



## State of New Jersey

PHILIP D. MURPHY  
Governor

TAHESHA L. WAY  
Lt. Governor

### DEPARTMENT OF ENVIRONMENTAL PROTECTION

AIR, ENERGY AND MATERIALS SUSTAINABILITY  
Division of Air Quality and Radiation Protection  
Bureau of Stationary Sources  
401 E. State Street, 2nd floor, P.O. Box 420, Mail Code 401-02  
Trenton, NJ 08625-0420

SHAWN M. LATOURETTE  
Commissioner

### Air Pollution Control Operating Permit Significant Modification

**Permit Activity Number: BOP230003**

**Program Interest Number: 70506**

Mailing Address	Plant Location
MATTHEW DENAFO PRESIDENT ATLANTIC CNTY UTILITIES AUTH PO BOX 996 Pleasantville, NJ 08232-0996	ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL 6700 Delilah Rd Egg Harbor Twp Atlantic County

**Initial Operating Permit Approval Date: May 20, 2005**

**Operating Permit Approval Date: Draft**

**Operating Permit Expiration Date: May 19, 2020 (Operating under application shield)**

#### **AUTHORITY AND APPLICABILITY**

The New Jersey Department of Environmental Protection (Department) approves and issues this Air Pollution Control Operating Permit under the authority of Chapter 106, P.L. 1967 (N.J.S.A. 26:2C-9.2). This permit is issued in accordance with the air pollution control permit provisions promulgated at Title V of the Federal Clean Air Act, 40 CFR 70, Air Pollution Control Act codified at N.J.S.A. 26:2C and New Jersey State regulations promulgated at N.J.A.C. 7:27-22.

The Department approves this operating permit based on the evaluation of the certified information provided in the permit application that all equipment and air pollution control devices regulated in this permit comply with all applicable State and Federal regulations. The facility shall be operated in accordance with the conditions of this permit. This operating permit supersedes any previous Air Pollution Control Operating Permits issued to this facility by the Department including any general operating permits, renewals, significant modifications, minor modifications, seven-day notice changes or administrative amendments to the permit.

Changes made through this permit activity are provided in the Reason for Application.

#### **PERMIT SHIELD**

This operating permit includes a permit shield, pursuant to the provisions of N.J.A.C. 7:27-22.17.

#### **COMPLIANCE SCHEDULES**

This operating permit does not include compliance schedules as part of the approved compliance plan.

## **COMPLIANCE CERTIFICATIONS AND DEVIATION REPORTS**

The permittee shall submit to the Department and to United States Environmental Protection Agency (US EPA) periodic compliance certifications, in accordance with N.J.A.C. 7:27-22.19. **The annual compliance certification** is due to the Department and EPA within 60 days after the end of each calendar year during which this permit was in effect. **Semi-annual deviation reports** relating to compliance testing and monitoring are due to the Department within 30 days after the end of the semi-annual period. The schedule and additional details for these submittals are available in Subject Item - FC, of the Facility Specific Requirements of this permit.

## **ACCESSING PERMITS**

The facility's current approved operating permit and any previously issued permits (e.g. superseded, expired, or terminated) are available for download in PDF format at: <https://dep.nj.gov/boss>. After accessing the website, click on "Approved Operating Permits" listed under "Reports" and then type in the Program Interest (PI) Number as instructed on the screen. If needed, the RADIUS file for your permit, containing Facility Specific Requirements (Compliance Plan), Inventories and Compliance Schedules can be obtained by contacting the Helpline number given below. RADIUS software, instructions, and help are available at the Department's website at <https://dep.nj.gov/boss>.

## **HELPLINE**

The Operating Permit Helpline is available for any questions at (609) 633-8248 from 9:00 AM to 4:00 PM Monday to Friday.

## **RENEWING YOUR OPERATING PERMIT AND APPLICATION SHIELD**

The permittee is responsible for submitting a timely and administratively complete operating permit renewal application pursuant to N.J.A.C. 7:27-22.30. Only applications which are timely and administratively complete are eligible for an application shield. The details on the contents of the renewal application, submittal schedule, and application shield are available in Section B - General Provisions and Authorities of this permit.

## **COMPLIANCE ASSURANCE MONITORING**

Facilities 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. The rule and guidance on how to prepare a CAM Plan can be found at EPA's website: <https://www.epa.gov/air-emissions-monitoring-knowledge-base/compliance-assurance-monitoring>. In addition, CAM Plans must be included as part of the permit renewal application. Facilities that do not submit a CAM Plan may have their permit applications denied, pursuant to N.J.A.C. 7:27-22.3.

## **ADMINISTRATIVE HEARING REQUEST**

If, in your judgment, the Department is imposing any unreasonable condition of approval, you may contest the Department's decision 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 specified in N.J.A.C. 7:27-1.32 and the information on the NJ04 - Administrative Hearing Request Checklist and Tracking Form available at <https://dep.nj.gov/wp-content/uploads/boss/applications-and-forms/administrative-hearing-request-checklist-and-tracking-form.pdf>.

If you have any questions regarding this permit approval, please call Michael Hogan at (609) 940-5673.

Approved by:

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Kevin Greener

Enclosure

CC: Suilin Chan, United States Environmental Protection Agency, Region 2

**Facility Name: ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL**  
**Program Interest Number: 70506**  
**Permit Activity Number: BOP230003**

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## Section A

**Facility Name: ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL**

**Program Interest Number: 70506**

**Permit Activity Number: BOP230003**

### **POLLUTANT EMISSIONS SUMMARY**

Table 1: Total emissions from all Significant Source Operations<sup>1</sup> at the facility.

Facility's Potential Emissions from all Significant Source Operations (tons per year)										
Source Categories	VOC (total)	NO <sub>x</sub>	CO	SO <sub>2</sub>	TSP (total)	PM <sub>10</sub> (total)	PM <sub>2.5</sub> <sup>2</sup> (total)	Pb	HAPs* (total)	CO <sub>2</sub> e <sup>3</sup>
Emission Units Summary	22.9	36.2	111.0	51.6	9.83	9.32	9.19	N/A	4.15	
Batch Process Summary	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	
Total Emissions	22.9	36.2	111.0	51.6	9.83	9.32	9.19	N/A	4.15	286,000

Table 2: Estimate of total emissions from all Insignificant Source Operations<sup>1</sup> 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	VOC (total)	NO <sub>x</sub>	CO	SO <sub>2</sub>	TSP (total)	PM <sub>10</sub> (total)	PM <sub>2.5</sub> <sup>2</sup> (total)	Pb	HAPs (total)
Insignificant Source Operations	0.303	3.806	2.222	0.151	0.272	0.248	N/A	N/A	N/A
Non-Source Fugitive Emissions	N/A	N/A	N/A	N/A	24.97	6.252	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

N/A: Indicates the pollutant is not emitted or is emitted below the reporting threshold specified in N.J.A.C. 7:27-22, Appendix, Table A and N.J.A.C. 7:27-17.9(a).

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

\*Emissions of individual HAPs are provided in Table 3 on the next page.

Emissions of "Other" air contaminants are provided in Table 4 on the next page.

<sup>1</sup> Significant Source Operations and Insignificant Source Operations are defined at N.J.A.C. 7:27-22.1.

<sup>2</sup> PM<sub>2.5</sub> has been included in air permitting rules as of December 9, 2017. Consequently, PM<sub>2.5</sub> totals in this section may not be up to date. The Department is in the process of updating these limits during each permit modification, and the entire permit will be updated at the time of permit renewal.

<sup>3</sup> Total CO<sub>2</sub>e emissions for the facility.

## Section A

**Facility Name: ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL**

**Program Interest Number: 70506**

**Permit Activity Number: BOP230003**

### **POLLUTANT EMISSIONS SUMMARY**

Table 3: Summary of Hazardous Air Pollutants (HAP) Emissions from Significant Source Operations <sup>4</sup>:

HAP	TPY
Arsenic	0.00501
Cadmium	0.0000376
Cobalt	0.00000287
Formaldehyde	0.00256
Hydrogen Chloride	4.12
Phenol	0.023
Tetrachloroethane (1,1,2,2-)	0.000562

Table 4: Summary of “Other” air contaminants emissions from Significant Source Operations:

Other Air Contaminant	TPY
Methane	5760
Hydrogen Sulfide	12.9

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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 B

**Facility Name: ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL**

**Program Interest Number: 70506**

**Permit Activity Number: BOP230003**

### **GENERAL PROVISIONS AND AUTHORITIES**

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 that occurs only in areas over which the permittee has exclusive use or occupancy. Requirements 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:
  - a. 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
  - b. 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
  - c. 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 an affirmative defense, consistent with General Provision #10 below, the violation shall be reported by 5:00 PM of the second full calendar day following the occurrence, or of becoming aware of the occurrence.
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 permittee may not assert an affirmative defense to penalty liability for non-compliance with a provision or condition of the operating permit that is based on any federally delegated regulation, including but not limited to NSPS, NESHAP, or MACT. An affirmative defense to penalty liability for non-compliance with a provision or condition of the operating permit may be asserted by a permittee if:
  - a. The provision or condition of the operating permit is based solely on State or local law; and
  - b. The affirmative defense is asserted and established as required by N.J.S.A. 26:2C-19.1 through 19.5.
11. 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)]
12. 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]
13. 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 or 7:27-17.9(a), unless emission of the air contaminant is authorized by this operating permit. [N.J.A.C. 7:27-22.3(c)]
14. 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.
15. Consistent with the provisions of N.J.A.C. 7:27-22.3(s), Except as otherwise provided in this subchapter, the submittal of any information or application by a permittee including, but not limited to, an application or notice for any change to the operating permit, including any administrative amendment, any minor or significant modification, renewal, a notice of a seven-day notice change, a notice of past or anticipated noncompliance, does not stay any operating permit condition, nor relieve a permittee from the obligation to obtain other necessary permits and to comply with all applicable Federal, State, and local requirements.
16. Applicable requirements derived from an existing or terminated consent decree with EPA will not be changed without advance consultation by the Department with EPA. N.J.A.C. 7:27-22.3(uu).
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 or operator of the subject equipment has obtained and maintains an approved Air Pollution Control Permit, issued pursuant to N.J.A.C. 7:27-8 or 22, 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 Air Pollution Control 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 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 reoccur 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. 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.
19. The permittee is responsible for submitting timely and administratively complete operating permit applications:
- 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)].
20. The operating permit renewal application consists of a RADIUS application and the application attachment available at the Department's website <https://dep.nj.gov/boss/applications-and-forms/> (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: <https://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, the renewal application shall include all 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 any deficiencies can be identified and addressed to ensure that the application is administratively complete by the renewal deadline. Only renewal applications which are timely and administratively complete are eligible for an application shield.
21. For all source emissions testing performed at the facility, the phrase "worst case conditions without creating an unsafe condition" used in the enclosed compliance plan is consistent with EPA's National Stack

Testing Guidance, dated April 27, 2009, where all source emission testing performed at the facility shall be under the representative (normal) conditions that:

- a. Represent the range of combined process and control measure conditions under which the facility expects to operate (regardless of the frequency of the conditions); and
  - b. Are likely to most challenge the emissions control measures of the facility with regard to meeting the applicable emission standards, but without creating an unsafe condition.
22. Consistent with EPA's National Stack Testing Guidance and Technical Manual 1004, a facility may not stop an ongoing stack test because it would have failed the test unless the facility also ceases operation of the equipment in question to correct the issue. Stopping an ongoing stack test in these instances will be considered credible evidence of emissions non-compliance.
  23. 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)]
  24. A Permittee may seek the approval of the Department for a delay in testing required pursuant to this permit by submitting a written request to the appropriate Regional Enforcement Office in accordance with N.J.A.C. 7:27-22.18(k). A Permittee may also seek advanced approval for a longer period for submittal of a source emissions test report required by the permit by submitting a request to the Department's Regional Enforcement Office in accordance with N.J.A.C. 7:27-22.19. [N.J.A.C. 7:27-22.18(k) and N.J.A.C. 7:27-22.19]
  25. Any emission limit values in an operating permit shall be interpreted to be followed by inherent trailing zeros (0) in the decimal portion of the limit to three significant figures (e.g. a printed limit of "1 lb/hr" means a limit of "1.00 lb/hr") except for concentration limits less than 10 parts per million (ppm). For such concentration limits, the emission limit shall be interpreted to be followed by inherent trailing zeros (0) in the decimal portion of the limit to two significant figures (e.g. a printed limit of "1 ppm" means a limit of "1.0 ppm").
  26. Testing every five years shall be defined as no later than the end of the 60th month after the first required and each subsequent stack test was completed for the new or modified source.

