission standards, for the same model year and maximum engine power. [40 CFR 60.4211].	None.
15	Owners and operators of stationary CI internal combustion engines must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 and 60.4205 over the entire life of the engine. [40 CFR 60.4206]	None.	Other: The owner or operator shall keep the manufacturer's emission-related written instructions over the entire life of the engine. If the manufacturer's emission-related written instructions are not followed, the owner or operator must keep the results of the performance test(s) demonstrating compliance with the applicable emission limits. [40 CFR 60.4206].	None.
16	Beginning October 1, 2007, the CI internal combustion engines subject to NSPS IIII that use diesel fuel must use diesel fuel that contains the following per gallon standards: 500 ppm (0.05 percent) maximum sulfur content and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 60.4207(a)]	Monitored by review of fuel delivery records once per bulk fuel shipment. For each diesel delivery received, the owner or operator shall review written documentation of the delivery to ensure the maximum allowable fuel oil sulfur content and either a minimum cetane index or a maximum aromatic content is not being exceeded. Such written documentation can include, but is not limited to: bill of lading, delivery Invoice, certificate of analysis. [N.J.A.C. 7:27- 8.13(d)]	Recordkeeping by invoices / bills of lading / certificate of analysis once per bulk fuel shipment. The owner or operator shall keep records of fuel showing oil sulfur content and either a minimum cetane index or a maximum aromatic content for each delivery received. All records must be maintained for a minimum of 2 years following the date of such records per 40 CFR 60.7(f). [N.J.A.C. 7:27- 8.13(d)]	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
17	Beginning October 1, 2010, the CI internal combustion engines with a displacement of less than 30 liters per cylinder subject to NSPS IIII that use diesel fuel must purchase diesel fuel that contains the following per gallon standards: 15 ppm (0.0015 percent) maximum sulfur content and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 60.4207(b)]	Monitored by review of fuel delivery records once per bulk fuel shipment. For each diesel delivery received, the owner or operator shall review written documentation of the delivery to ensure the maximum allowable fuel oil sulfur content and either a minimum cetane index or a maximum aromatic content is not being exceeded. Such written documentation can include, but is not limited to: bill of lading, delivery invoice, certificate of analysis. [N.J.A.C. 7:27- 8.13(d)]	Recordkeeping by invoices / bills of lading / certificate of analysis once per bulk fuel shipment. The owner or operator shall keep records of fuel showing oil sulfur content and either a minimum cetane index or a maximum aromatic content for each delivery received. All records must be maintained for a minimum of 2 years following the date of such records per 40 CFR 60.7(f). [N.J.A.C. 7:27- 8.13(d)]	None.
18	Owners and operators of a stationary CI internal combustion engine equipped with a diesel particulate filter must install a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [40 CFR 60.4209(b)]	Monitored by pressure measurement device continuously. The backpressure monitor must alert the operator when the diesel particulate filter requires service. The service monitor should be mounted in a location that is clearly visible to the operator during operation. [40 CFR 60.4209(b)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [40 CFR 60.4214(c)]	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
19	<p>The owner or operator that must comply with the emission standards specified in NSPS IIII must operate and maintain the stationary CI internal combustion engine and control device, except as permitted under 40 CFR 60.4211(g), according to the manufacturer's emission-related written instructions. In addition, owners and operators may only change emission-related settings that are permitted by the manufacturer. The owner or operator must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as applicable. If the engine and control device is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or emission-related settings are changed in a way that is not permitted by the manufacturer, the owner or operator must demonstrate compliance as prescribed at 40 CFR 60.4211(g)(1), (2) or (3) depending on the maximum engine power. [40 CFR 60.4211(a)]</p>	None.	<p>Other: The owner or operator shall keep the manufacturer's emission-related written instructions. If not complying with manufacturer's emission-related written instructions or emission-related settings, the owner or operator shall must keep a maintenance plan, records of conducted maintenance, and conduct a performance test(s), as prescribed at 40 CFR 60.4211(g). [40 CFR 60.4211].</p>	None.
20	<p>The owner or operator of a fire pump engine that was manufactured starting with or after the model year that applies to the engine power rating and a rated speed in table 3 to NSPS IIII and must comply with the emission standards in 40 CFR 60.4205(c), must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4205(c), for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]</p>	None.	<p>Other: The owner or operator must keep documentation from the manufacturer, for the life of the equipment, that the engine is certified to meet the emission standards. If the engine and control device is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or emission-related settings are changed in a way that is not permitted by the manufacturer, the owner or operator must demonstrate compliance as prescribed at 40 CFR 60.4211(g)(1), (2) or (3) depending on the maximum engine power. [40 CFR 60.4211(c)].</p>	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
21	<p>Emergency stationary internal combustion engines may be operated for the purpose of maintenance checks and readiness testing limited to 100 hours per year, provided that those tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. [40 CFR 60.4211(f)]</p>	<p>Monitored by hour/time monitor continuously. The owner or operator of an emergency stationary internal combustion engine that does not meet the standards applicable to non-emergency engines must install a non-resettable hour meter prior to startup of the engine. [40 CFR 60.4209(a)]</p>	<p>Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator must record the time of operation of the emergency engine and the reason the engine was in operation during that time. Starting with the model year 2011, 2012, or 2013, depending on the maximum engine power as provided in Table 5 in NSPS IIII, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter if the emergency engine does not meet the standards in 40 CFR 60.4204, applicable to non-emergency engines, in the applicable model year. The emergency engine must comply with the labeling requirements in 40 CFR 60.4210(f). [40 CFR 60.4214(b)]</p>	None.
22	<p>A new or reconstructed stationary RICE located at an area HAP source must meet the requirements of 40 CFR 63 by meeting the requirements of 40 CFR 60 Subpart IIII, for compression ignition engines or 40 CFR 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under 40 CFR 63. [40 CFR 63.6590(c)]</p>	<p>Other: Comply with all applicable provisions at NSPS IIII. [40 CFR 63].</p>	<p>Other: Comply with all applicable provisions at NSPS IIII. [40 CFR 63].</p>	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Emission Unit: U4 270 HP Fire Pump

Operating Scenario: OS1 270 HP Fire Pump

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Smoke emissions from stationary internal combustion engines no greater than 20% opacity, exclusive of visible condensed water vapor, for more than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Particulate Emissions <= 1.24 lb/hr. Particulate emission limit from the combustion of ULSD based on rated heat input of 2.06 MMBtu/hr (HHV) for emergency generator. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
3	Sulfur Content in Fuel <= 500 ppmw (0.05 % by weight). Maximum allowable sulfur content in No. 2 and lighter fuel oil. NOTE: This requirement is effective starting July 1, 2014 through June 30, 2016. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Sulfur Content in Fuel: Recordkeeping by invoices / bills of lading / certificate of analysis per delivery showing fuel sulfur content. [N.J.A.C. 7:27-22.16(o)]	None.
4	Sulfur Content in Fuel <= 15 ppmw (0.0015 % by weight). Maximum allowable sulfur content in No. 2 and lighter fuel oil. NOTE: This requirement is effective on and after July 1, 2016. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Sulfur Content in Fuel: Recordkeeping by invoices / bills of lading / certificate of analysis per delivery showing fuel sulfur content. [N.J.A.C. 7:27-22.16(o)]	None.
5	Sulfur Content in Fuel <= 0.0015 % by weight. Maximum allowable sulfur content in ULSD. [N.J.A.C. 7:27-22.16(a)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery. [N.J.A.C. 7:27-22.16(o)]	Sulfur Content in Fuel: Recordkeeping by invoices / bills of lading / certificate of analysis per delivery. [N.J.A.C. 7:27-22.16(o)]	None.
6	NOx (Total) <= 1.55 lb/hr. Based on emission factor for post-2009 fire pump engines (40 CFR 60 Subpart III, Table 4) and a maximum power rating of 201.4 kW. [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1)] and. [40 CFR 52.21]	None.	None.	None.

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**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	CO <= 1.55 lb/hr. Based on emission factor for post-2009 fire pump engines (40 CFR 60 Subpart IIII, Table 4) and a maximum power rating of 201.4 kW. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
8	VOC (Total) <= 0.22 lb/hr. Based on emission factor for post-2009 fire pump engines (40 CFR 60 Subpart IIII, Table 4) and a maximum power rating of 201.4 kW. [N.J.A.C. 7:27-22.16(a)] and. [N.J.A.C. 7:27-18.3(b)1]	None.	None.	None.
9	TSP <= 0.08 lb/hr. Based on emission factor for post-2009 fire pump engines (40 CFR 60 Subpart IIII, Table 4), a maximum power rating of 201.4 kW and AP-42 distribution of particulate matter (AP-42, Table 3.4-2). [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
10	PM-10 (Total) <= 0.09 lb/hr. Based on emission factor for post-2009 fire pump engines (40 CFR 60 Subpart IIII, Table 4) and a maximum power rating of 201.4 kW. [N.J.A.C. 7:27-22.16(a)] and. [40 CFR 52.21]	None.	None.	None.
11	PM-2.5 (Total) <= 0.09 lb/hr. Based on emission factor for post-2009 fire pump engines (40 CFR 60 Subpart IIII, Table 4) and a maximum power rating of 201.4 kW. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Emergency fire pump fuel limited to ultra low sulfur distillate fuel oil (ULSD) [sulfur content <= 15 ppm]. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.



BOP160001

**New Jersey Department of Environmental Protection  
Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	Hours of Operation While Firing Diesel <= 200 hr/yr (ULSD). [N.J.A.C. 7:27-22.16(a)]	Hours of Operation While Firing Diesel: Monitored by hour/time monitor continuously. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation While Firing Diesel: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The owner or operator shall maintain onsite and record in a logbook or computer data system the total operating time from the generator's hour meter. [N.J.A.C. 7:27-22.16(o)]	None.
14	Maximum Gross Heat Input <= 2.06 MMBTU/hr (HHV). [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by manufacturer's design specifications.[N.J.A.C. 7:27-22.16(o)].	Other: Maintain record of manufacturer's design specifications at all times.[N.J.A.C. 7:27-22.16(o)].	None.

BOP160001

## Compliance Schedule

**Subject Item: U1 OS 0**

**Violated Requirement**

- 7 Initial Stack Test Requirement for Boiler:  
Conduct a comprehensive stack test at emission point PT3, within 180 days of initial start up of the boiler to demonstrate compliance with the NO<sub>x</sub>, CO, VOC, TSP, PM-10 and PM-2.5 emission limits while firing natural gas.