## Section C

**Facility Name: ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL**

**Program Interest Number: 70506**

**Permit Activity Number: BOP230003**

### **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>
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B	---	10b	---
D	FC	---	3
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## Section D

**Facility Name: ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL**

**Program Interest Number: 70506**

**Permit Activity Number: BOP230003**

### **FACILITY SPECIFIC REQUIREMENTS AND INVENTORIES**

#### **FACILITY SPECIFIC REQUIREMENTS PAGE INDEX**

#### **Subject Item and Name**

#### **Page Number**

#### **Facility (FC):**

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#### **Insignificant Sources (IS):**

IS NJID	IS Description	
IS1	Emergency Diesel Generators (2), (<1 MM Btu/hr) @ landfill office & transfer station	7
IS2	Small Natural Gas Heaters (11)	9
IS3	Parts Washer (<= 6 sq.ft., open top, <=100 gal. capacity, >= 2 gal. solvents, <5% VOC content)	10
IS4	Diesel Tanks (2)	16
IS5	Emergency Diesel Generators (2), 64 HP, subject to 40 CFR Subpart IIII (<1 MM Btu/hr) @ fuel island & scale office	18
IS6	Propane Heaters	24
IS7	Hot Water Heater	25
IS8	Small Kerosene Torpedo Heaters(6)	26
IS9	Diesel Engine for Vermeer TR626 (powering U102 equipment and < 1 MMBtu/hr max. heat input rate)	27

#### **Groups (GR):**

GR NJID	GR Designation	GR Description	
GR1	Fed Regs	NSPS A, 40 CFR 62 Subpart OOO, MACT A, MACT AAAA and NESHAP Subpart M	32

#### **Emission Units (U):**

U NJID	U Designation	U Description	
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U2		Recycling Center	55
U3		Leachate Storage and equalization	57
U4		Gasoline dispensing with Stage II vapor recovery	60
U5		Vegetative Tub Grinding	68
U7		Heater, 1.2 MM Btu/hr	89
U14	EDG-Geo Bldg	GEO Building Emergency Generator	90
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U101	Heater	Waste Oil Heater	142
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**New Jersey Department of Environmental Protection**  
**Reason for Application**

**Permit Being Modified**

**Permit Class:** BOP      **Number:** 240001

**Description  
of Modifications:**

This significant modification contains the following changes:

1) Applicable requirements from 40 CFR 62 Subpart OOO related to landfill gas treatment were added to GR1 Federal Regulations (GR1 Ref#'s 38 and 39)

2) A renewable natural gas (RNG) plant was added to U100 Landfill Gas Control System.

3) Thermal Oxidizer (CD103) was added to control the waste gas stream from the RNG plant; New Operating Scenario U100 OS3, contains operating requirements for CD103.

4) Utility Flare (CD104) was added to control off-specification product gas and product gas unable to be injected to a natural gas pipeline from the RNG plant; New Operating Scenario U100 OS4, contains operating requirements for CD104.

5) Add the following annual HAP emission limits (which are above the reporting threshold), from the RNG plant, to U100 OS Summary:

Arsenic: 0.00000683 tpy

Cadmium: 0.0000376 tpy

Cobalt: 0.00000287 tpy

Formaldehyde: 0.00256 tpy

Tetrachloroethane (1,1,2,2-): 0.000562 tpy

BOP230003

**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.
6	Emission Statements: The permittee shall comply with all the applicable provisions of N.J.A.C. 7:27-21. [N.J.A.C. 7:27-21]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	Compliance Certification: The permittee shall submit an annual Compliance Certification for each applicable requirement, pursuant to N.J.A.C. 7:27-22.19(f). [N.J.A.C. 7:27-22]	None.	None.	Submit an Annual Compliance Certification: Annually to the Department and to EPA within 60 days after the end of each calendar year during which this permit was in effect. The Compliance Certification shall be certified pursuant to N.J.A.C. 7:27-1.39 by the responsible official and submitted electronically through the NJDEP online web portal. The certification should be printed for submission to EPA.  The NJDEP online web portal can be accessed at: <a href="http://www.state.nj.us/dep/online/">http://www.state.nj.us/dep/online/</a> . The Compliance Certification forms and instructions for submitting to EPA are available by selecting Documents and Forms and then Periodic Compliance Certification. [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.
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.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
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]
12	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]	Other: Comply with 40 CFR 82 Subparts A, B, E, F, and G. [40 CFR 82].	Other: Comply with 40 CFR 82 Subparts A, B, E, F, and G. [40 CFR 82].	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]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	Deviation Reports: The permittee shall submit to the Department a certified six-month Deviation Report relating to testing and monitoring required by the operating permit. [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)]	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)] and [N.J.A.C. 7:27-22.19(e)].	Submit a report: As per the approved schedule. The six-month deviation reports for the period from January 1 through June 30 shall be submitted by July 30 of the same calendar year, and for the period from July 1 through December 31, shall be submitted by January 30 of the following calendar year.  The annual compliance certification required by N.J.A.C. 7:27-22.19(f) may also be considered as your six-month Deviation Report for the period from July 1 – December 31, if submitted by January 30 of the following calendar year. The reports shall be certified pursuant to N.J.A.C. 7:27-1.39 by the responsible official and submitted electronically through the NJDEP online web portal.  The NJDEP online web portal can be accessed at: <a href="http://www.state.nj.us/dep/online/">http://www.state.nj.us/dep/online/</a> . The Compliance Certification forms are available by selecting Documents and Forms and then Periodic Compliance Certification. [N.J.A.C. 7:27-22]
14	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]	None.	None.	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)]
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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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	The Department and its authorized representatives shall have the right to enter and inspect any activity 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]	None.	None.	None.
17	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]	None.	None.	None.
18	Each permittee shall meet all requirements of the approved source emissions testing and monitoring protocol during the term of the operating permit.  Whenever the permittee 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 permittee must recertify the CEMS or COMS in accordance with Section V.B. and Appendix E of Technical Manual 1005.  The permittee 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)]	None.	None.	Comply with the requirement: Upon occurrence of event. The permittee is responsible for contacting the Emission Measurement Section to determine the need for recertification and/or to initiate the recertification process. [N.J.A.C. 7:27-22.18(j)]
19	Each process monitor must be operated at all times when the associated process equipment is operating except during service outage time not to exceed 24 hours per calendar quarter. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The permittee must keep a service log to document any outage. [N.J.A.C. 7:27-22.16(o)]	None.
20	Continuous recording for process monitors must be at a sufficient frequency and resolution to be able to document compliance or non-compliance in accordance with Technical Manual 1005 for CEMS (TM1005(B)(3)). [N.J.A.C. 7:27-22.16(a)]	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>
21	If an operating permit has expired, the conditions of the operating permit, including the requirements for stack testing, remain enforceable until the operating permit is reissued. [N.J.A.C. 7:27-22.30(j)] and [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.



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**Subject Item:** IS1 Emergency Diesel Generators (2), (<1 MM Btu/hr) @ landfill office & transfer station

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 % , exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Sulfur Content in Fuel <= 15 Parts per Million. No person shall use fuel that contains sulfur in excess of the applicable parts per million by weight set forth in N.J.A.C. 7:27-9 Table 1B (effective July 1, 2016) for Zone 4 (Atlantic County). [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.
3	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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.
4	Generator fuel limited to diesel fuel and/or upto B20 biodiesel fuels. [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
5	<p>This emergency generator shall not be used:</p> <p>1. 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" as defined in the EPA's Air Quality Index at <a href="http://airnow.gov/">http://airnow.gov/</a>, as supplemented or amended and incorporated herein by reference, 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's air quality permitting 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>2. 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>	None.	None.	None.
6	The Permittee shall, once per month, record the total operating time from the generator's hour meter if maximum rated output is 37 kW or greater. [N.J.A.C. 7:27-19.11]	Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-22.16(o)]	Other: The Permittee shall maintain on site and record in a log book or computer data system the total operating time from the generator's hour meter. Once per month.[N.J.A.C. 7:27-19.11].	None.

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**Subject Item:** IS2 Small Natural Gas Heaters (11)

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No visible emissions except for a period of not longer than three minutes in any consecutive 30-minute period (applicable to indirect heat exchangers). [N.J.A.C. 7:27-3.2(a)]	Other: Periodic visual inspections.[N.J.A.C. 7:27-22.16(o)].	None.	None.
2	Particulate Emissions <= 0.6 lb/hr as determined in the Table at N.J.A.C. 7:27-4.2(a). [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.

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**Subject Item:** IS3 Parts Washer (<= 6 sq.ft., open top, <=100 gal. capacity, >= 2 gal. solvents, <5% VOC content)

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The permittee shall cover the tank with a lid which protects the VOC vapors from drafts and diffusion during all periods which the tank is not in active use. [N.J.A.C. 7:27-22.6(a)]	Monitored by visual determination upon occurrence of event, based on an instantaneous determination . Monitoring shall occur for each period of inactive use of the tank. [N.J.A.C. 7:27-22.16(a)].	None.	None.
2	The permittee shall follow written operating, inspection, and maintenance instructions prepared in accordance with Department guidelines when using any VOC in an open top tank or surface cleaner. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	The permittee shall maintain a training program to ensure that all personnel associated with the use or operation of the open top tank or surface cleaner understand and follow the procedures specified in the Operating, Inspection, and Maintenance Instructions. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
4	The permittee shall maintain copies of the Operating, Inspection, and Maintenance Instructions at the open top tank or surface cleaner. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
5	Solvent must contain less than 5% by weight of any combination of methylene chloride, perchloroethylene, 1,1,1-trichloroethane, carbon tetrachloride and chloroform. [40 CFR 63.Subpart(T)]	Other: At the time of filling, confirm by MSDS or bill of lading[40 CFR 63.Subpart(T)].	None.	None.
6	The following provisions (Ref. #2 through 7) shall apply to a cold cleaning machine, that uses two gallons or more of solvents containing greater than five percent VOC content by weight for the cleaning of metal parts, and to any heated cleaning machine. [N.J.A.C. 7:27-16.6(j)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	<p>No person shall add solvent to a cold cleaning machine or a heated cleaning machine, or cause, suffer, allow, or permit the machine to be operated, unless the following requirements are met:</p> <p>i. If the machine is an immersion cold cleaning machine or heated cleaning machine, it shall have:</p> <p>(1) A freeboard ratio of 0.75 or greater; and</p> <p>(2) A visible fill line and a high level liquid mark;</p> <p>ii. The machine shall have a permanent, conspicuous label placed in a prominent location on the machine setting forth the applicable provisions of the operating requirements in N.J.A.C. 7:27-16.6(j)2 below (Ref.#3 through 5); and</p> <p>iii. The machine shall be equipped with:</p> <p>(1) A tightly fitting working-mode cover that completely covers the machine's opening and that shall be kept closed at all times except when parts are being placed into or being removed from the machine or when solvent is being added or removed. For a remote reservoir cold cleaning machine which drains directly into the solvent storage reservoir, a perforated drain with a diameter of not more than six inches shall constitute an acceptable cover; and</p> <p>(2) If the machine is a heated cleaning machine, a thermostat. [N.J.A.C. 7:27-16.6(j)1]</p>	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	<p>A person shall operate a cold cleaning machine or a heated cleaning machine in accordance with the following procedures:</p> <p>i. The solvent level in the machine shall not exceed the fill line when there are no parts in the machine for cleaning and shall not exceed the high level liquid mark during cleaning operations;</p> <p>ii. Flushing of parts with a solvent spray, using a spray head attached to a flexible hose or other flushing device, shall be performed only within the freeboard area of the machine. The solvent spray shall be a continuous fluid stream, not an atomized or shower spray, and shall be under a pressure that does not exceed ten pounds per square inch gauge;</p> <p>iii. Parts being cleaned shall be drained for at least 15 seconds or until dripping ceases, whichever is longer. Parts having cavities or blind holes shall be tipped or rotated while the part is draining. During the draining, tipping or rotating, the parts shall be positioned so that solvent drains directly back into the machine. [N.J.A.C. 7:27-16.6(j)2i, ii] and. [N.J.A.C. 7:27-16.6(j)2iii]</p>	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	<p>A person shall operate a cold cleaning machine or a heated cleaning machine in accordance with the following procedures:</p> <p>iv. When the machine's cover is open, the machine shall not be exposed to drafts greater than 40 meters per minute (132 feet per minute), as measured between one and two meters (between 3.3 and 6.6 feet) upwind and at the same elevation as the tank lip;</p> <p>v. Sponges, fabric, leather, paper products and other absorbent materials shall not be cleaned in the machine;</p> <p>vi. When a pump-agitated solvent bath is used, the agitator shall be operated to produce a rolling motion of the solvent with no observable splashing of solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used;</p> <p>vii. Spills during solvent transfer and use of the machine shall be cleaned up immediately, and the wipe rags or other sorbent material used shall be immediately stored in covered containers for disposal or recycling;</p> <p>viii. Waste solvent shall be collected and stored in a closed container. The closed container may contain a device that allows pressure relief, provided that it does not allow liquid solvent to drain from the container. [N.J.A.C. 7:27-16.6(j)2iv through vii] and. [N.J.A.C. 7:27-16.6(j)2viii]</p>	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	A person shall operate a cold cleaning machine or a heated cleaning machine in accordance with the following procedures: ix. Work area fans shall be located and positioned so that they do not blow across the opening of the degreaser unit; and x. If the machine is a heated cleaning machine, the solvent shall be maintained at a temperature that is below its boiling point. [N.J.A.C. 7:27-16.6(j)2ix] and [N.J.A.C. 7:27-16.6(j)2x]	None.	None.	None.
11	A person shall not use, in a cold cleaning machine or a heated cleaning machine, any solvent that has a vapor pressure of one millimeter of mercury or greater, measured at 20 degrees centigrade (68 degrees Fahrenheit). [N.J.A.C. 7:27-16.6(j)3]	None.	None.	None.



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
12	<p>A person who owns or operates a cold cleaning machine or a heated cleaning machine shall maintain, for not less than two years after the date of purchase of solvent for use in the machine, the information specified below and shall, upon the request of the Department or its representative, provide the information to the Department:</p> <ul style="list-style-type: none"> <li>i. The name and address of the person selling the solvent. An invoice, bill of sale, or a certificate that corresponds to a number of sales, if it has the seller's name and address on it, may be used to satisfy this requirement;</li> <li>ii. A list of VOC(s) and their concentration information in the solvent;</li> <li>iii. Information about each VOC listed pursuant to ii above. A Material Safety Data Sheet (MSDS) may be used to satisfy this requirement;</li> <li>iv. The solvents product number assigned by the manufacturer; and</li> <li>v. The vapor pressure of the solvent measured in millimeters of mercury at 20 degrees centigrade (68 degrees Fahrenheit). [N.J.A.C. 7:27-16.6(j)4i through iv] and. [N.J.A.C. 7:27-16.6(j)4v]</li> </ul>	None.	Other: Maintain readily available records for two years[N.J.A.C. 7:27-16.6(j)4].	None.