Three tests shall be conducted at worst-case permitted operating conditions achievable on the day of testing, under the corresponding test conditions, such as ambient (relative humidity and temperature) conditions, with regard to meeting the applicable emission standards, but without creating an unsafe condition.

The permittee shall submit all data necessary to substantiate the ambient conditions with the test report. The testing shall be conducted in accordance with the protocol approved by Chief, EMS.

[N.J.A.C. 7:27-22.16(a)]

**Compliance Schedule:**

Submit a progress report: Every month on the first day of the month, after full execution of the attached (see appendix III) Administrative Consent Order, NEA150003-08857 (April 1, 2016)

Each report shall explain the status of Newark Energy Center's compliance with NEA-150003-08857 and shall include, but not be limited to, the following:

- A) Identification of site and reference to NEA-150003-08857;
- B) Status of permitting and planning approvals and any work at the site and progress to date;
- C) Difficulties or problems encountered during the reporting period and actions taken to rectify;
- D) Activities planned for the next reporting period;
- E) Required and actual completion date for each item required by NEA-150003-08857;
- F) An explanation of any non-compliance with the compliance schedule; and
- G) Evaluation of all corrective measures implanted to date.

Installation and commissioning of the auxilliary boiler NO<sub>x</sub> burner shall be completed by January 6, 2017 in accordance with NEA-150003-08857, section B10(c).

Stack Testing to demonstrate compliance with all permitted NO<sub>x</sub> and CO emission limits, shall occur within 180 days from the date on which the auxilliary boiler with new NO<sub>x</sub> burner commences operation. [N.J.A.C. 7:27-22]

BOP160001

## Compliance Schedule

**Subject Item: U1 OS 13**

### Violated Requirement

- 6 NOx (Total)  $\leq$  0.606 lb/hr. Maximum emission rate based on manufacturer guaranteed emission factor (0.010 lb/MMBtu) and maximum heat input (60.6 MMBtu/hr). [N.J.A.C. 7:27-22.16(a)], [N.J.A.C. 7-27-18.3(b)(1) and. [40 CFR 52.21]

### Compliance Schedule:

Submit a progress report: Every month on the first day of the month, after full execution of the attached (see appendix III) Administrative Consent Order, NEA150003-08857 (April 1, 2016)

Each report shall explain the status of Newark Energy Center's compliance with NEA-150003-08857 and shall include, but not be limited to, the following:

- A) Identification of site and reference to NEA-150003-08857;
- B) Status of permitting and planning approvals and any work at the site and progress to date;
- C) Difficulties or problems encountered during the reporting period and actions taken to rectify;
- D) Activities planned for the next reporting period;
- E) Required and actual completion date for each item required by NEA-150003-08857;
- F) An explanation of any non-compliance with the compliance schedule; and
- G) Evaluation of all corrective measures implanted to date.

Installation and commissioning of the auxilliary boiler NOx burner shall be completed by January 6, 2017 in accordance with NEA-150003-08857, section B10(c).

Stack Testing to demonstrate compliance with all permitted NOx and CO emission limits, shall occur within 180 days from the date on which the auxilliary boiler with new NOx burner commences operation. [N.J.A.C. 7:27-22]

**NEWARK ENERGY CENTER (08857)**  
**BOP160001**

Date: 9/23/2016

**New Jersey Department of Environmental Protection**  
**Facility Profile (General)**

**Facility Name (AIMS):** Newark Energy Center, LLC

**Facility ID (AIMS):** 08857

**Street** 955 DELANCY ST  
**Address:** NEWARK, NJ 07105

**Mailing** MR ROBERT HALEY  
**Address:** 955 DELANCY ST  
NEWARK, NJ 07105

**County:** Essex  
**Location**  
**Description:**

<b>State Plane Coordinates:</b> <b>X-Coordinate:</b> <b>Y-Coordinate:</b> <b>Units:</b>  <b>Datum:</b> <b>Source Org.:</b> <b>Source Type:</b>
---

<b>Industry:</b> <b>Primary SIC:</b> <b>Secondary SIC:</b> <b>NAICS:</b> 221112
--

**New Jersey Department of Environmental Protection**  
**Facility Profile (General)**

**Contact Type: Air Permit Information Contact**

**Organization:** Newark Energy Center, LLC

**Org. Type:** Corporation

**Name:** Monica Howell

**NJ EIN:** 00452391369

**Title:** Environmental Manager

**Phone:** (609) 455-6320 x

**Mailing Address:** 955 DELANCY ST  
NEWARK, NJ 07105

**Fax:** ( ) - x

**Other:** ( ) - x

**Type:**

**Email:** mhowell@ppmsllc.com

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**Contact Type: BOP - Operating Permits**

**Organization:** NJDEP

**Org. Type:** State

**Name:** Michael Hogan

**NJ EIN:**

**Title:** Environmental Engineer 2

**Phone:** (609) 633-1124 x

**Mailing Address:** Mail Code 41-02  
DEP Air Quality Program, PO Box 420  
401 East State Street, 2nd Floor  
Trenton, NJ 08625-0420

**Fax:** (609) 633-1112 x

**Other:** ( ) - x

**Type:**

**Email:** michael.hogan@dep.nj.gov

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**Contact Type: Fees/Billing Contact**

**Organization:** Newark Energy Center, LLC

**Org. Type:** Corporation

**Name:** Robert Haley

**NJ EIN:** 00452391369

**Title:** Projects General Manager

**Phone:** (973) 274-3904 x

**Mailing Address:** 955 Delancy St  
Newark, NJ 07105

**Fax:** (973) 466-1550 x

**Other:** ( ) - x

**Type:**

**Email:** rhaley@ppmsllc.com

**New Jersey Department of Environmental Protection**  
**Facility Profile (General)**

**Contact Type: General Contact**

**Organization:** Newark Energy Center, LLC

**Org. Type:** Corporation

**Name:** Monica Howell

**NJ EIN:** 00452391369

**Title:** Environmental Manager

**Phone:** (609) 455-6320 x

**Mailing Address:** 955 DELANCY ST  
NEWARK, NJ 07105

**Fax:** ( ) - x

**Other:** ( ) - x

**Type:**

**Email:** mhowell@ppmsllc.com

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**Contact Type: Operator**

**Organization:** Newark Energy Center, LLC

**Org. Type:** Corporation

**Name:** Michael Salvador

**NJ EIN:** 00452391369

**Title:** Plant Manager

**Phone:** (973) 735-0869 x

**Mailing Address:** 955 Delancy St  
Newark, NJ 07105

**Fax:** (973) 274-1540 x

**Other:** ( ) - x

**Type:**

**Email:** mike.salvador@naes.com

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**Contact Type: Owner (Current Primary)**

**Organization:** Newark Energy Center, LLC

**Org. Type:** Corporation

**Name:** Robert Haley

**NJ EIN:** 00452391369

**Title:** Projects General Manager

**Phone:** (973) 274-3904 x

**Mailing Address:** 955 Delancy St  
Newark, NJ 07105

**Fax:** (973) 466-1550 x

**Other:** ( ) - x

**Type:**

**Email:** rhaley@ppmsllc.com

**NEWARK ENERGY CENTER (08857)**  
**BOP160001**

Date: 9/23/2016

**New Jersey Department of Environmental Protection**  
**Facility Profile (General)**

**Contact Type:** Responsible Official

**Organization:** Newark Energy Center, LLC

**Org. Type:** Corporation

**Name:** Robert Haley

**NJ EIN:** 00452391369

**Title:** Projects General Manager

**Phone:** (973) 274-3904 x

**Mailing Address:** 955 Delancy St

**Fax:** (973) 466-1550 x

Newark, NJ 07105

**Other:** ( ) - x

**Type:**

**Email:** rhaley@ppmsllc.com

**NEWARK ENERGY CENTER (08857)  
BOP160001**

Date:9/23/2016

**New Jersey Department of Environmental Protection  
Reason for Application**

**Permit Being Modified**

**Permit Class:** BOP      **Number:** 140005

**Description  
of Modifications:**      See List of Permit Changes in Permit Text.



**New Jersey Department of Environmental Protection  
Non-Source Fugitive Emissions**

FG NJID	Description of Activity Causing Emission	Location Description	Reasonable Estimate of Emissions (tpy)								
			VOC (Total)	NOx	CO	SO	TSP (Total)	PM-10	Pb	HAPS (Total)	Other (Total)
FG1											
Total											

**New Jersey Department of Environmental Protection  
Insignificant Source Emissions**

IS NJID	Source/Group Description	Equipment Type	Location Description	Estimate of Emissions (tpy)								
				VOC (Total)	NO <sub>x</sub>	CO	SO	TSP	PM-10	Pb	HAPS (Total)	Other (Total)
IS1	Fuel Oil Storage Tanks	Storage Vessel		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS3	Sulfuric Acid Storage Tank - (1) 20,000 gal tank	Storage Vessel		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.007
Total				0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.007

BOP160001

**New Jersey Department of Environmental Protection  
Equipment Inventory**

<b>Equip. NJID</b>	<b>Facility's Designation</b>	<b>Equipment Description</b>	<b>Equipment Type</b>	<b>Certificate Number</b>	<b>Install Date</b>	<b>Grand-Fathered</b>	<b>Last Mod. (Since 1968)</b>	<b>Equip. Set ID</b>
E1	Turbine 1	Combustion Turbine 1	Combustion Turbine			No		
E2	Turbine 2	Combustion Turbine 2	Combustion Turbine			No		
E3	HRSB 1	HRSB w/ Duct Burner 1	Duct Burner			No		
E4	HRSB 2	HRSB w/ Duct Burner 2	Duct Burner			No		
E5	Aux Boiler	Auxiliary Boiler	Boiler			No		
E6	Em Gen	1.5 MW Emergency Generator	Emergency Generator			No		
E7	Fire Pump	270 HP Fire Pump	Emergency Generator			No		
E8	CoolingTower	Cooling Tower	Other Equipment			No		

08857 NEWARK ENERGY CENTER BOP160001 E1 (Combustion Turbine)  
Print Date: 7/7/2016

Make:   
Manufacturer:   
Model:

Maximum rated Gross Heat Input (MMBtu/hr-HHV):

Type of Turbine:

Type of Cycle:  Description:

Industrial Application:  Description:

Power Output:  Units:

Is the combustion turbine using (check all that apply):

A Dry Low NOx Combustor:

Steam Injection:  Steam to Fuel Ratio:

Water Injection:  Water to Fuel Ratio:

Other:  Description:

Is the turbine Equipped with a Duct Burner?  
 Yes  
 No

Have you attached a diagram showing the location and/or the configuration of this equipment?  
 Yes  
 No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?  
 Yes  
 No

Comments:

08857 NEWARK ENERGY CENTER BOP160001 E2 (Combustion Turbine)  
Print Date: 7/7/2016

Make:   
Manufacturer:   
Model:

Maximum rated Gross Heat Input (MMBtu/hr-HHV):

Type of Turbine:

Type of Cycle:  Description:

Industrial Application:  Description:

Power Output:  Units:

Is the combustion turbine using (check all that apply):

A Dry Low NOx Combustor:

Steam Injection:  Steam to Fuel Ratio:

Water Injection:  Water to Fuel Ratio:

Other:  Description:

Is the turbine Equipped with a Duct Burner?  
 Yes  
 No

Have you attached a diagram showing the location and/or the configuration of this equipment?  
 Yes  
 No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?  
 Yes  
 No

Comments:

08857 NEWARK ENERGY CENTER BOP160001 E3 (Duct Burner)  
Print Date: 7/7/2016

Make:	De Jong DJC
Manufacturer:	De Jong Combustion
Model:	DJC
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	211.00
Equipment Type Description:	Supplementary-fired heat recovery steam generator (HRSG)

Have you attached a diagram showing the location and/or the configuration of this equipment?

Yes  
 No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

Yes  
 No

Comments:

Include Emission Rates on the Potential to Emit Screen for each contaminant in ppmvd @ 7%O2 in addition to lbs/hr and tons/yr.

08857 NEWARK ENERGY CENTER BOP160001 E4 (Duct Burner)  
Print Date: 7/7/2016

Make:	De Jong DJC
Manufacturer:	De Jong Combustion
Model:	DJC
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	211.00
Equipment Type Description:	Supplementary-fired heat recovery steam generator (HRSG)

Have you attached a diagram showing the location and/or the configuration of this equipment?

Yes  
 No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

Yes  
 No

Comments:

Include Emission Rates on the Potential to Emit Screen for each contaminant in ppmvd @ 7%O2 in addition to lbs/hr and tons/yr.

08857 NEWARK ENERGY CENTER BOP160001 E5 (Boiler)  
Print Date: 7/7/2016

Make: VS-3  
Manufacturer: Victory Energy  
Model: VS-3-99-11870  
Maximum Rated Gross Heat Input (MMBtu/hr - HHV): 60.55  
Boiler Type: Fire Tube  
Utility Type: Utility  
Output Type: Steam Only  
Steam Output (lb/hr): 50,000.00  
Fuel Firing Method: Tangential  
Description (if other):  
Draft Type: Forced  
Heat Exchange Type: Indirect

Is the boiler using? (check all that apply):

Low NOx Burner:  Type:   
Staged Air Combustion:   
Flue Gas Recirculation (FGR):  Amount (%):

Have you attached a diagram showing the location and/or the configuration of this equipment?

Yes

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

No

Comments:



08857 NEWARK ENERGY CENTER BOP160001 E6 (Emergency Generator)  
Print Date: 7/7/2016

Make:

Manufacturer:

Model:

Maximum rated Gross Heat Input (MMBtu/hr-HHV):

Will the equipment be used in excess of 500 hours per year?  
 Yes  
 No

Have you attached a diagram showing the location and/or the configuration of this equipment?  
 Yes  
 No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?  
 Yes  
 No

Comments:

08857 NEWARK ENERGY CENTER BOP160001 E7 (Emergency Generator)  
Print Date: 7/7/2016

Make:

Manufacturer:

Model:

Maximum rated Gross Heat Input (MMBtu/hr-HHV):

Will the equipment be used in excess of 500 hours per year?  
 Yes  
 No

Have you attached a diagram showing the location and/or the configuration of this equipment?  
 Yes  
 No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?  
 Yes  
 No

Comments:

08857 NEWARK ENERGY CENTER BOP160001 E8 (Other Equipment)  
Print Date: 7/7/2016

Make:	Marley F400 Clearsky
Manufacturer:	SPX Cooling Technologies
Model:	F4117D-6.0-12
Equipment Type:	Cooling Tower

Capacity:	5.40
Units:	other units
Description:	mega-gallons per day

Have you attached a diagram showing the location and/or the configuration of this equipment?

Yes  
 No

Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?

Yes  
 No

Comments:

BOP160001

**New Jersey Department of Environmental Protection  
Control Device Inventory**

<b>CD NJID</b>	<b>Facility's Designation</b>	<b>Description</b>	<b>CD Type</b>	<b>Install Date</b>	<b>Grand-Fathered</b>	<b>Last Mod. (Since 1968)</b>	<b>CD Set ID</b>
CD101	SCR 1	Selective Catalytic Reduction for Turbine 1	Selective Catalytic Reduction		No		
CD102	Ox Cat 1	CO Oxidation Catalyst for Turbine 1	Oxidizer (Catalytic)		No		
CD201	SCR 2	Selective Catalytic Reduction for Turbine 2	Selective Catalytic Reduction		No		
CD202	Ox Cat 2	CO Oxidation Catalyst for Turbine 2	Oxidizer (Catalytic)		No		

08857 NEWARK ENERGY CENTER BOP160001 CD101 (Selective Catalytic Reduction)  
Print Date: 7/7/2016

Make:	<input type="text" value="DNX"/>
Manufacturer:	<input type="text" value="Haldor Topsoe, Inc"/>
Model:	<input type="text" value="DNX Catalyst"/>
Minimum Temperature at Catalyst Bed (°F):	<input type="text" value="400"/>
Maximum Temperature at Catalyst Bed (°F):	<input type="text" value="825"/>
Minimum Temperature at Reagent Injection Point (°F):	<input type="text" value="400"/>
Maximum Temperature at Reagent Injection Point (°F):	<input type="text" value="825"/>
Type of Reagent:	<input type="text" value="Ammonia"/>
Description:	<input type="text"/>
Chemical Formula of Reagent:	<input type="text" value="NH3OH"/>
Minimum Reagent Charge Rate (gpm):	<input type="text" value="0.8"/>
Maximum Reagent Charge Rate (gpm):	<input type="text" value="0.9"/>
Minimum Concentration of Reagent in Solution (% Volume):	<input type="text" value="19"/>
Minimum NOx to Reagent Mole Ratio:	<input type="text"/>
Maximum NOx to Reagent Mole Ratio:	<input type="text"/>
Maximum Anticipated Ammonia Slip (ppm):	<input type="text" value="5"/>
Type of Catalyst:	<input type="text" value="Ceramic"/>
Volume of Catalyst (ft³):	<input type="text"/>
Form of Catalyst:	<input type="text" value="Ceramic Monolith Modules"/>
Anticipated Life of Catalyst:	<input type="text" value="39"/>
Units:	<input type="text" value="months"/>
Have you attached a catalyst replacement schedule?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Method of Determining Breakthrough:	<input type="text"/>
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	<input type="text" value="2"/>
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	<input type="text"/>
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No

**08857 NEWARK ENERGY CENTER BOP160001 CD101 (Selective Catalytic Reduction)**  
**Print Date: 7/7/2016**

Comments:

The maximum concentration of ammonia in solution is 19% by weight

08857 NEWARK ENERGY CENTER BOP160001 CD102 (Oxidizer (Catalytic))  
Print Date: 7/7/2016

Make:	ADCAT
Manufacturer:	Emero Chem
Model:	ADCAT
Minimum Inlet Temperature (°F):	535
Maximum Inlet Temperature (°F)	800
Minimum Outlet Temperature (°F)	550
Maximum Outlet Temperature (°F):	800
Minimum Residence Time (sec)	
Fuel Type:	Natural gas
Description:	
Maximum Rated Gross Heat Input (MMBtu/hr):	2320
Minimum Pressure Drop Across Catalyst (psi):	0.02
Maximum Pressure Drop Across Catalyst (psi):	0.05
Catalyst Material:	Platinum / Palladium / Rhodium / Alumna / Stainless Steel Monolith
Form of Catalyst:	Other
Description:	Module Carbon Steel Fram
Minimum Expected Life of Catalyst:	39
Units:	months
Volume of Catalyst (ft³):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	2
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Comments:	

08857 NEWARK ENERGY CENTER BOP160001 CD201 (Selective Catalytic Reduction)  
Print Date: 7/7/2016

Make:	DNX
Manufacturer:	Haldor Topsoe, Inc
Model:	DNX Catalyst
Minimum Temperature at Catalyst Bed (°F):	400
Maximum Temperature at Catalyst Bed (°F):	825
Minimum Temperature at Reagent Injection Point (°F):	400
Maximum Temperature at Reagent Injection Point (°F):	825
Type of Reagent:	Ammonia
Description:	
Chemical Formula of Reagent:	NH3OH
Minimum Reagent Charge Rate (gpm):	0.8
Maximum Reagent Charge Rate (gpm):	0.9
Minimum Concentration of Reagent in Solution (% Volume):	19
Minimum NOx to Reagent Mole Ratio:	
Maximum NOx to Reagent Mole Ratio:	
Maximum Anticipated Ammonia Slip (ppm):	5
Type of Catalyst:	Ceramic
Volume of Catalyst (ft³):	
Form of Catalyst:	Ceramic Monolith Modules
Anticipated Life of Catalyst:	39
Units:	months
Have you attached a catalyst replacement schedule?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Method of Determining Breakthrough:	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	2
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No



**08857 NEWARK ENERGY CENTER BOP160001 CD201 (Selective Catalytic Reduction)**  
**Print Date: 7/7/2016**

Comments:

The maximum concentration of ammonia in solution is 19% by weight

08857 NEWARK ENERGY CENTER BOP160001 CD202 (Oxidizer (Catalytic))  
Print Date: 7/7/2016

Make:	ADCAT
Manufacturer:	Emero Chem
Model:	ADCAT
Minimum Inlet Temperature (°F):	535
Maximum Inlet Temperature (°F)	800
Minimum Outlet Temperature (°F)	550
Maximum Outlet Temperature (°F):	800
Minimum Residence Time (sec)	
Fuel Type:	Natural gas
Description:	
Maximum Rated Gross Heat Input (MMBtu/hr):	2320
Minimum Pressure Drop Across Catalyst (psi):	0.02
Maximum Pressure Drop Across Catalyst (psi):	0.05
Catalyst Material:	Platinum / Palladium / Rhodium / Alumna / Stainless Steel Monolith
Form of Catalyst:	Other
Description:	Module Carbon Steel Fram
Minimum Expected Life of Catalyst:	39
Units:	months
Volume of Catalyst (ft³):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	2
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Comments:	