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Subject Item: IS4 Diesel Tanks (2)

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Sulfur Content in Fuel <= 15 Parts per Million. No person shall use fuel that contains sulfur in excess of the applicable parts per million by weight set forth in N.J.A.C. 7:27-9 Table 1B (effective July 1, 2016) for Zone 1 (Atlantic County). [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.
2	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 the fuel was stored in New Jersey may be stored, offered for sale, sold, delivered or exchanged in trade, for use in New Jersey, after the effective date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(a)]	None.	None.	None.
3	Tank contents limited to diesel fuel and/or upto B20 biodiesel fuels. [N.J.A.C. 7:27-22.16(a)]	Other: Tank contents. Per Delivery.[N.J.A.C. 7:27-22.16(o)].	Recordkeeping by invoices / bills of lading once per bulk fuel shipment. Invoice or Bill of Lading shall show the material name and description. [N.J.A.C. 7:27-22.16(o)]	None.
4	The operating temperature shall not be greater than 350 degrees F. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
5	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. 7:27-22.16(a)]	None.	None.	None.
6	The tank shall have no visible emissions, exclusive of water vapor, to the outdoor atmosphere. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
7	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. 7:27-22.16(a)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	The tank shall not qualify for 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. 7:27-22.16(a)]	None.	None.	None.
9	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. 7:27-22.16(a)]	None.	None.	None.
10	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. 7:27-22.16(a)]	None.	None.	None.
11	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 #9 above and (3) attests that the tank is in compliance with all other applicable State or federal air pollution requirements. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

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**Subject Item:** IS5 Emergency Diesel Generators (2), 64 HP, subject to 40 CFR Subpart IIII (<1 MM Btu/hr) @ fuel island & scale office

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	Sulfur Content in Fuel <= 15 Parts per Million. No person shall use fuel that contains sulfur in excess of the applicable parts per million by weight set forth in N.J.A.C. 7:27-9 Table 1B (effective July 1, 2016) for Zone 4 (Atlantic County). [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.
3	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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.
4	Generator fuel limited to diesel fuel and/or up to B20 biodiesel fuels. [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
5	<p>This emergency generator shall not be used:</p> <p>1. 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" as defined in the EPA's Air Quality Index at <a href="http://airnow.gov/">http://airnow.gov/</a>, as supplemented or amended and incorporated herein by reference, 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's air quality permitting 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>2. 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>	None.	None.	None.
6	The Permittee shall, once per month, record the total operating time from the generator's hour meter if maximum rated output is 37 kW or greater. [N.J.A.C. 7:27-19.11]	Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-22.16(o)]	Other: The Permittee shall maintain on site and record in a log book or computer data system the total operating time from the generator's hour meter. Once per month.[N.J.A.C. 7:27-19.11].	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	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: Region II, Director, Air and Waste Management Division, US Environmental Protection Agency, 21st Floor, 290 Broadway, New York, NY 1007. [40 CFR 60.4(a)]	None.	None.	Submit a report: As per the approved schedule to EPA region II as required by 40 CFR 60. [40 CFR 60.4(a)]
8	Copies of all information submitted to EPA pursuant to 40 CFR Part 60, must be submitted to the appropriate Regional Enforcement Office of NJDEP. [40 CFR 60.4(b)]	None.	None.	Submit a report: Other To the approved Regional Enforcement Office of NJDEP as required by 40 CFR 60. [40 CFR 60.4(b)]
9	Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification as follows:  1) A notification of the date construction (or reconstruction as defined under 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. 2) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date. 3) A 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 in 60.14(e). [40 CFR 60.7(a)]	None.	None.	Submit notification: Other. As required by 40 CFR 60 to EPA Region II. [40 CFR 60.7(a)]

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	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.
11	The owner or operator shall notify the Administrator of the proposed replacement of components. [40 CFR 60.15]	None.	None.	Submit notification: Other. The notification shall include information listed under 40 CFR Part 60.15(d). The notification shall be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced. [40 CFR 60.15(d)]
12	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.
13	NO <sub>x</sub> (Total) ≤ 6.9 grams/brake horsepower-hour. Emission standards for stationary pre-2007 model year engines with a displacement of <10 liter per cylinder. [40 CFR 60.4205(a)]	None.	Other: The owner or operator of a pre 2007 model year engine must keep documentation and records of engine manufacture data and control device vendor data demonstrating compliance with the emission standards, for the same model year and maximum engine power.[40 CFR 60.4211].	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	Emergency generators may be operated for the purpose of maintenance checks and readiness testing limited to 100 hours per year, provided those tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. [40 CFR 60.4211(e)]	The owner or operator of an emergency stationary internal combustion engine must install a non-resettable hour meter prior to startup of the engine. Monitored by hour/time monitor continuously. [40 CFR 60.4209(a)]	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 size of the engine 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 60.4202, applicable to non-emergency engines, in the applicable model year. Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [40 CFR 60.4214(b)]	None.
15	The emergency generators may be operated in emergency situations as defined in 40 CFR 60.4219. For emergency engines not meeting emission standards in 40 CFR 60.4202, any operation other than emergency operation and maintenance and testing as permitted in 40 CFR 60.4211 (e), is prohibited. [40 CFR 60.4211(e)]	Monitored by hour/time monitor continuously. The owner or operator of an emergency stationary internal combustion engine must install a non-resettable meter prior to the startup of the engine. [40 CFR 60.4209(a)]	None.	None.
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 fuel oil 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 once per bulk fuel shipment. The owner of 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.



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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 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 (b) that contains the following per gallon standards: 15 ppm (0.00155 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 fuel oil 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 once per bulk fuel shipment. The owner of 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.

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

**Subject Item: IS6 Propane Heaters**

<b>Ref.#</b>	<b>Applicable Requirement</b>	<b>Monitoring Requirement</b>	<b>Recordkeeping Requirement</b>	<b>Submittal/Action Requirement</b>
1	Opacity: No visible emissions except for a period of not longer than three minutes in any consecutive 30-minute period (applicable to indirect heat exchangers). [N.J.A.C. 7:27- 3.2(a)]	Other: Periodic visual inspections.[N.J.A.C. 7:27-22.16(o)].	None.	None.
2	Particulate Emissions <= 0.5 lb/hr as determined in the Table at N.J.A.C. 7:27-4.2(a). [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
3	Fuel is limited to propane. [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**

**Subject Item:** IS7 Hot Water Heater

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No visible emissions except for a period of not longer than three minutes in any consecutive 30-minute period. [N.J.A.C. 7:27-3.2(a)] & [N.J.A.C. 7:27- 3.2(c)]	None.	None.	None.
2	Fuel limited to natural gas. [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**

**Subject Item:** IS8 Small Kerosene Torpedo Heaters(6)

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity: No visible emissions except for a period of not longer than three minutes in any consecutive 30-minute period (applicable to indirect heat exchangers). [N.J.A.C. 7:27- 3.2(a)]	Opacity: Monitored by ic visual inspections.[N.J.A.C. 7:27-22.16(o)].	None.	None.
2	Particulate Emissions <= 0.3 lb/hr as determined in the Table at N.J.A.C. 7:27-4.2(a). [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
3	Sulfur Content in Fuel <= 15 Parts per Million. No person shall use fuel that contains sulfur in excess of the applicable parts per million by weight set forth in N.J.A.C. 7:27-9 Table 1B (effective July 1, 2016) for Zone 4 (Atlantic County). [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	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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.
5	Torpedo heater fuel is limited to kerosene.. [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**

**Subject Item:** IS9 Diesel Engine for Vermeer TR626 (powering U102 equipment and < 1 MMBtu/hr max. heat input rate)

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Summary of Applicable Federal Requirements: 40 CFR 60 Subpart A 40 CFR 60 Subpart III. [None]	None.	None.	None.
2	Opacity <= 20 % , exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
3	Sulfur Content in Fuel <= 15 ppmw (0.0015% by weight). [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records per delivery showing fuel sulfur content. [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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.
5	Engine fuel limited to diesel. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
6	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. (NSPS Subpart A) [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)]
7	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. (NSPS Subpart A) [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. [40 CFR 60.4(b)]

IS9 Diesel Engine for Vermeer TR626 (powering U102 equipment and &lt; 1 M

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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>
8	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. (NSPS Subpart A) [40 CFR 60.12]	None.	None.	None.
9	The owner or operator shall notify the Administrator of the proposed replacement of components, upon triggering reconstruction as defined at 40 CFR 60.15. (NSPS Subpart A) [40 CFR 60.15]	None.	None.	Submit notification: At a common schedule agreed upon by the operator and the Administrator. The notification shall include information listed under 40 CFR Part 60.15(d). The notification shall be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced. [40 CFR 60.15(d)]
10	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. (NSPS Subpart A) [40 CFR 60.19]	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
11	The owner or operator of a 2014 and later model year non-emergency CI ICE with a displacement of < 10 liters per cylinder and a maximum engine power $100 \leq \text{HP} < 175$ ( $75 \leq \text{kW} < 130$ ) must comply with the certification emissions standards in in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104 (interim provisions), 40 CFR 1039.105 (smoke standards), 40 CFR 1039.107, and 40 CFR 1039.115, for the same model year and maximum engine power as follows: NMHC $\leq 0.19$ g/KW-hr, NO <sub>x</sub> $\leq 0.40$ g/KW-hr, CO $\leq 5.0$ g/KW-hr, PM $\leq 0.02$ g/KW-hr. (NSPS Subpart IIII) [40 CFR 60.4204(b)]	Other: The owner or operator of a 2007 model year or later engine must review manufacturer certification showing compliance with the applicable emission standards, for the same model year and maximum engine power, once initially. [40 CFR 60.4211].	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.
12	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 over the entire life of the engine. (NSPS Subpart IIII) [40 CFR 60.4206]	Other: The owner or operator shall review the emission-related manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [40 CFR 60.4206].	Other: The owner or operator shall keep the manufacturer's emission-related written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, 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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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	Beginning October 1, 2010, the CI internal combustion engines with a displacement of less than 30 liters per cylinder subject to 40 CFR 60 Subpart 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(b) subject to 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, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. (NSPS Subpart IIII) [40 CFR 60.4207(b)]	Monitored by review of fuel delivery records once per bulk fuel shipment. For each diesel fuel 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, or 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 used 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.
14	The owner or operator that must comply with the emission standards specified in 40 CFR 60 Subpart IIII must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator must also meet the requirements of 40 CFR parts 89, 94 and/or 1068 (General Compliance Provisions), as applicable. (NSPS Subpart IIII) [40 CFR 60.4211(a)]	Other: The owner or operator shall review the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, once initially. [40 CFR 60.4211(a)].	Other: The owner or operator shall keep the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [40 CFR 60.4211(a)].	None.



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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
15	The owner or operator of a 2007 model year and later stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder complying with the emission standards specified in 40 CFR 60.4204(b), must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(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. If the owner/operator does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or you change emission related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as prescribed in 40 CFR 60.4211(g). (NSPS Subpart IIII) [40 CFR 60.4211(c)]	Other: The owner or operator must review documentation once initially from the manufacturer that the engine is certified to meet the emission standards as applicable, for the same model year and maximum engine power. [40 CFR 60.4211(c)].	Other: The owner or operator must keep documentation for the life of the equipment from the manufacturer that the engine is certified to meet the emission standards as applicable, for the same model year and maximum engine power. [40 CFR 60.4211(c)].	None.
16	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. (MACT Subpart ZZZZ) [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**

**Subject Item:** GR1 NSPS A, 40 CFR 62 Subpart OOO, MACT A, MACT AAAA and NESHAP Subpart M

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	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. (NSPS Subpart A) [40 CFR 60.4(a)]	None.	None.	Submit a report: As per the approved schedule to EPA Region II as required by 40 CFR 60. [40 CFR 60.4(a)]
2	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. (NSPS Subpart A) [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. [40 CFR 60.4(b)]
3	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. (NSPS Subpart A) [40 CFR 60.7(b)]	None.	Recordkeeping by manual logging of parameter upon occurrence of event. The records should be kept in a permanent form suitable for inspections. [40 CFR 60.7(b)]	None.
4	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. (NSPS Subpart A) [40 CFR 60.8(b)]	None.	None.	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	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 be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. (NSPS Subpart A) [40 CFR 60.8(c)]	None.	None.	None.
6	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). (NSPS Subpart A) [40 CFR 60.8(d)]	None.	None.	None.
7	Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. (NSPS Subpart A) [40 CFR 60.8(f)]	None.	None.	None.
8	Compliance with NSPS standards specified in this permit, other than opacity, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in NSPS. (NSPS Subpart A) [40 CFR 60.11(a)]	None.	None.	None.
9	The owner or operator shall demonstrate compliance with NSPS opacity standards specified in 40 CFR Part 60. (NSPS Subpart A) [40 CFR 60.11(b)]	Other: Monitoring and demonstration of compliance shall be by Method 9 or Method 22. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours for the performance test.[40 CFR 60.11(b)].	Other: The owner or operator shall maintain records of opacity of emissions based on approval of alternative method. [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 to the Administrator for approval an alternative method to demonstrate compliance and data shall be submitted based on alternative approved method. [40 CFR 60.11(e)(2)]

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	The NSPS opacity standard shall apply at all times except during periods of startup, shutdown, malfunctions and as otherwise specified in this permit. (NSPS Subpart A) [40 CFR 60.11(c)]	None.	None.	None.
11	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. (NSPS Subpart A) [40 CFR 60.11(d)]	None.	None.	None.
12	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. (NSPS Subpart A) [40 CFR 60.12]	None.	None.	None.
13	Flares shall be designed for, and operated with, no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. (NSPS Subpart A) [40 CFR 60.18(c)(1)]	Monitored by visual determination once initially, based on a 2 hour period. Compliance shall be determined using Method 22 [40 CFR 60.18(f)(1)]	None.	None.