**New Jersey Department of Environmental Protection  
Emission Points Inventory**

PT NJID	Facility's Designation	Description	Config.	Equiv. Diam. (in.)	Height (ft.)	Dist. to Prop. Line (ft)	Exhaust Temp. (deg. F)			Exhaust Vol. (acfm)			Discharge Direction	PT Set ID
							Avg.	Min.	Max.	Avg.	Min.	Max.		
PT1	Turbine 1	Turbine 1 and HRSG Emission Point	Round	222	252	185	181.2	161.3	300.0	1,121,050.0	0.0	1,232,750.0	Up	
PT2	Turbine 2	Turbine 2 and HRSG Emission Point	Round	222	252	185	181.2	161.3	300.0	1,121,050.0	0.0	1,232,750.0	Up	
PT3	Aux Boiler	Aux Boiler Emission Point	Round	36	252	207	277.0	254.0	300.0	22,220.0	14,752.0	29,688.0	Up	
PT6	Em Gen	Emergency Generator Emission Point	Round	12	50	273	948.7	948.7	948.7	11,174.0	0.0	11,174.0	Up	
PT7	Fire Pump	Fire Pump Emission Point	Round	6	50	240	826.0	826.0	826.0	1,644.0	0.0	1,644.0	Up	
PT8	Cooling Tower	Cooling Tower Emission Point (diameter is per cell)	Round	428	72	23	85.0	32.0	120.0	3,944.0	0.0	3,944.0	Up	

New Jersey Department of Environmental Protection  
Emission Unit/Batch Process Inventory

U 1 Cogen Plant 2 Turbines, 2 HRSGs, and Aux. Boiler

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours		VOC Range	Flow (acfm)		Temp. (deg F)	
								Min.	Max.		Min.	Max.	Min.	Max.
OS1	CT1	Combustion Turbine (CT) 1 firing natural gas at full load without supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 1	Normal - Steady State	E1	CD101 (P) CD102 (S)	PT1		0.0	8,760.0		0.0	1,232,750.0	161.3	187.3
OS2	CT2	Combustion Turbine (CT) 2 firing natural gas at full load without supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 2	Normal - Steady State	E2	CD201 (P) CD202 (S)	PT2		0.0	8,760.0		0.0	1,232,750.0	161.3	187.3
OS3	CT / HRSG 1	Combustion Turbine (CT) 1 firing natural gas at full load with supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 1	Normal - Steady State	E3	CD101 (P) CD102 (S)	PT1		0.0	1,800.0		0.0	1,232,750.0	161.3	187.3
OS4	CT / HRSG 2	Combustion Turbine (CT) 2 firing natural gas at full load with supplemental duct burner firing in Heat Recovery Steam Generator (HRSG) 2	Normal - Steady State	E4	CD201 (P) CD202 (S)	PT2		0.0	1,800.0		0.0	1,232,750.0	161.3	187.3
OS5	CT1 Cold SU	Combustion Turbine (CT) 1 Cold start-up	Startup	E1		PT1		0.0	167.5		0.0	1,232,750.0	161.3	187.3
OS6	CT2 Cold SU	Combustion Turbine (CT) 2 Cold start-up	Startup	E2		PT2		0.0	167.5		0.0	1,232,750.0	161.3	187.3
OS7	CT1 Warm SU	Combustion Turbine (CT) 1 Warm start-up	Startup	E1		PT1		0.0	395.0		0.0	1,232,750.0	161.3	187.3
OS8	CT2 Warm SU	Combustion Turbine (CT) 2 Warm start-up	Startup	E2		PT2		0.0	395.0		0.0	1,232,750.0	161.3	187.3

NEWARK ENERGY CENTER (08857)  
BOP160001

Date: 9/23/2016

New Jersey Department of Environmental Protection  
Emission Unit/Batch Process Inventory

U 1 Cogen Plant 2 Turbines, 2 HRSGs, and Aux. Boiler

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours		VOC Range	Flow (acfm)		Temp. (deg F)	
								Min.	Max.		Min.	Max.	Min.	Max.
OS9	CT1 Hot SU	Combustion Turbine (CT) 1 Hot start-up	Startup	E1		PT1		0.0			0.0	1,232,750.0	161.3	187.3
OS10	CT2 Hot SU	Combustion Turbine (CT) 2 Hot start-up	Startup	E2		PT2		0.0			0.0	1,232,750.0	161.3	187.3
OS11	CT1 SD	Combustion Turbine (CT) 1 Shut Down	Shutdown	E1		PT1		0.0	90.0		0.0	1,232,750.0	161.3	187.3
OS12	CT2 SD	Combustion Turbine (CT) 2 Shut Down	Shutdown	E2		PT2		0.0	90.0		0.0	1,232,750.0	161.3	187.3
OS13	Aux. Boiler	Auxiliary Boiler firing natural gas.	Normal - Steady State	E5		PT3		0.0	800.0		0.0	19,301.0	300.0	300.0

U 2 CoolingTower Cooling Tower

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours		VOC Range	Flow (acfm)		Temp. (deg F)	
								Min.	Max.		Min.	Max.	Min.	Max.
OS1	CoolingTower	Cooling Tower	Normal - Steady State	E8		PT8		0.0	8,760.0		0.0	3,944.0	32.0	120.0

**NEWARK ENERGY CENTER (08857)  
BOP160001**

Date: 9/23/2016

**New Jersey Department of Environmental Protection  
Emission Unit/Batch Process Inventory**

**U 3 Em Gen 1.5 MW Emergency Generator**

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours		VOC Range	Flow (acfm)		Temp. (deg F)	
								Min.	Max.		Min.	Max.	Min.	Max.
OS1	Em Gen	1.5 MW Emergency Generator	Normal - Steady State	E6		PT6		0.0	100.0		0.0	11,174.0	70.0	775.9

**U 4 Fire Pump 270 HP Fire Pump**

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours		VOC Range	Flow (acfm)		Temp. (deg F)	
								Min.	Max.		Min.	Max.	Min.	Max.
OS1	Fire Pump	270 HP Fire Pump	Normal - Steady State	E7		PT7		0.0	100.0		0.0	1,644.0	70.0	750.0

**New Jersey Department of Environmental Protection  
Subject Item Group Inventory**

**Group NJID:** GR1 Emissions

**Members:**

Type	ID	OS	Step
IS	IS3		
U	U 1	OS0 Summary	
U	U 2	OS0 Summary	
U	U 3	OS0 Summary	
U	U 4	OS0 Summary	

**Formal Reason(s) for Group/Cap:**

Other

**Other (explain):** Facility Wide annual emission limits for all sources combined

**Condition/Requirements that will be complied with or are no longer applicable as a result of this Group:**

**Operating Circumstances:**

**New Jersey Department of Environmental Protection  
Subject Item Group Inventory**

**Group NJID:** GR2 GHG

**Members:**

Type	ID	OS	Step
U	U 1	OS0 Summary	
U	U 3	OS0 Summary	
U	U 4	OS0 Summary	

**Formal Reason(s) for Group/Cap:**

Other

**Other (explain):** Consolidate all GHG Requirements in one location

**Condition/Requirements that will be complied with or are no longer applicable as a result of this Group:**

**Operating Circumstances:**



# **Appendix I:**

## **Cross-State Air Pollution Rule (CSAPR) Title V requirements for**

- **CSAPR NO<sub>x</sub> Annual Trading Program,**
- **CSAPR NO<sub>x</sub> Ozone Season Trading Program, and**
- **CSAPR SO<sub>2</sub> Trading Program**

## Transport Rule (TR) Trading Program Title V Requirements

### TR NO<sub>x</sub> Annual Trading Program requirements (40 CFR 97.406)

#### **(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.413 through 97.418.

#### **(b) Emissions monitoring, reporting, and recordkeeping requirements.**

- (1) The owners and operators, and the designated representative, of each TR NO<sub>x</sub> Annual source and each TR NO<sub>x</sub> Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.431 (initial monitoring system certification and recertification procedures), 97.432 (monitoring system out-of-control periods), 97.433 (notifications concerning monitoring), 97.434 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.435 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of TR NO<sub>x</sub> Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the TR NO<sub>x</sub> Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

#### **(c) NO<sub>x</sub> emissions requirements.**

- (1) TR NO<sub>x</sub> Annual emissions limitation.
  - (i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NO<sub>x</sub> Annual source and each TR NO<sub>x</sub> Annual unit at the source shall hold, in the source's compliance account, TR NO<sub>x</sub> Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for such control period from all TR NO<sub>x</sub> Annual units at the source.
  - (ii). If total NO<sub>x</sub> emissions during a control period in a given year from the TR NO<sub>x</sub> Annual units at a TR NO<sub>x</sub> Annual source are in excess of the TR NO<sub>x</sub> Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:
    - (A). The owners and operators of the source and each TR NO<sub>x</sub> Annual unit at the source shall hold the TR NO<sub>x</sub> Annual allowances required for deduction under 40 CFR 97.424(d); and
    - (B). The owners and operators of the source and each TR NO<sub>x</sub> Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAA and the Clean Air Act.
- (2) TR NO<sub>x</sub> Annual assurance provisions.
  - (i). If total NO<sub>x</sub> emissions during a control period in a given year from all TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the

- common designated representative's share of such NO<sub>x</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NO<sub>x</sub> Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying— (A) The quotient of the amount by which the common designated representative's share of such NO<sub>x</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO<sub>x</sub> emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the state for such control period exceed the state assurance level.
- (ii). The owners and operators shall hold the TR NO<sub>x</sub> Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
  - (iii). Total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the State during a control period in a given year exceed the state assurance level if such total NO<sub>x</sub> emissions exceed the sum, for such control period, of the state NO<sub>x</sub> Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).
  - (iv). It shall not be a violation of 40 CFR part 97, subpart AAAAAA or of the Clean Air Act if total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NO<sub>x</sub> emissions from the TR NO<sub>x</sub> Annual units at TR NO<sub>x</sub> Annual sources in the state during a control period exceeds the common designated representative's assurance level.
  - (v). To the extent the owners and operators fail to hold TR NO<sub>x</sub> Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
    - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
    - (B). Each TR NO<sub>x</sub> Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart AAAAAA and the Clean Air Act.
- (3) Compliance periods.
- (i). A TR NO<sub>x</sub> Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.
  - (ii). A TR NO<sub>x</sub> Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.430(b) and for each control period thereafter.
- (4) Vintage of allowances held for compliance.
- (i). A TR NO<sub>x</sub> Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NO<sub>x</sub> Annual allowance that was allocated for such control period or a control period in a prior year.

- (ii). A TR NO<sub>x</sub> Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NO<sub>x</sub> Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
  - (5) Allowance Management System requirements. Each TR NO<sub>x</sub> Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.
  - (6) Limited authorization. A TR NO<sub>x</sub> Annual allowance is a limited authorization to emit one ton of NO<sub>x</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:
    - (i). Such authorization shall only be used in accordance with the TR NO<sub>x</sub> Annual Trading Program; and
    - (ii). Notwithstanding any other provision of 40 CFR part 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
  - (7) Property right. A TR NO<sub>x</sub> Annual allowance does not constitute a property right.
- (d) Title V permit revision requirements.**
- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NO<sub>x</sub> Annual allowances in accordance with 40 CFR part 97, subpart AAAAA.
  - (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.430 through 97.435, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.406(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).
- (e) Additional recordkeeping and reporting requirements.**
- (1) Unless otherwise provided, the owners and operators of each TR NO<sub>x</sub> Annual source and each TR NO<sub>x</sub> Annual unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
    - (i). The certificate of representation under 40 CFR 97.416 for the designated representative for the source and each TR NO<sub>x</sub> Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.416 changing the designated representative.
    - (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart AAAAA.
    - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NO<sub>x</sub> Annual Trading Program.
  - (2) The designated representative of a TR NO<sub>x</sub> Annual source and each TR NO<sub>x</sub> Annual unit at the source shall make all submissions required under the TR NO<sub>x</sub> Annual Trading Program, except

as provided in 40 CFR 97.418. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

- (1) Any provision of the TR NO<sub>x</sub> Annual Trading Program that applies to a TR NO<sub>x</sub> Annual source or the designated representative of a TR NO<sub>x</sub> Annual source shall also apply to the owners and operators of such source and of the TR NO<sub>x</sub> Annual units at the source.
- (2) Any provision of the TR NO<sub>x</sub> Annual Trading Program that applies to a TR NO<sub>x</sub> Annual unit or the designated representative of a TR NO<sub>x</sub> Annual unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NO<sub>x</sub> Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NO<sub>x</sub> Annual source or TR NO<sub>x</sub> Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

## **TR NO<sub>x</sub> Ozone Season Trading Program Requirements (40 CFR 97.506)**

### **(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.513 through 97.518.

### **(b) Emissions monitoring, reporting, and recordkeeping requirements.**

- (1) The owners and operators, and the designated representative, of each TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.530 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.531 (initial monitoring system certification and recertification procedures), 97.532 (monitoring system out-of-control periods), 97.533 (notifications concerning monitoring), 97.534 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.535 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (2) The emissions data determined in accordance with 40 CFR 97.530 through 97.535 shall be used to calculate allocations of TR NO<sub>x</sub> Ozone Season allowances under 40 CFR 97.511(a)(2) and (b) and 97.512 and to determine compliance with the TR NO<sub>x</sub> Ozone Season emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.530 through 97.535 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

### **(c) NO<sub>x</sub> emissions requirements.**

- (1) TR NO<sub>x</sub> Ozone Season emissions limitation.
  - (i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall hold, in the source's compliance account, TR NO<sub>x</sub> Ozone Season allowances available for deduction for such control period under 40 CFR 97.524(a) in an amount not less than the tons of total NO<sub>x</sub> emissions for such control period from all TR NO<sub>x</sub> Ozone Season units at the source.
  - (ii). If total NO<sub>x</sub> emissions during a control period in a given year from the TR NO<sub>x</sub> Ozone Season units at a TR NO<sub>x</sub> Ozone Season source are in excess of the TR NO<sub>x</sub> Ozone Season emissions limitation set forth in paragraph (c)(1)(i) above, then:
    - (A). The owners and operators of the source and each TR NO<sub>x</sub> Ozone Season unit at the source shall hold the TR NO<sub>x</sub> Ozone Season allowances required for deduction under 40 CFR 97.524(d); and
    - (B). The owners and operators of the source and each TR NO<sub>x</sub> Ozone Season unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBB and the Clean Air Act.
- (2) TR NO<sub>x</sub> Ozone Season assurance provisions.
  - (i). If total NO<sub>x</sub> emissions during a control period in a given year from all TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO<sub>x</sub> emissions during such control period exceeds the common designated representative's assurance level for the state

and such control period, shall hold (in the assurance account established for the owners and operators of such group) TR NO<sub>x</sub> Ozone Season allowances available for deduction for such control period under 40 CFR 97.525(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.525(b), of multiplying—

- (A). The quotient of the amount by which the common designated representative's share of such NO<sub>x</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO<sub>x</sub> emissions exceeds the respective common designated representative's assurance level; and
  - (B). The amount by which total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state for such control period exceed the state assurance level.
- (ii). The owners and operators shall hold the TR NO<sub>x</sub> Ozone Season allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
  - (iii). Total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state during a control period in a given year exceed the state assurance level if such total NO<sub>x</sub> emissions exceed the sum, for such control period, of the State NO<sub>x</sub> Ozone Season trading budget under 40 CFR 97.510(a) and the state's variability limit under 40 CFR 97.510(b).
  - (iv). It shall not be a violation of 40 CFR part 97, subpart BBBBBB or of the Clean Air Act if total NO<sub>x</sub> emissions from all TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NO<sub>x</sub> emissions from the TR NO<sub>x</sub> Ozone Season units at TR NO<sub>x</sub> Ozone Season sources in the state during a control period exceeds the common designated representative's assurance level.
  - (v). To the extent the owners and operators fail to hold TR NO<sub>x</sub> Ozone Season allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
    - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
    - (B). Each TR NO<sub>x</sub> Ozone Season allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart BBBBBB and the Clean Air Act.
- (3) Compliance periods.
- (i). A TR NO<sub>x</sub> Ozone Season unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.
  - (ii). A TR NO<sub>x</sub> Ozone Season unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.530(b) and for each control period thereafter.
- (4) Vintage of allowances held for compliance.
- (i). A TR NO<sub>x</sub> Ozone Season allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR NO<sub>x</sub> Ozone

Season allowance that was allocated for such control period or a control period in a prior year.

- (ii). A TR NO<sub>x</sub> Ozone Season allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR NO<sub>x</sub> Ozone Season allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- (5) Allowance Management System requirements. Each TR NO<sub>x</sub> Ozone Season allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart BBBBB.
- (6) Limited authorization. A TR NO<sub>x</sub> Ozone Season allowance is a limited authorization to emit one ton of NO<sub>x</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:
  - (i). Such authorization shall only be used in accordance with the TR NO<sub>x</sub> Ozone Season Trading Program; and
  - (ii). Notwithstanding any other provision of 40 CFR part 97, subpart BBBBB, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- (7) Property right. A TR NO<sub>x</sub> Ozone Season allowance does not constitute a property right.

**(d) Title V permit revision requirements.**

- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR NO<sub>x</sub> Ozone Season allowances in accordance with 40 CFR part 97, subpart BBBBB.
- (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.530 through 97.535, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E). Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.506(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).

**(e) Additional recordkeeping and reporting requirements.**

- (1) Unless otherwise provided, the owners and operators of each TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
  - (i). The certificate of representation under 40 CFR 97.516 for the designated representative for the source and each TR NO<sub>x</sub> Ozone Season unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.516 changing the designated representative.
  - (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart BBBBB.
  - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR NO<sub>x</sub> Ozone Season Trading Program.



(2) The designated representative of a TR NO<sub>x</sub> Ozone Season source and each TR NO<sub>x</sub> Ozone Season unit at the source shall make all submissions required under the TR NO<sub>x</sub> Ozone Season Trading Program, except as provided in 40 CFR 97.518. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

(1) Any provision of the TR NO<sub>x</sub> Ozone Season Trading Program that applies to a TR NO<sub>x</sub> Ozone Season source or the designated representative of a TR NO<sub>x</sub> Ozone Season source shall also apply to the owners and operators of such source and of the TR NO<sub>x</sub> Ozone Season units at the source.

(2) Any provision of the TR NO<sub>x</sub> Ozone Season Trading Program that applies to a TR NO<sub>x</sub> Ozone Season unit or the designated representative of a TR NO<sub>x</sub> Ozone Season unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR NO<sub>x</sub> Ozone Season Trading Program or exemption under 40 CFR 97.505 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR NO<sub>x</sub> Ozone Season source or TR NO<sub>x</sub> Ozone Season unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

## **TR SO<sub>2</sub> Group 1 Trading Program requirements (40 CFR 97.606)**

### **(a) Designated representative requirements.**

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 40 CFR 97.613 through 97.618.

### **(b) Emissions monitoring, reporting, and recordkeeping requirements.**

- (1) The owners and operators, and the designated representative, of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 97.631 (initial monitoring system certification and recertification procedures), 97.632 (monitoring system out-of-control periods), 97.633 (notifications concerning monitoring), 97.634 (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 97.635 (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).
- (2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of TR SO<sub>2</sub> Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the TR SO<sub>2</sub> Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

### **(c) SO<sub>2</sub> emissions requirements.**

#### **(1) TR SO<sub>2</sub> Group 1 emissions limitation.**

- (i). As of the allowance transfer deadline for a control period in a given year, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold, in the source's compliance account, TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO<sub>2</sub> emissions for such control period from all TR SO<sub>2</sub> Group 1 units at the source.
- (ii). If total SO<sub>2</sub> emissions during a control period in a given year from the TR SO<sub>2</sub> Group 1 units at a TR SO<sub>2</sub> Group 1 source are in excess of the TR SO<sub>2</sub> Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:
  - (A). The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall hold the TR SO<sub>2</sub> Group 1 allowances required for deduction under 40 CFR 97.624(d); and
  - (B). The owners and operators of the source and each TR SO<sub>2</sub> Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart CCCC and the Clean Air Act.