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14	Flares shall be operated with a flame present at all times. (NSPS Subpart A) [40 CFR 60.18(c)(2)]	Monitored by flame monitor continuously, based on an instantaneous determination. The owner or operator may also use any other equivalent device to detect the presence of a flare flame. [40 CFR 60.18(f)(2)]	None.	None.
15	The net heating value, Ht, [as calculated using the equation in 40 CFR Part 60.18(f)(3)] of the gas being combusted in a non-assisted flare shall be 200 Btu/SCF or greater. (NSPS Subpart A) [40 CFR 60.18(c)(3)]	Monitored by calculations once initially. The net heating value of the gas being combusted in a flare shall be calculated using the equation in 40 CFR Part 60.18(f)(3). [40 CFR 60.18(f)(3)]	None.	None.
16	Steam assisted or non-assisted flare shall be designated and operated with an exit velocity, V actual, being less than 60 ft/sec. (NSPS Subpart A) [40 CFR 60.18(c)(4)(i)]	Monitored by calculations once initially. The actual exit velocity, V actual, of the flare shall be determined by dividing volumetric flowrate (as determined by Reference Methods 2, 2A, 2C or 2D) by the unobstructed cross sectional area of the flare tip. [40 CFR 60.18(f)(4)]	None.	None.
17	Flares used to comply with the provisions of 40 CFR Part 60 Subpart A, shall monitor these control device to ensure that they operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how the owner or operator shall monitor the Flare as a control device. (NSPS Subpart A) [40 CFR 60.18(d)]	Other: The owner or operator shall monitor the flare as specified in the applicable subpart(s) of 40 CFR Part 60. [40 CFR 60.18(d)].	None.	None.
18	Flares used to comply with the provisions of 40 CFR Part 60 Subpart A, shall be operated at all times when emissions may be vented to them. (NSPS Subpart A) [40 CFR 60.18(e)]	None.	None.	None.
19	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. (NSPS Subpart A) [40 CFR 60.19]	None.	None.	None.

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20	The owner or operator of an MSW landfill with NMOC emission rate greater than or equal to 34 megagrams per year must collect and control MSW landfill emissions. (40 CFR 62 Subpart OOO) [40 CFR 62.16714(a)(3)]	None.	None.	None.
21	Install a collection and control system that captures the gas generated within the landfill as required by 40 CFR 62.16714(b)(2) or (3) and 40 CFR 62.16714(c) within 30 months after the first annual report in which the emission rate equals or exceeds 50 megagrams per year. The date will be March 31 2011. (40 CFR 62 Subpart OOO) [40 CFR 62.16714(b)]	Other: The owner or operator shall determine whether the gas collection system is in compliance with 40 CFR 62.16714(b) using procedures in 40 CFR 62.16720(a)(1) through (a)(3).[40 CFR 62.16720(a)].	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator must keep up-to-date, readily accessible records for the life of the control system of the data in 40 CFR 62.16726(b)(1) through (b)(5) as measured during the initial performance test or compliance demonstration. Records of subsequent tests or monitoring must be maintained for a minimum of 5 years. Records of the control device vendor specifications must be maintained until removal. [40 CFR 62.16726(b)]	Submit a report: Annually. The report shall include all the information required in 40 CFR 62.16724(h)(1) through (h)(7). The initial annual report shall be submitted no later than one year after the most recent annual report submitted under NSPS Subpart WWW. [40 CFR 62.16724(h)]

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22	Control the gas collected from within the landfill through the use of either: (1) An open (non-enclosed) flare designed and operated in accordance with the parameters established in 40 CFR 60.18 except as noted in 40 CFR 62.16722(d); or (2) A control system designed and operated to reduce NMOC by 98 weight percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen; (3) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use. Venting of treated landfill gas to the ambient air is not allowed. The treated landfill gas that cannot be routed for subsequent sale or beneficial use and all emissions from any atmospheric vent from the gas treatment system must be controlled according to either (1) or (2) above. All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of 40 CFR 62.16714(b) and (c). (40 CFR 62 Subpart OOO) [40 CFR 62.16714(c)]	Monitored by stack emission testing once initially. The owner or operator shall demonstrate compliance by the performance tests required in 40 CFR 62.16714(c)(1) and (2) using test methods in 40 CFR 62.16718(e) for an enclosed flare or 40 CFR 62.16718(d) for an open flare, as applicable. The initial performance test is to be completed no later than 180 days after the initial startup of the approved control system. [40 CFR 62.16718(e)] and. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by stack test results once initially. The owner or operator must keep up-to-date, readily accessible records for the life of the control system of the data in 40 CFR 62.16726(b)(1) through (b)(5) as measured during the initial performance test or compliance demonstration. [40 CFR 62.16726(b)]	None.
23	The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in 40 CFR 62.16722. (40 CFR 62 Subpart OOO) [40 CFR 62.16714(c)(2)(ii)]	None.	None.	None.

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24	The collection and control system may be capped, removed or decommissioned if (1) The landfill is closed and a closure report has been submitted to the Administrator; (2) The collection system has been in operation a minimum of 15 years and (3) The calculated NMOC emission rate based on the procedures specified in 40 CFR 62.16718(b) is less than 34 Megagrams (37.5 tons) per year on three successive test dates. (40 CFR 62 Subpart OOO) [40 CFR 62.16714(f)]	Monitored by calculations upon occurrence of event. The owner or operator must calculate the NMOC emission rate in accordance with 40 CFR 62.16718(b) based on the measurements of the total flow rate and the average NMOC concentration. The test dates must be no less than 90 days apart, and no more than 180 days apart, per 40 CFR 62.16714(f). [40 CFR 62.16718(b)]	None.	Submit a report: Upon occurrence of event. The owner or operator of a controlled landfill must submit an equipment removal report 30 days prior to removal or cessation of operation of the control equipment. The equipment removal report must contain all of the following items described under 40 CFR 62.16724(g)(1)(i) through (1)(iii), such as closure report; initial performance test report; and dated copies of three successive NMOC rate reports. The Administrator may request such additional information as may be necessary to verify that all of the conditions for removal in 40 CFR 62.16714(f) have been met. [40 CFR 62.16724(g)]
25	The collection system shall be operated such that gas is collected from each area, cell, or group of cells in the MSW Landfill in which solid waste has been in place for: (1) 5 years or more if active; or (2) 2 years or more if closed or at final grade. (40 CFR 62 Subpart OOO) [40 CFR 62.16716(a)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator must keep for at least 5 years up-to-date, readily accessible, on-site records of the design capacity report that triggered 40 CFR 62.16714(e), the current amount of solid waste in place, and the year-by-year waste acceptance rate. Off-site records may be maintained if they are retrievable within 4 hours. Either paper copy or electronic formats are acceptable. [40 CFR 62.16726(a)]	Demonstrate compliance: As per the approved schedule. The owner or operator must operate the collection system in accordance with an approved collection and control system design plan. [40 CFR 62.16724(d)]



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26	The owner or operator must operate the collection system with negative pressure at each wellhead, except under the following conditions: (1) A fire or increased well temperature. The owner or operator must record instances when positive pressure occurs in efforts to avoid a fire. These records must be submitted with the required annual reports. (2) Use of a geomembrane or synthetic cover. The owner or operator must develop acceptable pressure limits in the design plan. (3) A decommissioned well. A well may experience a static positive pressure after shut down to accommodate for declining flows. (40 CFR 62 Subpart OOO) [40 CFR 62.16716(b)]	Monitored by pressure measurement device each month during operation. For the purpose of demonstrating whether the gas collection system flow rate is sufficient to determine compliance with 40 CFR 62.16714(b)(2)(iii), the owner or operator shall measure gauge pressure in the gas collection header at each individual well, monthly.[40 CFR 62.16720(a)(3)] and. [40 CFR 62.16722(a)(1)]	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The owner or operator must keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 60.753, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. For each root cause analysis for which corrective action is required, keep records in accordance with 40 CFR 62.16726(e)(4)-(6). [40 CFR 62.16726(e)]	Comply with the requirement: Upon occurrence of event. If a positive pressure exists, action shall be initiated to correct the exceedance within 5 calendar days, except for the three conditions allowed under 40 CFR 62.16716(b). Any attempted corrective measure shall not cause exceedances of other operational or performance standards. If negative pressure cannot be achieved without excess air infiltration within 15 calendar days of the first measurement of positive pressure, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable, but not later than 60 days after positive pressure was first measured. If corrective actions cannot be fully implemented within 60 days following the positive pressure measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of positive pressure. The owner or operator must submit the items listed in 40 CFR 62.16724(h)(7) as part of the next annual report. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to 40 CFR 62.16724(h)(7) and (k). [40 CFR 62.16720(a)(3)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
27	<p>The owner or operator must operate the collection system so that the methane concentration is less than 500 parts per million above background at the surface of the landfill. To determine if this level is exceeded, the owner or operator shall conduct surface testing using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 62.16720(d), around the perimeter of the collection area and along a pattern that traverses the landfill at no more than 30 meter intervals and where visual observations indicate elevated concentrations of landfill gas, such as distressed vegetation and cracks or seeps in the cover and all cover penetrations. Thus, the owner or operator must monitor any openings that are within an area of the landfill where waste has been placed and a gas collection system is required. The owner or operator may establish an alternative traversing pattern that ensures equivalent coverage. A surface monitoring design plan shall be developed that includes a topographical map with the monitoring route and the rationale for any site-specific deviations from the 30 meter intervals. Areas with steep slopes or other dangerous areas may be excluded from the surface testing. (40 CFR 62 Subpart OOO) [40 CFR 62.16716(d)]</p>	<p>Monitored by periodic emission monitoring quarterly: once per quarter; quarters shall begin on January 1, April 1, July 1, and October 1 of each year. Monitor surface concentrations of methane along the entire perimeter of the collection area and along a pattern that traverses the landfill at no more than 30 meter intervals (or a site specific established spacing) for each collection area using an organic vapor analyzer, flame ionization detector, or other portable monitor meeting the specifications provided in 40 CFR 62.16716(d). The background concentration must be determined by moving the probe inlet upwind and downwind outside the boundary of the landfill at a distance of at least 30 meters from the perimeter wells. Surface emission monitoring must be performed in accordance with section 8.3.1 of EPA Method 21 of appendix A-7 of 40 CFR 60, except that the probe inlet must be placed within 5 to 10 centimeters of the ground. Monitoring must be performed during typical meteorological conditions. [40 CFR 62.16720(c)]</p>	<p>Recordkeeping by manual logging of parameter or storing data in a computer data system quarterly: once per quarter; quarters shall begin on January 1, April 1, July 1, and October 1 of each year. Any reading of 500 ppm or more above background must be recorded as a monitored exceedance and the actions specified in 40 CFR 62.16720(c)(4)(i) through (v) must be taken. The owner or operator must keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 62.16716, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance. [40 CFR 62.16720(c)(4)] and . [40 CFR 62.16726(e)(1)]</p>	<p>Demonstrate compliance: Upon occurrence of event. Any reading of 500 parts per million or more above background at any location must be recorded as a monitored exceedance and the actions specified in (i) through (v) below must be taken. As long as the specified actions are taken, the exceedance is not a violation of the operational requirements of 40 CFR 62.16716(d). (i) The location of each monitored exceedance must be marked, and the location and concentration recorded. (ii) Cover maintenance or adjustments to the vacuum of the adjacent wells to increase the gas collection in the vicinity of each exceedance must be made and the location must be re-monitored within 10 calendar days of detecting the exceedance. (iii) If the re-monitoring of the location shows a second exceedance, additional corrective action must be taken and the location must be monitored again within 10 days of the second exceedance. If the re-monitoring shows a third exceedance for the same location, the action in (v) must be taken. (iv) Any location that initially showed an exceedance but has a methane concentration less than 500 ppm methane above background at the 10-day re-monitoring, must be re-monitored 1 month from the initial exceedance. If the 1-month re-monitoring shows a concentration less than 500 ppm above background, no further monitoring of that location is required until the next quarterly monitoring period. If the 1-month re-monitoring shows an exceedance, the actions specified in (iii) or (v) must be taken. . [40 CFR 62.16720(c)(4)]</p>

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28	CONTINUATION OF SUBMITTAL/ACTION REQUIREMENT FOR 40 CFR 62.16716(d) APPLICABLE REQUIREMENT. [None]	None.	None.	Demonstrate compliance: Upon occurrence of event (v) For any location where monitored methane concentration equals or exceeds 500 ppm above background three times within a quarterly period, a new well or other collection device must be installed within 120 calendar days of the initial exceedance. An alternative remedy to the exceedance, such as upgrading the blower, header pipes or control device, and a corresponding timeline for installation may be submitted to the Administrator for approval. [40 CFR 62.16720(c)(4)]
29	The owner or operator shall operate the collection system such that all collected gases are vented to a control system designed and operated in compliance with 40 CFR 62.16714(c). (40 CFR 62 Subpart OOO) [40 CFR 62.16716(e)]	None.	None.	Comply with the requirement: As per the approved schedule. In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within 1 hour. [40 CFR 62.16716(e)]
30	The owner or operator shall operate the control system at all times when the collected gas is routed to the system. (40 CFR 62 Subpart OOO) [40 CFR 62.16716(f)]	None.	None.	None.
31	If monitoring demonstrates that the operational requirements in 40 CFR 62.16716(b), (c) or (d) are not met, corrective action shall be taken as specified in 40 CFR 62.16720(a)(3) and (5) or 40 CFR 62.16720(c). If corrective actions are taken as specified in 40 CFR 62.16720, the monitored exceedance is not a violation of the operational requirements in this section. (40 CFR 62 Subpart OOO) [40 CFR 62.16716(g)]	None.	None.	None.