#### **(2) TR SO<sub>2</sub> Group 1 assurance provisions.**

- (i). If total SO<sub>2</sub> emissions during a control period in a given year from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO<sub>2</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and

such control period, shall hold (in the assurance account established for the owners and operators of such group) TR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying—

- (A). The quotient of the amount by which the common designated representative's share of such SO<sub>2</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO<sub>2</sub> emissions exceeds the respective common designated representative's assurance level; and
  - (B). The amount by which total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state for such control period exceed the state assurance level.
- (ii). The owners and operators shall hold the TR SO<sub>2</sub> Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
  - (iii). Total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO<sub>2</sub> emissions exceed the sum, for such control period, of the state SO<sub>2</sub> Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).
  - (iv). It shall not be a violation of 40 CFR part 97, subpart CCCCC or of the Clean Air Act if total SO<sub>2</sub> emissions from all TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO<sub>2</sub> emissions from the TR SO<sub>2</sub> Group 1 units at TR SO<sub>2</sub> Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.
  - (v). To the extent the owners and operators fail to hold TR SO<sub>2</sub> Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
    - (A). The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
    - (B). Each TR SO<sub>2</sub> Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 40 CFR part 97, subpart CCCCC and the Clean Air Act.
- (3) Compliance periods.
- (i). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.
  - (ii). A TR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.630(b) and for each control period thereafter.
- (4) Vintage of allowances held for compliance.
- (i). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for such control period or a control period in a prior year.

- (ii). A TR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year must be a TR SO<sub>2</sub> Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
  - (5) Allowance Management System requirements. Each TR SO<sub>2</sub> Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.
  - (6) Limited authorization. A TR SO<sub>2</sub> Group 1 allowance is a limited authorization to emit one ton of SO<sub>2</sub> during the control period in one year. Such authorization is limited in its use and duration as follows:
    - (i). Such authorization shall only be used in accordance with the TR SO<sub>2</sub> Group 1 Trading Program; and
    - (ii). Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
  - (7) Property right. A TR SO<sub>2</sub> Group 1 allowance does not constitute a property right.
- (d) Title V permit revision requirements.**
- (1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of TR SO<sub>2</sub> Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.
  - (2) This permit incorporates the TR emissions monitoring, recordkeeping and reporting requirements pursuant to 40 CFR 97.630 through 97.635, and the requirements for a continuous emission monitoring system (pursuant to 40 CFR part 75, subparts B and H), an excepted monitoring system (pursuant to 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR part 75.19), and an alternative monitoring system (pursuant to 40 CFR part 75, subpart E), Therefore, the Description of TR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this title V permit using minor permit modification procedures in accordance with 40 CFR 97.606(d)(2) and 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B).
- (e) Additional recordkeeping and reporting requirements.**
- (1) Unless otherwise provided, the owners and operators of each TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall keep on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
    - (i). The certificate of representation under 40 CFR 97.616 for the designated representative for the source and each TR SO<sub>2</sub> Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 40 CFR 97.616 changing the designated representative.
    - (ii). All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.
    - (iii). Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the TR SO<sub>2</sub> Group 1 Trading Program.
  - (2) The designated representative of a TR SO<sub>2</sub> Group 1 source and each TR SO<sub>2</sub> Group 1 unit at the source shall make all submissions required under the TR SO<sub>2</sub> Group 1 Trading Program, except

as provided in 40 CFR 97.618. This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a title V operating permit program in 40 CFR parts 70 and 71.

**(f) Liability.**

- (1) Any provision of the TR SO<sub>2</sub> Group 1 Trading Program that applies to a TR SO<sub>2</sub> Group 1 source or the designated representative of a TR SO<sub>2</sub> Group 1 source shall also apply to the owners and operators of such source and of the TR SO<sub>2</sub> Group 1 units at the source.
- (2) Any provision of the TR SO<sub>2</sub> Group 1 Trading Program that applies to a TR SO<sub>2</sub> Group 1 unit or the designated representative of a TR SO<sub>2</sub> Group 1 unit shall also apply to the owners and operators of such unit.

**(g) Effect on other authorities.**

No provision of the TR SO<sub>2</sub> Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a TR SO<sub>2</sub> Group 1 source or TR SO<sub>2</sub> Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.



## State of New Jersey

CHRIS CHRISTIE  
*Governor*

### DEPARTMENT of ENVIRONMENTAL PROTECTION

BOB MARTIN  
*Commissioner*

KIM GUADAGNO  
*Lt. Governor*

Division of Air Quality  
Bureau of Air Permits  
401 E. State Street, 2<sup>nd</sup> floor, P.O. Box 420, Mail Code 401-02  
Trenton, NJ 08625-0420

## Appendix II

### PHASE II ACID RAIN PERMIT

**Issued to:** Newark Energy Center  
955 Delancy Street  
Newark, Essex County, New Jersey, 07105

**Owned by:** Hess NEC, LLC  
955 Delancy Street  
Newark, New Jersey, 07105

**Operated by:** Hess NEC, LLC  
955 Delancy Street  
Newark, New Jersey, 07105

**ORIS Code:** 58079

**Effective:** November 1, 2012 thru October 31, 2017 (Coincide with the Operating Permit Date)

This Acid Rain Permit is issued under the authority of Chapter 106, P.L.1967 (N.J.S.A. 26:2C-9.2) and Titles IV and V of the Clean Air Act. The owners and operators of each affected unit at this facility shall comply with all of the requirements established in this permit.

Approved by:

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Yogesh Doshi  
Bureau of Air Permits  
Air Quality Permitting Element

## **ACID RAIN PERMIT CONTENTS**

- 1) STATEMENT OF BASIS
- 2) UNIT SPECIFIC REQUIREMENTS
- 3) COMMENTS, NOTES, AND JUSTIFICATIONS REGARDING PERMIT DECISIONS
- 4) PHASE II PERMIT APPLICATION

**1) Statement of Basis**

In accordance with N.J.S.A. 26:2C-9.2 and Titles IV and V of the Clean Air Act, the Department issues this permit pursuant to N.J.A.C. 7:27 et seq.

**2) Unit Specific Requirements**

Refer to 40 CFR 72 for specific requirements.

**3) Comments, Notes, And Justifications Regarding Permit Decisions**

This facility is subject to the Operating Permit regulations promulgated at N.J.A.C. 7:27-22. Therefore, the facility must obtain an Operating Permit. The Department is currently reviewing the Operating Permit application filed by the applicant, and expects to issue a permit decision on their application in the near future. The procedures for incorporating this Acid Rain permit into the Operating Permit shall be consistent with the state requirements at N.J.A.C. 7:27-22.29, the federal requirements at 40 CFR 72, and any official guidance issued by USEPA.

**4) Phase II Permit Application**

The owners and operators shall comply with all of the standard requirements and special provisions set forth on the attached Phase II Permit Application for each affected unit.





# Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is:  new  revised  for Acid Rain permit renewal

## STEP 1

Identify the facility name, State, and plant (ORIS) code.

Hess Newark Energy Center Facility (Source) Name	New Jersey State	pending Plant Code
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## STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
U001	Yes
U002	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes

### **Permit Requirements**

#### **STEP 3**

Read the standard requirements.

- (1) The designated representative of each affected source and each affected unit at the source shall:
  - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
  - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
  - (ii) Have an Acid Rain Permit.

### **Monitoring Requirements**

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

### **Sulfur Dioxide Requirements**

- (1) The owners and operators of each source and each affected unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

### **Sulfur Dioxide Requirements, Cont'd.**

**STEP 3, Cont'd.**

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

### **Nitrogen Oxides Requirements**

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

### **Excess Emissions Requirements**

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.

(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:

- (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
- (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

### **Recordkeeping and Reporting Requirements**

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:

- (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;

**Recordkeeping and Reporting Requirements, Cont'd.**

**STEP 3, Cont'd.**

- (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
  - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

**Liability**

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

**Effect on Other Authorities**

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating

Hess Newark Energy Center  
Facility (Source) Name (from STEP 1)

**Effect on Other Authorities, Cont'd.**

STEP 3, Cont'd.

to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a source can hold; *provided*, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

**Certification**

STEP 4

Read the certification statement, sign, and date.

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	Peter Haid	
Signature		Date
		06/13/12



## Instructions for the Acid Rain Program Permit Application

*The Acid Rain Program requires the designated representative to submit an Acid Rain permit application for each source with an affected unit. A complete Certificate of Representation must be received by EPA before the permit application is submitted to the title V permitting authority. A complete Acid Rain permit application, once submitted, is binding on the owners and operators of the affected source and is enforceable in the absence of a permit until the title V permitting authority either issues a permit to the source or disapproves the application.*

Please type or print. If assistance is needed, contact the title V permitting authority.

**STEP 1** A Plant Code is a 4 or 5 digit number assigned by the Department of Energy's (DOE) Energy Information Administration (EIA) to facilities that generate electricity. For older facilities, "Plant Code" is synonymous with "ORISPL" and "Facility" codes. If the facility generates electricity but no Plant Code has been assigned, or if there is uncertainty regarding what the Plant Code is, send an email to the EIA. The email address is [EIA-860@eia.gov](mailto:EIA-860@eia.gov).

**STEP 2** In column "a," identify each unit at the facility by providing the appropriate unit identification number, consistent with the identifiers used in the Certificate of Representation and with submissions made to DOE and/or EIA. Do not list duct burners. For new units without identification numbers, owners and operators must assign identifiers consistent with EIA and DOE requirements. Each Acid Rain Program submission that includes the unit identification number(s) (e.g., Acid Rain permit applications, monitoring plans, quarterly reports, etc.) should reference those unit identification numbers in exactly the same way that they are referenced on the Certificate of Representation.

### Submission Deadlines

For new units, an initial Acid Rain permit application must be submitted to the title V permitting authority 24 months before the date the unit commences operation. Acid Rain permit renewal applications must be submitted at least 6 months in advance of the expiration of the acid rain portion of a title V permit, or such longer time as provided for under the title V permitting authority's operating permits regulation.

### Submission Instructions

Submit this form to the appropriate title V permitting authority. If you have questions regarding this form, contact your local, State, or EPA Regional Acid Rain contact, or call EPA's Acid Rain Hotline at (202) 343-9620.

### Paperwork Burden Estimate

The public reporting and record keeping burden for this collection of information is estimated to average 8 hours per response. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. 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.

Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. **Do not send the completed form to this address.**

# **Appendix III:**

**Administrative Consent Order NEA-150003-08857**



**State of New Jersey**

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
Division of Air Enforcement  
Bureau of Air Compliance & Enforcement-Northern  
7 Ridgedale Avenue  
Cedar Knolls, NJ 07927  
Telephone: (973) 656-4444 Fax: (973) 656-4080

CHRIS CHRISTIE  
*Governor*

KIM GUADAGNO  
*Lt. Governor*

BOB MARTIN  
*Commissioner*

**CERTIFIED MAIL/RRR**  
**7007 0220 0002 1053 3156**

Monica Howell  
NEWARK ENERGY CENTER LLC  
955 Delancy Street  
Newark, NJ 07105

April 1, 2016

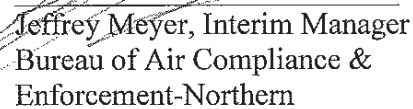
Re: NEWARK ENERGY CENTER LLC – PI # 08857  
New Jersey Administrative Code 7:27-22.16(a) and 7:27-22.22.3(e)  
Administrative Consent Order with EA ID#: NEA150003 - 08857

Dear Ms. Howell:

Enclosed please find an invoice and a fully executed copy of the referenced Administrative Consent Order which contains the agreements reached between NEWARK ENERGY CENTER LLC and the Department.

Thank you for your efforts in reaching this amicable agreement. If you have any further questions, please contact Brian E. Farbanish at (973) 656-4444.

Sincerely,

  
Jeffrey Meyer, Interim Manager  
Bureau of Air Compliance &  
Enforcement-Northern

Enclosures





## State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
AIR COMPLIANCE & ENFORCEMENT  
Northern Regional Office  
7 Ridgedale Avenue  
Cedar Knolls, NJ 07927  
Phone # (973) 656-4444 FAX # (973) 656-4080

CHRIS CHRISTIE  
*Governor*

KIM GUADAGNO  
*Lt. Governor*

BOB MARTIN  
*Commissioner*

IN THE MATTER OF

ADMINISTRATIVE  
CONSENT ORDER

NEWARK ENERGY CENTER LLC  
955 DELANCY STREET  
NEWARK, NJ 07105  
EA ID # NEA150003 - 08857

This Administrative Consent Order (ACO) is entered into pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection ("Department") by N.J.S.A. 13:1D-1 et seq., and the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq. (the "Act"), and duly delegated to Jeffrey Meyer, Interim Manager, Bureau of Air Compliance & Enforcement-Northern pursuant to N.J.S.A. 13:1B-4.

### FINDINGS

1. NEWARK ENERGY CENTER LLC owns and operates the facility known as NEWARK ENERGY CENTER at 955 Delancy Street, Block(s) 5074 and Lot(s) 25, Newark City, Essex County, New Jersey (ID# 08857).
2. NEWARK ENERGY CENTER LLC operates two General Electric (GE) 207FA.05 combined cycle combustion turbine generators, two heat recovery steam generators equipped with duct burners and an Auxiliary Steam Boiler.
3. As the result of an investigation and various meetings the last of which was conducted on February 10, 2016 the Department has determined that NEWARK ENERGY CENTER LLC failed to comply with applicable requirements as follows:
  - a. Requirement: Pursuant to N.J.A.C. 7:27-22.3(e), a permittee shall ensure that all requirements of the operating permit are met.

Description of Noncompliance: You failed to ensure that all requirements of the operating permit are met. Specifically, you operated a 60.55 MMBTU Coen/Victor Energy Boiler (model number VS-3-49; serial number 11876) during the July 29, 2015 stack test rather than the 66.20 MMBTU unit listed within Operating Permit BOP140006.

5831482.2

- b. Requirement: Pursuant to N.J.A.C. 7:27-22.16(a) and N.J.A.C. 7:27-22.3(e), initial stack test requirement for boiler: Conduct a comprehensive stack test at emission point PT3, within 180 days of initial start-up of the boiler to demonstrate compliance with the NO<sub>x</sub>, CO, VOC, TSP, PM-10 and PM-2.5 emission limits while firing natural gas. Three tests shall be conducted at worst-case permitted operating conditions achievable on the day of testing, under the corresponding test conditions, such as ambient (relative humidity and temperature) conditions, with regard to meeting the applicable emission standards, but without creating an unsafe condition. The permittee shall submit all data necessary to substantiate the ambient conditions with the test report. The testing shall be conducted in accordance with the protocol approved by Chief, BTS.

Description of Noncompliance: You failed to conduct a comprehensive stack test of the natural gas fired auxiliary boiler while operating at a worst-case permitted operating conditions (plus or minus 5 % of 100 %) achievable on the day of testing, under the corresponding test conditions, such as ambient conditions with regard to meeting the applicable emission standard but without creating an unsafe condition. Specifically, on July 29, 2015 you operated the natural gas fired, auxiliary boiler at 91.69 % during run 1, 2 and 3 within the stack test rather than at worst-case in violation of Operating Permit BOP140006, emission unit U1; Operation Scenario OS Summary; reference number 7. The permitted maximum heat input rating of the unit is 66.2 MMBTU but the actual rating of the unit is 60.55 MMBTU.

- c. Requirement: Pursuant to N.J.A.C. 7:27-22.16(a) and N.J.A.C. 7:27-22.3(e), NO<sub>x</sub> (Total)  $\leq$  0.66 lb/hr. Maximum emission rate based on manufacturer guaranteed emission factor (0.010 lb/MMBtu) and maximum heat input (66.2 MMBtu/hr).

Description of Noncompliance: The Department has determined that as a result of stack emission tests conducted on July 29, 2015 emissions to the outdoor atmosphere from the auxiliary boiler exceeded the standards stated in Operating Permit BOP140006; Emission Unit U1; Operating Scenario OS7; reference number 6. Specifically, the permit limit for NO<sub>x</sub> (total) = .66 lb/hr but the following NO<sub>x</sub> rates were detected during the test: run 1 = 1.33 lb/hr; run 2 = 1.35 lb/hr; run 3 = 1.37 lb/hr

4. The Department previously issued an Administrative Order & Notice of Civil Administrative Penalty Assessment (AONOCAPA) EA ID# PEA150002-08857 in the amount of \$11,000.00 to NEWARK ENERGY CENTER LLC on November 18, 2015 for violations of the Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq. (the "Act") and the regulations promulgated pursuant thereto, specifically N.J.A.C. 7:27-22.16(a) and N.J.A.C. 7:27-22.3(e) as listed in paragraph 3 above.

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5. Based on the facts set forth in these FINDINGS, the Department has determined that NEWARK ENERGY CENTER LLC has violated Air Pollution Control Act, N.J.S.A. 26:2C-1 et seq., and the regulations promulgated pursuant thereto specifically, N.J.A.C. 7:27-22.3(e) and N.J.A.C. 7:27-22.16(a).
6. Therefore, the Department has determined that NEWARK ENERGY CENTER LLC is liable for civil administrative penalties totaling \$43,700.00 for the above referenced violations pursuant to N.J.S.A. 26:2C and N.J.A.C. 7:27A-3.1 et seq.
7. On December 22, 2015, NEWARK ENERGY CENTER LLC filed a Request for Adjudicatory Hearing of Administrative Order and Notice of Administrative Penalty Assessment contesting the findings in the AONOCAPA.
8. In order to resolve this matter without trial or adjudication, NEWARK ENERGY CENTER LLC has agreed to entry of this ACO and to be bound by its terms and conditions.

ORDER

NOW, THEREFORE, IT IS HEREBY ORDERED THAT:

A. HEARING REQUEST

9. By execution of this ACO, NEWARK ENERGY CENTER LLC hereby withdraws, with prejudice, its request for an administrative hearing before the Office of Administrative Law regarding the above enforcement action PEA150002-08857.

B. COMPLIANCE SCHEDULE

10. NEWARK ENERGY CENTER LLC shall take whatever actions are necessary to achieve and maintain compliance with its permit, N.J.A.C. 7:27-22.16(a) and N.J.A.C. 7:27-22.3(e) including but not limited to the following:
  - a. Within 30 days of execution of this document submit an administratively complete Operating Permit application that adequately reflects the Auxiliary Boiler on-site.
  - b. NEWARK ENERGY CENTER LLC shall respond to any request from the Bureau of Operating (BOP) Permits within 20 days. If NEWARK ENERGY CENTER LLC fails to respond within 20 days of any request NEWARK ENERGY CENTER LLC will be subject to daily stipulated penalties specified in paragraph 19.
  - c. NEWARK ENERGY CENTER LLC shall install and commission the Auxiliary Boiler NOx Burner by January 6, 2017.
  - d. NEWARK ENERGY CENTER LLC must obtain an Operating Permit for the violations referenced above.

- e. NEWARK ENERGY CENTER LLC will restrict the heat input to the Auxiliary Boiler to 40 MMBTU/hr.
  - f. NEWARK ENERGY CENTER LLC will continue to operate in accordance with the 800 operating hour yearly restriction listed within emission unit U1; operating scenario OS7; reference number 19 of BOP140006.
11. If NEWARK ENERGY CENTER LLC is not able to achieve compliance by taking the above actions, NEWARK ENERGY CENTER LLC is responsible for taking whatever additional actions are necessary in order to comply with all applicable federal, state and local permits as well as all applicable statutes, codes, rules, regulations and orders, including but not limited to the statutes and regulations cited herein.

#### C. PROGRESS REPORTS

12. NEWARK ENERGY CENTER LLC shall submit progress reports to the Department monthly, on the first day of the month after full execution of this document. Each report shall explain the status of NEWARK ENERGY CENTER LLC's compliance with this ACO and shall include, but not be limited to, the following:
- A. identification of site and reference to this ACO;
  - B. status of permitting and planning approvals and any work at the site and progress to date;
  - C. difficulties or problems encountered during reporting period and actions taken to rectify;
  - D. activities planned for the next reporting period;
  - E. required and actual completion date for each item required by this ACO;
  - F. an explanation of any non-compliance with the compliance schedule; and
  - G. evaluation of all corrective measures implemented to date.