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32	The provisions of 40 CFR 62 Subpart OOO apply at all times, including periods of startup, shutdown, or malfunction. During periods of startup, shutdown, and malfunction, you must comply with the work practice specified in 40 CFR 62.16716(e) in lieu of the compliance provisions in 40 CFR 62.16720. (40 CFR 62 Subpart OOO) [40 CFR 62.16720(e)]	None.	None.	None.
33	The nitrogen or oxygen concentration in the landfill gas at each wellhead shall be monitored on a monthly basis. (40 CFR 62 Subpart OOO) [40 CFR 62.16722(a)(2)]	<p>Other: The nitrogen level must be determined using EPA Method 3C of appendix A-2 of 40 CFR part 60, unless an alternative test method is established as allowed by 40 CFR 62.16724(d)(2).</p> <p>Unless an alternative test method is established as allowed by 40 CFR 62.16724(d)(2), the oxygen level must be determined by an oxygen meter using EPA Method 3A of appendix A-7 of 40 CFR part 60, EPA Method 3C of appendix A-7 of 40 CFR part 60, or ASTM D6522-11 except that: (A) The span must be set between 10- and 12-percent oxygen; (B) A data recorder is not required; (C) Only two calibration gases are required, a zero and span; (D) A calibration error check is not required; and (E) The allowable sample bias, zero drift, and calibration drift are <math>\pm 10</math> percent.</p> <p>A portable gas composition analyzer may be used to monitor the oxygen levels provided: The analyzer is calibrated and the analyzer meets all quality assurance and quality control requirements for EPA Method 3A or ASTM D6522-11.[40 CFR 62.16722(a)(2)].</p>	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. Keep records of each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent. [40 CFR 62.16726(e)(2)]	None.

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34	The owner or operator must calibrate, maintain, and operate according to manufacturer's specifications, a temperature monitoring device to monitor the gas combustion temperature at an enclosed combustor. (40 CFR 62 Subpart OOO) [40 CFR 62.16722(b)(1)]	Monitored by temperature instrument continuously. The temperature monitoring device shall have a minimum accuracy of +/- 1 percent of the temperature being measured expressed in degrees Celsius or +/- 0.9 degrees Fahrenheit, whichever is greater. [40 CFR 62.16722(b)(1)]	Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. Each 3 hour period of operation during which the average temperature is more than 28 degrees Celsius below the average combustion temperature during the most recent performance test at which compliance with 40 CFR 62.16714(c) was determined shall be recorded as an exceedance. [40 CFR 62.16722(b)(1)] & [40 CFR 62.16726(c)(1)(i)]	Submit a report: Annually. The annual report must include the value and length of time for each exceedance of operating temperature. [40 CFR 62.16724(h)(1)]
35	The owner or operator must install, calibrate, and maintain a gas flow rate measuring device that measures and records the flow to the enclosed combustor and bypass of the control device (if applicable) at least every 15 minutes. The owner or operator shall secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line. (40 CFR 62 Subpart OOO) [40 CFR 62.16722(b)(2)]	Monitored by gas flow rate instrument each quarter hour during operation. [40 CFR 62.16722(b)(2)(i)]	Recordkeeping by data acquisition system (DAS) / electronic data storage each quarter hour during operation. The owner or operator shall keep up-to-date, readily accessible continuous records of the indication of flow to the control system and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines. [40 CFR 62.16722(b)(2)(i)] & [40 CFR 62.16726(c)(2)]	Submit a report: Annually. The annual report must include a description and duration of all periods when the gas stream was diverted from the control device or a treatment system through a bypass line or the indication of bypass flow as specified under 40 CFR 62.16722. [40 CFR 62.16724(h)(2)]
36	For an open flare, the owner or operator must install, calibrate, maintain, and operate according to manufacturer's specifications, a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. (40 CFR 62 Subpart OOO) [40 CFR 62.16722(c)(1)]	Monitored by flame monitor continuously. [40 CFR 62.16722(c)(1)]	Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. The owner or operator must keep up to date, readily accessible continuous records of the flame or flare pilot flame monitoring specified under 40 CFR 62.16722(c), and records of all periods of operation in which the flame of flare pilot flame is absent. [40 CFR 62.16726(c)(4)]	None.

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37	The owner or operator must install, calibrate, and maintain a gas flow rate measuring device that measures and records the flow to the open flare and bypass of the control device (if applicable) at least every 15 minutes. The owner or operator shall secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line. (40 CFR 62 Subpart OOO) [40 CFR 60.16722(c)(2)]	Monitored by gas flow rate instrument each quarter hour during operation. [40 CFR 62.16722(c)(2)(i)]	Recordkeeping by data acquisition system (DAS) / electronic data storage each quarter hour during operation. The owner or operator shall keep up-to-date, readily accessible continuous records of the indication of flow to the control system and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines. [40 CFR 62.16722(c)(2)(i) & [40 CFR 62.16726(c)(2)]	Submit a report: Annually. The annual report must include a description and duration of all periods when the gas stream was diverted from the control device or a treatment system through a bypass line or the indication of bypass flow as specified under 40 CFR 62.16722. [40 CFR 62.16724(h)(2)]
38	The owner or operator must maintain and operate all monitoring systems associated with the treatment system in accordance with the site-specific treatment system monitoring plan required in 40 CFR 62.16726(b)(5)(ii) and must calibrate, maintain, and operate according to manufacturer's specifications a device that records flow to the treatment system and bypass of the treatment system (if applicable). The owner or operator must install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatment system at least every 15 minutes and secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line. (40 CFR 62 Subpart OOO) [40 CFR 62.16722(g)]	Monitored by gas flow rate instrument each quarter hour during operation. [40 CFR 62.16722(g)(1)]	Recordkeeping by data acquisition system (DAS) / electronic data storage each quarter hour during operation. The owner or operator shall keep up-to-date, readily accessible continuous records of the indication of flow to the treatment system and the indication of bypass flow or records of monthly inspections of car-seals or lock-and-key configurations used to seal bypass lines. [40 CFR 62.16722(g)(1) & [40 CFR 62.16726(c)(2)]	Submit a report: Annually. The annual report must include a description and duration of all periods when the gas stream was diverted from the control device or a treatment system through a bypass line or the indication of bypass flow as specified under 40 CFR 62.16722. [40 CFR 62.16724(h)(2)]

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39	The owner or operator shall prepare a site-specific treatment system monitoring plan as specified in 40 CFR 62.16726(b)(5) (40 CFR 62 Subpart OOO) [40 CFR 62.16724(d)(7)]	Other: The owner or operator shall monitor operations of the treatment system in accordance with the site-specific treatment monitoring plan.[40 CFR 62.16726(b)(5)].	Other: The site-specific monitoring plan shall include records of the following: (A) Monitoring records of parameters that are identified in the treatment system monitoring plan and that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. At a minimum, records should include records of filtration, de-watering, and compression parameters that ensure the treatment system is operating properly for each intended end use of the treated landfill gas. (B) Monitoring methods, frequencies, and operating ranges for each monitored operating parameter based on manufacturer's recommendations or engineering analysis for each intended end use of the treated landfill gas. (C) Documentation of the monitoring methods and ranges, along with justification for their use. (D) Identification who is responsible (by job title) for data collection. (E) Processes and methods used to collect the necessary data. (F) Description of the procedures and methods that are used for quality assurance, maintenance, and repair of all continuous monitoring systems.[40 CFR 62.16726(b)(5)(ii)].	Submit a report: As per the approved schedule. The owner or operator shall submit a revised collection and control system design plan under 40 CFR 62.16724(d) to the Administrator for approval prior to installing the landfill gas treatment system. [40 CFR 62.16724(e)]
40	The owner or operator must keep for the life of the collection system an up-to-date, readily accessible plot map showing each existing and planned collector in the system and providing a unique identification location label on each collector that matches the labeling on the plot map. (40 CFR 62 Subpart OOO) [40 CFR 62.16726(d)]	None.	Other: The owner or operator must keep up-to-date, readily accessible records of the installation date and location of all newly installed collectors as specified under 40 CFR 62.16720(b).[40 CFR 62.16726(d)(1)].	None.

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41	Asbestos: As applicable asbestos waste shall be disposed of in conformance with NESHAPs in 40 CFR 61 Subpart M [40 CFR 61.154]	None.	Asbestos: Recordkeeping by manual logging of parameter or storing data in a computer data system once per batch during operation. Asbestos disposal records shall be maintained in accordance with. [40 CFR 61.154]	None.
42	For equipment subject to MACT, no owner or operator subject to the provisions of MACT Subpart A in 40 CFR 63 shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to: (1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere; and (2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions. (MACT Subpart A) [40 CFR 63.4(b)]	None.	None.	None.
43	The owner and operator must not use fragmentation or phasing of reconstruction activities (i.e., intentionally dividing reconstruction into multiple parts for purposes of avoiding new source requirements) to avoid becoming subject to new source requirements. (MACT Subpart A) [40 CFR 63.4(c)]	None.	None.	None.
44	The owner or operator of an affected source shall conduct monitoring as specified in the relevant standard, unless otherwise specified by the Administrator. (MACT Subpart A) [40 CFR 63.8(b)(1)]	None.	None.	None.



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45	After a title V permit has been issued, the owner or operator shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under 40 CFR 63. After a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this part, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard. (MACT Subpart A) [40 CFR 63.9(h)(3)]	None.	Recordkeeping by other recordkeeping method (provide description) upon occurrence of event. Notification records shall be maintained for at least 5 years following the date of each record. At minimum, the most recent two years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on a computer floppy disks, on magnetic tape disks, or on microfiche. [40 CFR 63.10(b)(1)]	Submit notification: As per the approved schedule. The notification shall be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration to NJDEP. [40 CFR 63.9(h)(3)]
46	The owner or operator shall submit all information required under 40 CFR 63 to the Regional Enforcement Office of NJDEP. In addition, per 40 CFR 63.9(a)(4)(ii), the owner or operator shall send a copy of each report submitted to NJDEP under 40 CFR 63 to Director, Division of Enforcement and Compliance Assistance, USEPA Region 2, 290 Broadway, New York, NY 10007-1866. (MACT Subpart A) [40 CFR 63.10(a)(4)(ii)]	None.	Other: The owner or operator of an affected source subject to the provisions of this part shall maintain files of all information (including all reports and notifications) required by this part recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche. [40 CFR 63.10(b)(1)].	Other (provide description): As per the approved schedule. Submit reports and notifications as required by 40 CFR 63 to EPA Region 2 and NJDEP. [40 CFR 63.13(b)]

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
47	General recordkeeping requirements. The owner or operator shall maintain files of all information (including all reports and notifications) required by 40 CFR 63 recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. The owner or operator shall maintain relevant records per 40 CFR 63.10(b)(2) and 40 CFR 63.10(c). (MACT Subpart A) [40 CFR 63.10(b)(1)]	None.	None.	None.
48	The owner or operator shall comply, as applicable, with the National Emission Standards for Hazardous Air Pollutants (NESHAPS): Municipal Solid Waste Landfill standards required in 40 CFR 63 Subpart AAAA when the calculated NMOC emission rate is equal to or greater than 50 megagrams per year. (MACT Subpart AAAA) [40 CFR 63.1935]	Other: The owner or operator shall comply, as applicable, with the monitoring requirements as required in 40 CFR 63 Subpart AAAA.[40 CFR 63].	Other: The owner or operator shall comply, as applicable, with the recordkeeping requirements as required in 40 CFR 63 Subpart AAAA.[40 CFR 63].	Comply with the requirement: As per the approved schedule The owner or operator shall comply, as applicable, with the submittal/action requirements as required in 40 CFR 63 Subpart AAAA. The owner or operator shall submit all required reports to the EPA and NJDEP Regional Enforcement Office. [40 CFR 63]

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
49	At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if the requirements of this subpart have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (MACT Subpart AAAA) [40 CFR 63.1955(c)]	None.	None.	None.
50	Except for provisions related to the temperature operational standard at 40 CFR 63.1958(c)(1), the owner or operator shall demonstrate compliance in the same way it is determined for 40 CFR Part 62, Subpart OOO, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data, collected under 40 CFR 62.16722(b)(1) [closed flare] and (c)(1) [open flare] of Subpart OOO, are used to demonstrate compliance with the operating conditions for control systems. (MACT Subpart AAAA) [40 CFR 63.1960]	Other: Monitored by continuous parameter monitoring, pursuant to 40 CFR 62.16722[40 CFR 63.1961].	Recordkeeping by strip chart or data acquisition (DAS) system continuously. [40 CFR 63.1961]	Comply with the requirement: As per the approved schedule. [40 CFR 63.1981]

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
51	Operate each interior wellhead in the collection gas system with a landfill gas temperature less than 62.8 degrees Celsius (145 degrees Fahrenheit). (MACT Subpart AAAA) [40 CFR 63.1958(c)(1)]	<p>Monitored by temperature instrument each month during operation. Install a sampling port and a thermometer, other temperature measuring device, or an access port for temperature measurements at each wellhead. The temperature measuring device must be calibrated annually using the procedures in 40 CFR 60, Appendix A-1, Method 2, Section 10.3.</p> <p>At each well with a measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit), enhanced monitoring must be initiated in accordance with the procedures at 40 CFR 63.1961(a)(5)(i)-(ix). [40 CFR 63.1961(a)(4)]</p>	<p>Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The owner or operator must keep for at least 5 years up-to-date, readily accessible records of all collection and control system exceedances of the operational standards in 40 CFR 63.1958, the reading in the subsequent month whether or not the second reading is an exceedance, and the location of each exceedance.</p> <p>The owner or operator must also keep records of each wellhead temperature monitoring value of 62.8 degrees Celsius (145 degrees Fahrenheit) or above, each wellhead nitrogen level at or above 20 percent, and each wellhead oxygen level at or above 5 percent.</p> <p>Each owner or operator required to conduct the enhanced monitoring provisions in 40 CFR 63.1961(a)(5), must also keep records of all enhanced monitoring activities.</p> <p>Each owner or operator required to submit the 24-hour high temperature report in 40 CFR 63.1981(k), must also keep a record of the email transmission.</p> <p>For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(4)(i)(A), keep a record of the root cause analysis conducted, including a description of the recommended corrective action(s) taken, and the date(s) the corrective action(s) were completed. [40 CFR 63.1983(e)]</p>	<p>Comply with the requirement: Upon occurrence of event. If a well exceeds the operating parameter for temperature, action must be initiated to correct the exceedance within 5 days. Any attempted corrective measure must not cause exceedances of other operational or performance standards. If the exceedance cannot be corrected within 15 days, the owner or operator must conduct a root cause analysis and correct the exceedance as soon as practicable but no later than 60 days after a landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit) was first measured.</p> <p>If corrective actions cannot be fully implemented within 60 days following the temperature measurement for which the root cause analysis was required, the owner or operator must also conduct a corrective action analysis and develop an implementation schedule to complete the corrective action(s) as soon as practicable, but no more than 120 days following the measurement of landfill gas temperature greater than 62.8 degrees Celsius (145 degrees Fahrenheit). [40 CFR 63.1960(a)(4)]</p>

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
52	CONTINUATION OF RECORDKEEPING AND SUBMITTAL/ACTION REQUIREMENTS FOR 40 CFR 63.1958(c)(1) APPLICABLE REQUIREMENT. [None]	None.	For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(4)(i)(B), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates. For any root cause analysis for which corrective actions are required in 40 CFR 63.1960(a)(4)(i)(C), keep a record of the root cause analysis conducted, the corrective action analysis, the date for corrective action(s) already completed following the positive pressure reading or high temperature reading, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates, and a copy of any comments or final approval on the corrective action analysis or schedule from the Administrator. Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [40 CFR 63.1983(e)]	Comply with the requirement: Upon occurrence of event. If corrective action is expected to take longer than 120 days to complete after the initial exceedance, the owner or operator must submit the root cause analysis, corrective action analysis, and corresponding implementation timeline to the Administrator, according to 40 CFR 63.1981(h)(7) and (j). If a landfill gas temperature measured at either the wellhead or at any point in the well is greater than or equal to 76.7 degrees Celsius (170 degrees Fahrenheit) and the carbon monoxide concentration measured, according to the procedures in 40 CFR 63.1961(a)(5)(vi) is greater than or equal to 1,000 ppmv the corrective action(s) for the wellhead temperature standard (62.8 degrees Celsius or 145 degrees Fahrenheit) must be completed within 15 days. [40 CFR 63.1960(a)(4)]
53	For the purposes of the landfill monitoring requirements, deviations include the following items: (a) A deviation occurs when the control device operating parameter boundaries described in 40 CFR 62.16726(c)(1) of subpart OOO are exceeded. (b) A deviation occurs when 1 hour or more of the hours during the 3-hour block averaging period does not constitute a valid hour of data. A valid hour of data must have measured values for at least three 15-minute monitoring periods within the hour. (MACT Subpart AAAA) [40 CFR 63.1965]	None.	None.	None.

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Facility Specific Requirements**

<b>Ref.#</b>	<b>Applicable Requirement</b>	<b>Monitoring Requirement</b>	<b>Recordkeeping Requirement</b>	<b>Submittal/Action Requirement</b>
54	The owner or operator shall submit the report described in 40 CFR 62.16724(h) every 6 months to the Administrator. (MACT Subpart AAAAA) [40 CFR 63.1981(h)]	None.	None.	Submit a report: As per the approved schedule. The reports shall contain the information specified at 40 CFR 62.16724(h)(1)-(7). [40 CFR 63.1981(h)]
55	The owner or operator shall comply with the General Provisions of 40 CFR 63 as shown in Table 1 of 40 CFR 63 Subpart AAAAA. (MACT Subpart AAAAA) [40 CFR 63]	None.	None.	None.

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

Emission Unit: U1 Solid Waste Transfer/Storage

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Particulate Emissions <= 0.5 lb/hr based on 99% collection efficiency of the control device. [N.J.A.C. 7:27- 6.2(a)]	None.	None.	None.
2	Opacity <= 20 % , exclusive of water vapor, except for a period not longer than three minutes in any consecutive 30-minute period. [N.J.A.C. 7:27-6.2(d)] & [N.J.A.C. 7:27- 6.2(e)]	None.	None.	None.
3	The permittee shall not use the equipment in a manner which will cause visible emissions, exclusive of condensed water vapor, except for 3 minutes in any consecutive 30 minute period. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
4	Total Production Rate <= 1,950 tons/day. The Facility is allowed to process only waste types permitted by the Solid Waste Permit for Transfer Operations. [N.J.A.C. 7:27-22.16(e)]	Total Production Rate: Monitored by material feed/flow monitoring daily, based on one calendar day. [N.J.A.C. 7:27-22.16(o)]	Total Production Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system daily or automated record system daily. The Permittee shall maintain records and demonstrate compliance in accordance with the Solid Waste Regulations N.J.A.C. 7:26-2.13(a). [N.J.A.C. 7:27-22.16(e)]	None.
5	Total Production Rate <= 608,400 tons/yr based on 1950 tons/day processed. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
6	Hours of Operation: Within any operating day, the hours of operation for the transfer station/materials recovery facility shall be consistent with the requirements of the current Solid Waste Permit for transfer operations. This includes limitations on when bulky waste and construction and demolition waste may be accepted and processed. [N.J.A.C. 7:27-22.16(e)]	None.	Hours of Operation: Recordkeeping by manual logging of parameter daily or automated record system daily. [N.J.A.C. 7:27-22.16(e)]	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	All solid waste delivery vehicles shall be properly registered with the Division of Solid and Hazardous Waste pursuant to N.J.A.C. 7:26-3. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
8	The control devices for the Material Recovering Process and Transfer are the dust collectors CD1, CD2 & CD3 or equivalent. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
9	Inlet temperature to each dust collector (CD1, CD2 & CD3) <= 120 deg F. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
10	Particulates Control Efficiency of the filter, from preconstruction permit, is 99.9%. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
11	Air-to-Cloth Ratio: For each dust collector (CD1, CD2 & CD3) <= 463 ACFM/sq.ft. [N.J.A.C. 7:27-22.16(e)]	Air-to-Cloth Ratio: Monitored by documentation of construction once initially. [N.J.A.C. 7:27-22.16(o)]	None.	None.
12	Pressure Drop >= 1 and Pressure Drop <= 6.5 inches w.c. for each dust collector (CD1, CD2 & CD3). The Permittee shall perform maintenance within 24 hours after observing differential pressure higher or lower than the limit. A pressure drop of <1.0 inches w.c. is allowed for up to 3 days immediately following a filter replacement to allow for steady state operation to be achieved, from BOP140001. [N.J.A.C. 7:27-22.16(a)]	Pressure Drop: Monitored by pressure drop Instrument continuously, based on an instantaneous determination. [N.J.A.C. 7:27-22.16(e)]	Pressure Drop: Recordkeeping by manual logging of parameter each week during operation. [N.J.A.C. 7:27-22.16(e)]	None.
13	The permittee shall inspect and maintain the dust collector (CD1, CD2 & CD3) and replace the filter media on a schedule which will ensure the dust collector efficiency is maintained. The dust collector shall be operated and maintained in accordance with the manufacturer's recommendations. [N.J.A.C. 7:27-22.16(e)]	Monitored by visual determination each month during operation. [N.J.A.C. 7:27-22.16(e)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. Each instance of dust collector maintenance and filter media replacement shall be recorded. [N.J.A.C. 7:27-22.16(e)]	None.



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

Emission Unit: U2 Recycling Center

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Particulate Emissions <= 0.5 lb/hr based on 99% collection efficiency of the control device. [N.J.A.C. 7:27- 6.2(a)]	None.	None.	None.
2	No person shall cause, suffer, allow or permit particles to be emitted from any stack or chimney of which is greater than 20 percent opacity, exclusive of water vapor, except for a period not longer than three minutes in any consecutive 30-minute period. [N.J.A.C. 7:27-6.2(d)] & [N.J.A.C. 7:27- 6.2(e)]	None.	None.	None.
3	The permittee shall not use the equipment in a manner which will cause visible emissions, exclusive of condensed water vapor, except for 3 minutes in any consecutive 30 minute period. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
4	Hours of Operation <= 4,160 hr/yr. [N.J.A.C. 7:27-22.16(e)]	Hours of Operation: Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation: 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.
5	Total Production Rate <= 300 tons/day of recyclable materials. [N.J.A.C. 7:27-22.16(e)]	Total Production Rate: Monitored by material feed/flow monitoring daily, based on one calendar day. [N.J.A.C. 7:27-22.16(o)]	Total Production Rate: Recordkeeping by manual logging of parameter daily or automated record system daily. The Permittee shall maintain records and demonstrate compliance in accordance with the Solid Waste Regulations NJAC 7:26-2.13(a).  [N.J.A.C. 7:27-22.16(e)]	None.
6	No putrescible waste shall be accepted at the recycling center. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	All emissions from the recycling center shall be directed to the air pollution control equipment, baghouses CD4 and CD5, which shall be in operation at all times of recycling center operation. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
8	Particulates Control Efficiency $\geq 99.9\%$ for the baghouses, from preconstruction permit. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
9	Pressure Drop $\geq 1$ and Pressure Drop $\leq 6$ inches w.c. For each dust collector CD4 & CD5. [N.J.A.C. 7:27-22.16(e)]	Pressure Drop: Monitored by pressure drop Instrument continuously, based on an instantaneous determination. [N.J.A.C. 7:27-22.16(e)]	Pressure Drop: Recordkeeping by manual logging of parameter each week during operation. [N.J.A.C. 7:27-22.16(e)]	None.
10	Pressure Drop Across the Baghouse $> 6$ inches w.c. is the threshold for filter bag replacement. [N.J.A.C. 7:27-22.16(e)]	Pressure Drop Across the Baghouse: Monitored by pressure drop instrument continuously. [N.J.A.C. 7:27-22.16(o)]	Pressure Drop Across the Baghouse: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27-22.16(o)]	None.
11	Inlet Temperature to Baghouse $\leq 120$ degrees F for Baghouses CD4 & CD5. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Air-to-Cloth Ratio $\leq 463$ ACFM/sq.ft. for dust collectors (CD1, CD2 & CD3). [N.J.A.C. 7:27-22.16(e)]	Air-to-Cloth Ratio: Monitored by documentation of construction once initially. [N.J.A.C. 7:27-22.16(o)]	None.	None.
13	The permittee shall inspect and maintain the dust collector (CD4 and CD5) and replace the filter media on a schedule which will ensure the dust collector efficiency is maintained. The dust collector shall be operated and maintained in accordance with the manufacturer's recommendations. [N.J.A.C. 7:27-22.16(e)]	Monitored by visual determination each month during operation. [N.J.A.C. 7:27-22.16(e)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. Each instance of dust collector maintenance and filter media replacement shall be recorded. [N.J.A.C. 7:27-22.16(e)]	None.

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

Emission Unit: U3 Leachate Storage and Equalization

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Tank contents limited to landfill leachate. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
2	Flowrate <= 250,000 gallons /day and 91,250,000 gallons/yr total throughput limit for leachate from BOP100001. [N.J.A.C. 7:27-22.16(a)]	Flowrate: Monitored by material feed/flow monitoring continuously. Daily and annual leachate throughput limit shall be monitored using a totalizer. [N.J.A.C. 7:27-22.16(o)]	Flowrate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per calendar day during operation or automated record system daily. [N.J.A.C. 7:27-22.16(o)]	None.
3	VOC (Total) <= 12.71 ppmv in leachate from BOP090001. [N.J.A.C. 7:27-22.16(a)]	VOC (Total): Monitored by wastewater sampling each month during operation, based on an instantaneous determination. Permittee shall sample leachate per NJPDES guidelines. [N.J.A.C. 7:27-22.16(o)]	VOC (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.
4	VOC (Total) <= 4.83 tons/yr from BOP100001. [N.J.A.C. 7:27-22.16(a)]	VOC (Total): Monitored by other method (provide description) each month during operation. Monitored by calculating the VOC emissions in ton/yr using measured flowrates and VOC concentrations for each month.. AP-42 method or Water 9 (latest revisions) shall be used to calculate the VOC emissions.. [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Calculate the monthly and sum-to-date of VOC emissions for the calendar year. [N.J.A.C. 7:27-22.16(o)]	None.
5	HAPs (Total) <= 0.028 tons/yr from BOP100001. [N.J.A.C. 7:27-22.16(a)]	HAPs (Total): Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(o)]	HAPs (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system initial calculations only. [N.J.A.C. 7:27-22.16(o)]	None.
6	Arsenic compounds <= 0.005 tons/yr. [N.J.A.C. 7:27-22.16(e)]	Arsenic compounds: Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(e)]	Arsenic compounds: Recordkeeping by manual logging of parameter initial calculations only. [N.J.A.C. 7:27-22.16(e)]	None.
7	Phenol <= 0.023 tons/yr. [N.J.A.C. 7:27-22.16(e)]	Phenol: Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(e)]	Phenol: Recordkeeping by manual logging of parameter initial calculations only. [N.J.A.C. 7:27-22.16(e)]	None.