#### D. PENALTY AND SUPPLEMENTAL PROJECT

13. In settlement of the violations cited in the above findings, NEWARK ENERGY CENTER LLC shall pay a penalty of \$43,700.00.
14. NEWARK ENERGY CENTER LLC shall make an initial penalty payment of \$10,925.00 by check made payable to the "Treasurer, State of New Jersey" and remitted to the Division of Revenue at the address stated on the enclosed invoice within 30 days of execution of this ACO.
15. In lieu of payment of the remaining penalty amount of \$32,775.00, NEWARK ENERGY CENTER LLC shall fund a Supplemental Environmental Project ("SEP"). Within 60 days of execution of this ACO, NEWARK ENERGY CENTER LLC shall submit to the Department for approval a proposal for a SEP. The cost of the approved SEP shall be no less than \$32,775.00 and shall be borne by NEWARK ENERGY CENTER LLC. The approved SEP shall be implemented by August 31, 2016, unless extended in writing by the Department.

16. If NEWARK ENERGY CENTER LLC does not submit a SEP proposal within 60 days of execution of this ACO, or if the Department does not approve NEWARK ENERGY CENTER LLC's proposal, the Department shall give written notice to NEWARK ENERGY CENTER LLC that stipulates that NEWARK ENERGY CENTER LLC shall pay the remaining penalty amount of \$32,775.00. NEWARK ENERGY CENTER LLC shall pay this penalty as outlined in paragraph 14 above by the due date indicated on the invoice enclosed with the written notice.
17. If NEWARK ENERGY CENTER LLC fails to make a payment of a penalty amount in settlement or the cost of the SEP as described above, then NEWARK ENERGY CENTER LLC is liable for the full penalty amount. The full penalty amount will be included in a formal action that will also include formal withdrawal of this ACO.
18. In the event that there are remaining funds available after the SEP project is complete, NEWARK ENERGY CENTER LLC shall forward the balance of these funds to the Department by check made payable to the "Treasurer, State of New Jersey" as outlined in paragraph 14 above.

E. STIPULATED PENALTIES

19. NEWARK ENERGY CENTER LLC shall pay stipulated penalties to the Department, as set forth below, for failure to comply with the provisions of this ACO unless the Department has notified NEWARK ENERGY CENTER LLC in writing that a stipulated penalty will not be assessed for violations of the compliance schedule pursuant to the force majeure provisions of this ACO.

<u>Calendar Days After Due Date</u>	<u>Per Calendar Day</u>
1-7	\$500
8-14	\$1000
15 or more	\$2500

20. Within 45 calendar days after NEWARK ENERGY CENTER LLC's receipt of a written demand from the Department for stipulated penalties, NEWARK ENERGY CENTER LLC shall submit a check to the Department as outlined in paragraph 14 above.
21. If NEWARK ENERGY CENTER LLC fails to pay stipulated penalties pursuant to the preceding paragraphs, the Department may take action to collect same, including, but not limited to, instituting civil proceedings to collect such penalties pursuant to R. 4:67 and R. 4:70 or assess civil administrative penalties for violations of this ACO.
22. The payment of stipulated penalties does not alter NEWARK ENERGY CENTER LLC's responsibility to complete all requirements of this ACO.

F. FORCE MAJEURE

23. If any event occurs which is beyond the control of NEWARK ENERGY CENTER LLC and which NEWARK ENERGY CENTER LLC believes will or may cause delay in the achievement of the compliance schedule provisions of this ACO, NEWARK ENERGY CENTER LLC shall notify the Department in writing within 7 calendar days of becoming aware of the delay or anticipated delay, as appropriate. In the notification, NEWARK ENERGY CENTER LLC shall reference this paragraph, describe the anticipated length of the delay, the precise cause or causes of the delay, and any measures taken or to be taken to minimize the delay. NEWARK ENERGY CENTER LLC shall take all necessary action to prevent or minimize any such delay.
24. The Department may adjust the deadlines in the compliance schedule of this ACO for a period no longer than the delay if the Department finds that:
- A. NEWARK ENERGY CENTER LLC has complied with the notice requirements of paragraph 23;
  - B. any delay or anticipated delay has been or will be caused by fire, flood, riot, strike, or other circumstances beyond the control of NEWARK ENERGY CENTER LLC; and
  - C. NEWARK ENERGY CENTER LLC has taken all necessary actions to prevent or minimize the delay.
25. If the Department denies NEWARK ENERGY CENTER LLC's force majeure request, NEWARK ENERGY CENTER LLC may be subject to stipulated penalties. The burden of proving that any delay is caused by circumstances beyond the control of NEWARK ENERGY CENTER LLC and the length of any such delay attributable to those circumstances shall rest with NEWARK ENERGY CENTER LLC. Increases in the cost or expenses incurred by NEWARK ENERGY CENTER LLC in fulfilling the requirements of this ACO shall not be a basis for an extension of time. Delay in an interim requirement shall not automatically justify or excuse delay in the attainment of subsequent requirements. Contractor's breach shall not automatically constitute force majeure.

G. GENERAL PROVISIONS

26. Nothing contained in this ACO restricts the ability of the Department to raise the above Findings in any other proceeding, specifically including, but not limited to, proceedings pursuant to N.J.S.A. 13:1E-126 et seq., (commonly referred to as A-901).
27. This ACO shall be binding on NEWARK ENERGY CENTER LLC, its respective agents, successors, assigns, and any trustee in bankruptcy or receiver appointed pursuant to a proceeding in law or equity.

28. This ACO shall be fully enforceable as a final Administrative Order in the New Jersey Superior Court.
29. NEWARK ENERGY CENTER LLC agrees not to contest the terms or conditions of this ACO except that NEWARK ENERGY CENTER LLC may contest the Department's interpretation or application of such terms or conditions in any action brought by the Department to enforce this ACO's provisions.
30. This ACO shall not relieve NEWARK ENERGY CENTER LLC from obtaining and complying with all applicable federal, state and local permits as well as all applicable statutes, codes, rule, regulations and orders, including but not limited to the statutes and regulations cited herein.
31. No modification or waiver of this ACO shall be valid except by written amendment duly executed by NEWARK ENERGY CENTER LLC and the Department or by the Department's written modification pursuant to the force majeure provisions herein.
32. Unless otherwise specifically provided herein, NEWARK ENERGY CENTER LLC shall submit all documents required by this ACO, except penalty payments, to the Department by certified mail, return receipt requested, overnight mail or by hand delivery with an acknowledgment of receipt form for the Department's signature to:

Jeffrey Meyer, Interim Manager  
Division of Air Enforcement  
Bureau of Air Compliance & Enforcement-Northern  
7 Ridgedale Avenue  
Cedar Knolls, NJ 07927

The date the Department receives the certified mail or overnight mail, or executes the acknowledgment will be the date the Department uses to determine NEWARK ENERGY CENTER LLC's compliance with this ACO.

33. Unless otherwise specifically provided herein, any communication made by the Department to NEWARK ENERGY CENTER LLC pursuant to this ACO shall be sent to

Robert Franson, Vice President  
NEWARK ENERGY CENTER LLC  
63 Kendrick Street  
Needham, MA 02494

With a copy to:

John G. Valeri, Jr.  
Chiesa Shahinian & Giantomasi PC  
One Boland Drive  
West Orange, NJ 07052

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34. NEWARK ENERGY CENTER LLC shall not construe any unwritten or informal advice, guidance, suggestions, or comments by the Department, or by persons acting on behalf of the Department, as relieving NEWARK ENERGY CENTER LLC of its obligations under its permit(s), this ACO, the Air Pollution Control regulations, and/or the Air Pollution Control Act.
35. In addition to the Department's statutory and regulatory rights to enter and inspect, NEWARK ENERGY CENTER LLC shall allow the Department and its authorized representatives access to the site at all times for the purpose of determining compliance with this ACO.
36. Nothing in this ACO shall preclude the Department from taking enforcement action against NEWARK ENERGY CENTER LLC for matters not set forth in the findings of this ACO.
37. No obligations or penalties imposed by this ACO are intended to constitute debt(s) which may be limited or discharged in a bankruptcy proceeding. All obligations and penalties are imposed pursuant to the police powers of the State of New Jersey for the enforcement of the law and the protection of public health, safety, welfare and the environment.
38. NEWARK ENERGY CENTER LLC shall give written notice of this ACO to any successor in interest thirty (30) calendar days prior to transfer of ownership or control of the facility or facilities which are the subject of this ACO and shall simultaneously notify the Department that such notice has been given. This requirement shall be in addition to any other statutory or regulatory requirements arising from the transfer of ownership or control of NEWARK ENERGY CENTER LLC's facility. In addition, the parties agree that any contract, lease, deed or any other agreement that NEWARK ENERGY CENTER LLC enters into to convey the property/facility that is the subject of this ACO shall include a provision which states that the successor, assignee, tenant or purchaser has agreed to assume the obligations imposed by this ACO.
39. The Department reserves all statutory and common law rights to require NEWARK ENERGY CENTER LLC to take additional action(s) if the Department determines that such actions are necessary to protect public health, safety, welfare and the environment. Nothing in this ACO shall constitute a waiver of any statutory or common law right of the Department to require such additional measures should the Department determine that such measures are necessary.
40. This ACO shall be governed and interpreted under the laws of the State of New Jersey.
41. If any provision of this ACO is found invalid or unenforceable, the remainder of this ACO shall not be affected thereby and each provision shall be valid and enforced to the fullest extent permitted by law. The Department does, however, retain the right to terminate the remainder of this ACO if, after such finding, it determines that the remaining ACO does not serve the purpose for which it was intended.



42. This ACO represents the entire integrated agreement between the Department and NEWARK ENERGY CENTER LLC on the matters contained herein.
43. The Department reserves the right to unilaterally terminate this ACO in the event NEWARK ENERGY CENTER LLC violates its terms and to take any additional enforcement action it deems necessary.
44. This ACO shall terminate upon receipt by NEWARK ENERGY CENTER LLC of written notice from the Department that all the requirements of this ACO have been satisfied.
45. This ACO shall become effective upon the execution hereof by all parties, subject to completion of any required public participation process.

DATED:

3-29-2016

NEWARK ENERGY CENTER LLC

BY:

 Robert D. Francon

TITLE: vice president

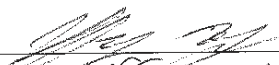
By this signature, I certify that I have full authority to execute this document on behalf of NEWARK ENERGY CENTER LLC.

DATED:

4/1/16

NJDEP

BY:

 Jeffrey Meyer

TITLE: INTERIM MANAGER

By this signature, I certify that I have full authority to execute this document on behalf of NJDEP.

RF