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

Emission Unit: U3 Leachate Storage and Equalization

Operating Scenario: OS1 Leachate storage and equalization, Tank 1

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	VOC (Total) <= 1.1 lb/hr from BOP100001. [N.J.A.C. 7:27-22.16(a)]	VOC (Total): Monitored by calculations each month during operation. [N.J.A.C. 7:27-22.16(o)]	VOC (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.
2	HAPs (Total) <= 0.012 lb/hr from BOP080003. [N.J.A.C. 7:27-22.16(a)]	HAPs (Total): Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(o)]	HAPs (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system initial calculations only. [N.J.A.C. 7:27-22.16(o)]	None.
3	Arsenic compounds <= 0.0012 lb/hr based on Preconstruction permit. [N.J.A.C. 7:27-22.16(e)]	Arsenic compounds: Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(e)]	Arsenic compounds: Recordkeeping by manual logging of parameter initial calculations only. [N.J.A.C. 7:27-22.16(e)]	None.
4	Phenol <= 0.0102 lb/hr based on Preconstruction permit. [N.J.A.C. 7:27-22.16(e)]	Phenol: Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(e)]	Phenol: Recordkeeping by manual logging of parameter initial calculations only. [N.J.A.C. 7:27-22.16(e)]	None.

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

Emission Unit: U3 Leachate Storage and Equalization

Operating Scenario: OS2 Leachate storage and equalization, Tank 2

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	VOC (Total) <= 1.1 lb/hr from BOP100001. [N.J.A.C. 7:27-22.16(a)]	VOC (Total): Monitored by calculations each month during operation. [N.J.A.C. 7:27-22.16(o)]	VOC (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.
2	HAPs (Total) <= 0.011 lb/hr from BOP080003. [N.J.A.C. 7:27-22.16(a)]	HAPs (Total): Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(o)]	HAPs (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system initial calculations only. [N.J.A.C. 7:27-22.16(o)]	None.
3	Arsenic compounds <= 0.0012 lb/hr based on Preconstruction permit. [N.J.A.C. 7:27-22.16(e)]	Arsenic compounds: Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(e)]	Arsenic compounds: Recordkeeping by manual logging of parameter initial calculations only. [N.J.A.C. 7:27-22.16(e)]	None.
4	Phenol <= 0.0102 lb/hr based on Preconstruction permit. [N.J.A.C. 7:27-22.16(e)]	Phenol: Monitored by calculations initial calculations only. [N.J.A.C. 7:27-22.16(e)]	Phenol: Recordkeeping by manual logging of parameter initial calculations only. [N.J.A.C. 7:27-22.16(e)]	None.

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

Emission Unit: U4 Gasoline dispensing with Stage II vapor recovery

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Total Throughput <= 60,000 gal/yr. [N.J.A.C. 7:27-22.16(a)]	Total Throughput: Monitored by review of fuel delivery records once per bulk fuel shipment and calculations, annually. [N.J.A.C. 7:27-22.16(o)]	Total Throughput: Recordkeeping by invoices / bills of lading once per bulk fuel shipment and manual logging of parameter (permanently bound), annually. [N.J.A.C. 7:27-22.16(o)]	None.
2	Tank content limited to unleaded gasoline. [N.J.A.C. 7:27-22.16(e)]	Monitored by review of fuel delivery records once per bulk fuel shipment. [N.J.A.C. 7:27-22.16(e)]	Recordkeeping by invoices / bills of lading once per bulk fuel shipment. [N.J.A.C. 7:27-22.16(e)]	None.
3	VOC (Total) <= 0.17 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
4	VOC (Total) <= 0.73 tons/yr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
5	The permittee shall maintain records specifying each material stored and its vapor pressure at standard conditions. [N.J.A.C. 7:27-16.2(s)]	Other: Tank contents, per delivery. [N.J.A.C. 7:27-22.16(o)].	Recordkeeping by manual logging of parameter or storing data in a computer data system per change of material in a bound log book. [N.J.A.C. 7:27-22.16(e)]	None.
6	No person shall cause, suffer, allow, or permit the transfer of gasoline into a receiving vessel having a maximum capacity of 2,000 gallons (7,570 liters) or greater, unless the transfer is made through a submerged fill pipe. If the receiving vessel is a stationary storage tank (either above ground or underground), the submerged fill pipe shall be permanently affixed to the tank. [N.J.A.C. 7:27-16.3(c)i]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	<p>No person shall cause, suffer, allow, or permit the transfer of gasoline from a delivery vessel into any stationary storage tank having a maximum capacity of 2,000 gallons (7,570 liters) or greater unless the storage tank is equipped and operating with a vapor control system that:</p> <p>(1) Reduces the total applicable VOC emissions into the outdoor atmosphere by no less than 98 percent of the concentration of applicable VOC by volume in the air-vapor mixture displaced during the transfer of gasoline; and</p> <p>(2) Includes a pressure/vacuum relief valve on each atmospheric vent which remains closed during the gasoline transfer. [N.J.A.C. 7:27-16.3(d)i]</p>	None.	None.	None.
8	<p>No person shall cause, suffer, allow, or permit the transfer of gasoline into any gasoline laden vehicular fuel tank, unless the transfer is made using a vapor control system that is approved by the Department and that reduces the total applicable VOC emissions into the outdoor atmosphere by no less than 95 percent of the concentration of applicable VOC by volume in the air-vapor mixture displaced during the transfer of gasoline; and prevents overfilling and spillage. [N.J.A.C. 7:27-16.3(e)1]</p>	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	<p>If the transfer is made at a gasoline dispensing facility, the vapor recovery system shall be one of the following:</p> <ul style="list-style-type: none"> <li>i. A system that was certified by CARB prior to July 25, 2001;</li> <li>ii. A system that has been certified by CARB on or after July 25, 2001;</li> <li>iii. A system that was certified by CARB prior to July 25, 2001; and any replacement parts/equipment/components and any subsequent construction modifications: <ul style="list-style-type: none"> <li>(1) Are approved in an Executive Order or approval letter issued by CARB on or after July 25, 2001; and</li> <li>(2) Do not decrease the VOC emission control efficiency of the system; or</li> </ul> </li> <li>iv. A system that is equivalent for the purpose of VOC emission control to a CARB certified system and that is approved by the Department and EPA [N.J.A.C. 7:27-16.3(e)2]</li> </ul>	None.	None.	None.
10	<p>Each dispensing device at a gasoline dispensing facility shall meet the following requirements:</p> <ul style="list-style-type: none"> <li>i. Each nozzle shall have a check valve located in the nozzle;</li> <li>ii. At a facility with a vacuum assist vapor control system, each nozzle shall be equipped with a splash-guard that prevents spillage during refueling; and</li> <li>iii. Each dispensing device and its nozzle(s) shall be designed to be compatible, such that <ul style="list-style-type: none"> <li>(1) The nozzle together with its vapor boot fits into the housing in which it is hung on the dispensing device; and</li> <li>(2) The nozzle's vapor check valve remains in the closed position when the nozzle is properly hung on the dispensing device.</li> </ul> </li> </ul> <p>[N.J.A.C. 7:27-16.3(e)4]</p>	None.	None.	None.



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
11	The owner or operator of a gasoline dispensing facility shall demonstrate the facility's vapor control system is performing properly, described in N.J.A.C. 7:27-16.3(i)(1)(i)-(v). [N.J.A.C. 7:27-16.3(i)1]	None.	Other: A record of the performance of each of test, and of the results obtained, shall be maintained in accordance with N.J.A.C. 7:27-16.3(s).[N.J.A.C. 7:27-16.3(i)3].	None.
12	No person shall cause, suffer, allow, or permit a transfer of gasoline, to or from a delivery vessel, if the transfer is subject to the provisions of 16.3(d), (l), or (m), and if the delivery vessel being loaded is under a pressure in excess of 18 inches of water (34 millimeters of mercury) gauge or the delivery vessel being unloaded is under vacuum in excess of six inches of water (11 millimeters of mercury) gauge. [N.J.A.C. 7:27-16.3(k)]	None.	None.	None.
13	No person shall cause, suffer, allow, or permit the transport or transfer of gasoline in a delivery vessel having a maximum capacity of 2,000 gallons (7,570 liters) or greater unless such vessel is vapor-tight at all times while containing any VOC except during emergency conditions; gauging; or venting through a vapor control system approved by the Department. [N.J.A.C. 7:27-16.3(l)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
14	<p>No person shall cause, suffer, allow, or permit the transfer or loading of gasoline or any other substance into any gasoline vapor laden delivery vessel except at a gasoline loading facility that is equipped and operating with a vapor control system in accordance with the following provisions:</p> <p>At a facility where the daily loading rate exceeds, or may exceed, 15,000 gallons (56,775 liters) of gasoline per day, as determined N.J.A.C. 7:27-16.3(n)3, the facility shall be equipped and operating with a vapor control system which:</p> <p>i. Prevents applicable VOC emissions to the outdoor atmosphere from exceeding the maximum allowable emissions as determined from Table 3B; or</p> <p>ii. Reduces the total applicable VOC emissions to the outdoor atmosphere by no less than 90 percent by weight. [N.J.A.C. 7:27-16.3(n)]</p>	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system daily. The owner or operator of a gasoline loading facility with a vapor control system pursuant to N.J.A.C. 7:27-16.3(n) shall on a daily basis, record the total quantity, in gallons or liters, loaded into delivery vessels at the facility. [N.J.A.C. 7:27-16.3(t)1]	None.
15	The permittee shall not transfer gasoline if the delivery vessel being loaded or unloaded, any control apparatus or other equipment serving the transfer operation has a leak that results in a concentration of VOC greater than or equal to 100 % LEL of propane, when measured at a distance of 1.0 inch or less from the location of the leak. [N.J.A.C. 7:27-16.3(o)3]	Monitored by periodic leak detection monitoring at no required frequency, based on an instantaneous determination. Monitoring shall occur upon detection of a leak in the delivery vessel.[N.J.A.C. 7:27-16.3(k)1.i].	Recordkeeping by manual logging of parameter upon occurrence of event. The permittee shall record each instance of detection of a leak in the delivery vessel.[N.J.A.C. 7:27-16.3].	None.
16	The permittee shall not transfer gasoline if the delivery vessel being loaded or unloaded, any control apparatus or other equipment serving the transfer operation has a leak that is a liquid leak. [N.J.A.C. 7:27-16.3(o)3]	Monitored by periodic leak detection monitoring upon occurrence of event, based on an instantaneous determination. Monitoring shall occur upon detection of a leak in the delivery vessel.[N.J.A.C. 7:27-16.3(k)1.ii].	Recordkeeping by manual logging of parameter at the approved frequency . The permittee shall record each instance of detection of a leak in the delivery vessel. [N.J.A.C. 7:27-22.16].	None.
17	The permittee shall not transfer gasoline if the continued transfer results in a liquid gasoline spill. [N.J.A.C. 7:27-16.3(o)3]	Monitored by visual determination continuously, based on an instantaneous determination. [N.J.A.C. 7:27-16.3].	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
18	<p>No person shall cause, suffer, allow, or permit any transfer of gasoline, subject to the provisions of 16.3(d), (e), (m), or (n), if:</p> <p>1. The delivery vessel being loaded or unloaded, or the vapor control system or other equipment serving the transfer operation, has:</p> <p style="padding-left: 20px;">i. A vapor leak which results in a concentration of applicable VOC greater than or equal to 100% of the lower explosive limit of propane, when measured at a distance of 1.0 inch (2.54 centimeters) or less from the location of the leak; or</p> <p style="padding-left: 20px;">ii. A liquid leak;</p> <p>2. Any component of the delivery vessel designed for preventing the release of gasoline vapors is not installed and operating as designed; or</p> <p>3. Commencing or continuing the transfer would result in a liquid gasoline spill.</p> <p>[N.J.A.C. 7:27-16.3(o)]</p>	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
19	<p>No person shall cause, suffer, allow, or permit the transfer of gasoline at a gasoline loading facility, into or from a delivery vessel, or at a gasoline dispensing facility, which is required to have a vapor control system pursuant to N.J.A.C. 7:27-16.3(d)1i, (e)1i, (m), or (n) unless:</p> <p>1. The vapor control system is designed to meet the applicable requirements in N.J.A.C. 7:27-16.3(d), (e), (m), or (n);</p> <p>2. All hoses, piping, connections, fittings and manholes serving the vapor control system are vapor-tight and free of liquid leaks, except when gauging or sampling is being performed;</p> <p>3. The vapor control system, including any component thereof, is maintained in proper operating condition and kept free of defects that could impair the effectiveness of the system;</p> <p>4. The vapor control system is constructed out of materials that will not become degraded when exposed to any grade of gasoline which may be stored, transferred, and/or dispensed; and</p> <p>5. The vapor control system is operated properly whenever gasoline is stored, transferred, and/or dispensed. [N.J.A.C. 7:27-16.3(q)]</p>	None.	None.	None.
20	<p>Maintain records of blockage and pressure drop tests. Permittee shall conduct and pass a California Air Resource Board (CARB) Certified Blockage and Pressure Drop Test within 90 days of: installation of Gasoline Stage II Vapor Recovery System, replacement of any existing Gasoline tanks, addition of any new Gasoline tanks, and replacement of any underground vapor return lines. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Other: Permittee shall review Blockage and Pressure Drop Test results for compliance with CARB acceptable ranges. Once initially.[N.J.A.C. 7:27-22.16(o)].</p>	<p>Other: Manual logging of inspection date, time, and test results in a logbook. All records must be maintained on site for the life of the equipment or until superseded by a new CARB test.[N.J.A.C. 7:27-22.16(o)].</p>	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>
21	Maintain records of blockage and pressure drop tests. Permittee shall conduct and pass a California Air Resource Board (CARB) Certified Blockage and Pressure Drop Test within 90 days prior to the Operating Permit renewal application. [N.J.A.C. 7:27-22.16(a)]	Other: Permittee shall review Blockage and Pressure Drop Test results for compliance with CARB acceptable ranges. Every 5 years, prior to Operating Permit renewal application.[N.J.A.C. 7:27-22.16(o)].	Other: Manual logging of inspection date, time, and test results in a logbook. All records must be maintained on site for the life of the equipment or until superseded by a new CARB test.[N.J.A.C. 7:27-22.16(o)].	None.
22	The owner or operator shall keep a record of the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. [40 CFR 60.116b(b)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially in a log book. [40 CFR 60.116b(b)]	None.

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

Emission Unit: U5 Vegetative Tub Grinding

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Summary of Applicable Federal Requirements:  40 CFR 60 Subpart A 40 CFR 60 Subpart IIII [None]	None.	None.	None.
2	<p><b>STACK TESTING SUMMARY</b> The permittee shall conduct a stack test using a protocol approved by the Department to demonstrate compliance with emission limits for CO and NOx as specified in the compliance plan for OS6. Testing must be conducted at worst-case permitted operating conditions with regard to meeting the applicable emission standards, but without creating an unsafe condition.</p> <p><b>THIS STACK TEST IS SUBJECT TO THE SIGNIFICANT MODIFICATION SUPPLEMENTAL FEES PURSUANT TO N.J.A.C. 7:27-22.31. [N.J.A.C. 7:27-22.16(a)]</b></p>	<p>Other: The stack test must be conducted either within 60 days of the protocol approval or within 180 days after initial startup of the new or modified source, whichever comes later.</p> <p>If a source is subject to NSPS, extending the testing date beyond 180 days after the source's initial startup requires prior approval from US EPA. [N.J.A.C. 7:27-22.18] and [N.J.A.C. 7:27-22.16(o)].</p>	Other: Recordkeeping as required under the applicable operating scenario(s). [N.J.A.C. 7:27-22.16(o)].	<p>Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule.. Submit a stack test protocol to the Emission Measurement Section (EMS) at Mail Code: 380-01A, PO Box 420, Trenton, NJ 08625 within 60 days from the date of the approved initial (or modified) operating permit. The protocol and test report must be prepared and submitted on a CD using the Electronic Reporting Tool (ERT), unless another format is approved by EMS. The ERT program can be downloaded at: <a href="http://www.epa.gov/ttnchie1/ert">http://www.epa.gov/ttnchie1/ert</a>. Within 30 days of protocol approval or no less than 60 days prior to the testing deadline, whichever is later, the permittee must contact EMS at 609-530-4041 to schedule a mutually acceptable test date. A full stack test report must be submitted to EMS and a certified summary test report 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. [N.J.A.C. 7:27-22.18(e)] and. [N.J.A.C. 7:27-22.18(h)]</p>
3	VOC (Total) <= 0.27 tons/yr based on 750 hours/year operation per engine. [N.J.A.C. 7:27-22.16(a)]	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>
4	TSP <= 0.34 tons/yr based on 24,375 tons/yr per grinder of vegetative materials processed. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
5	PM-10 (Total) <= 0.15 tons/yr based on 24,375 tons/yr per grinder of vegetative materials processed. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
6	PM-2.5 (Total) <= 0.15 tons/yr based on 24,375 tons/yr per grinder of vegetative materials processed. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
7	NOx (Total) <= 3.26 tons/yr based on 750 hours/year operation per engine. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
8	CO <= 3.26 tons/yr based on 750 hours/year operation per engine. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

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Emission Unit: U5 Vegetative Tub Grinding

Operating Scenario: OS1 Horizontal Grinder grinds vegetative material

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity: <= 20%. No person shall cause, suffer, allow or permit particles to be emitted from any stack or chimney of which is greater than 20 percent opacity, exclusive of water vapor, except for a period not longer than three minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 6.2(d)]	None.	None.	None.
2	Opacity: There shall be no visible emissions, exclusive of visible water vapor, except for a period no longer than three minutes in any consecutive thirty minute period. [N.J.A.C. 7:27-22.16(e)]	Opacity: Monitored by visual determination each month during operation The permittee shall conduct visual opacity inspections during daylight hours. Visual inspections shall consist of a visual survey to identify if the stack has visible emissions (other than condensed water vapor). [N.J.A.C. 7:27-22.16(o)]	Opacity: 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.
3	Particulate Emissions <= 0.5 lb/hr based on 0.02 gr/scf. [N.J.A.C. 7:27- 6.2(a)]	None.	None.	None.
4	TSP <= 0.274 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	TSP: Monitored by calculations once initially based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(o)]	TSP: 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)]	None.
5	PM-10 (Total) <= 0.114 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	PM-10 (Total): Monitored by calculations once initially based on AP-42 emission factor. [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 once initially. [N.J.A.C. 7:27-22.16(o)]	None.
6	PM-2.5 (Total) <= 0.114 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	PM-2.5 (Total): Monitored by calculations once initially based on AP-42 emission factor. [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 once initially. [N.J.A.C. 7:27-22.16(o)]	None.



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	Total Production Rate <= 24,375 tons/yr of vegetative material. [N.J.A.C. 7:27-22.16(a)]	Total Production Rate: Monitored by material feed/flow monitoring upon occurrence of event. [N.J.A.C. 7:27-22.16(o)]	Total Production Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of total production rate during each calendar month and each consecutive 12-month period. [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: U5 Vegetative Tub Grinding

Operating Scenario: OS2 Brush conveyor/ moves processed wood dust

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity: <= 20%. No person shall cause, suffer, allow or permit particles to be emitted from any stack or chimney of which is greater than 20 percent opacity, exclusive of water vapor, except for a period not longer than three minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 6.2(d)]	None.	None.	None.
2	Opacity: There shall be no visible emissions, exclusive of visible water vapor, except for a period no longer than three minutes in any consecutive thirty minute period. [N.J.A.C. 7:27-22.16(e)]	Opacity: Monitored by visual determination each month during operation The permittee shall conduct visual opacity inspections during daylight hours. Visual inspections shall consist of a visual survey to identify if the stack has visible emissions (other than condensed water vapor). [N.J.A.C. 7:27-22.16(o)]	Opacity: 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.
3	Particulate Emissions <= 0.5 lb/hr based on 0.02 gr/scf. [N.J.A.C. 7:27- 6.2(a)]	None.	None.	None.
4	TSP <= 0.094 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	TSP: Monitored by calculations once initially based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(o)]	TSP: 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)]	None.

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Emission Unit: U5 Vegetative Tub Grinding

Operating Scenario: OS3 Horizontal grinder/diesel engine

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 %. Visible emissions from stationary internal combustion engines no greater than 20%, exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
2	Opacity: no visible emissions, exclusive of visible condensed water vapor, except for a period of not longer than three minutes in any consecutive 30-minute period [N.J.A.C. 7:27-22.16(a)]	Opacity: Monitored by visual determination each month during operation. [N.J.A.C. 7:27-22.16(o)]	Opacity: Recordkeeping by manual logging of parameter each month during operation. [N.J.A.C. 7:27-22.16(o)]	None.
3	Maximum Gross Heat Input <= 5.36 MMBTU/hr (HHV). [N.J.A.C. 7:27-22.16(a)]	None.	Other: maintain documentation of burner rated heat input.[N.J.A.C. 7:27-22.16(o)].	None.
4	Particulate Emissions <= 3.08 lb/hr Maximum allowable particulate emission rate from the combustion of fuel based on rated heat input of source. [N.J.A.C. 7:27-4.2(a)]	None.	None.	None.
5	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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.
6	Sulfur Content in Fuel <= 15 Parts per Million . [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.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	The owner or operator of a stationary reciprocating engine that has a maximum rated power output of 37 kW or more shall adjust the combustion process in accordance with the procedure set forth at N.J.A.C. 7:27-19.16 and in accordance with the manufacturer's recommended procedures and maintenance schedules. [N.J.A.C. 7:27-16.10(e)] and [N.J.A.C. 7:27-19.8(f)]	Monitored by periodic emission monitoring upon performing combustion adjustment. Monitoring shall be performed in accordance with the specific procedures for combustion adjustment monitoring specified in NJDEP Technical Manual 1005.  [N.J.A.C. 7:27-19.16(g)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon performing combustion adjustment. The permittee shall record the following information for each adjustment in a log book or computer data system: 1. The date and times the adjustment began and ended; 2. The name, title, and affiliation of the person who performed the procedure and adjustment; 3. The type of procedure and maintenance performed; 4. The concentration of NOx, CO, and O2 measured before and after the adjustment was made; and 5. The type and amount of fuel use over the 12 months prior to the adjustment. The records shall be kept for a minimum of 5 years and be readily accessible to the Department upon request. [N.J.A.C. 7:27-19.16(h)]	None.
8	NOx (Total) <= 8 grams/brake horsepower-hour. [N.J.A.C. 7:27-19.8(c)]	NOx (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. Stack test was successfully conducted on 8/11/2016. [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results upon occurrence of event. Stack test was successfully conducted on 8/11/2016. [N.J.A.C. 7:27-22.16(o)]	None.
9	Carbon monoxide <= 500 ppmvd @ 15% O2. [N.J.A.C. 7:27-16.10(b)]	Carbon monoxide: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. Stack test was successfully conducted on 8/11/2016. [N.J.A.C. 7:27-16.23]	Carbon monoxide: Recordkeeping by stack test results upon occurrence of event. Stack test was successfully conducted on 8/11/2016. [N.J.A.C. 7:27-22.16(o)]	None.
10	Fuel use limited to diesel. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
11	TSP <= 0.12 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	TSP: Monitored by calculations once initially based on emission factors from Vermeer H Grinder Interim Tier 4 Engine. [N.J.A.C. 7:27-22.16(o)]	TSP: 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)]	None.
12	PM-10 (Total) <= 0.12 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	PM-10 (Total): Monitored by calculations once initially based on emission factors from Vermeer H Grinder Interim Tier 4 Engine. [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 once initially. [N.J.A.C. 7:27-22.16(o)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	PM-2.5 (Total) <= 0.12 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	PM-2.5 (Total): Monitored by calculations once initially based on emission factors from Vermeer H Grinder Interim Tier 4 Engine. [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 once initially. [N.J.A.C. 7:27-22.16(o)]	None.
14	VOC (Total) <= 0.5 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	VOC (Total): Monitored by calculations once initially based on emission factors from Vermeer H Grinder Interim Tier 4 Engine. [N.J.A.C. 7:27-22.16(o)]	VOC (Total): 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)]	None.
15	CO <= 4.34 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	CO: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. Stack test was successfully conducted on 8/11/2016. [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results upon occurrence of event. Stack test was successfully conducted on 8/11/2016. [N.J.A.C. 7:27-22.16(o)]	None.
16	NOx (Total) <= 4.34 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	NOx (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. Stack test was successfully conducted on 8/11/2016. [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results upon occurrence of event. Stack test was successfully conducted on 8/11/2016. [N.J.A.C. 7:27-22.16(o)]	None.
17	CO <= 4.34 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by periodic emission monitoring every quarter if the actual operation exceeds 200 hours during that quarter, but at least annually, except when the engine did not operate during that period. Quarters shall begin January 1, April 1, July 1 and October 1 of each year. The periodic monitoring procedure shall be carried out in accordance with the procedure specified in BTS Technical Manual 1005.  [N.J.A.C. 7:27-22.16(o)].	CO: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event and retain the following records:  (1) Date and time of PMP;  (2) PMP results and calculations in accordance with the procedure specified in the latest version of EPA CTM-034. PMP results must be recorded in the same units as permit limits;  (3) Description of corrective action taken if needed;  (4) Date and time of corrective action taken, if applicable. [N.J.A.C. 7:27-22.16(o)]	Other (provide description): Upon occurrence of event If the PMP test result exceeds the permit limit, the permittee shall do the following:  (1) Verify that the equipment and/or control device is operating according to manufacturer's specifications and the operating permit compliance plan. If the equipment or control device is not operating properly, the permittee shall take corrective action immediately to eliminate the excess emissions.  (2) If the corrective action taken in step (1) does not correct the problem within 24 hours, the applicant shall perform a repeat the PMP test. Such test shall be conducted each day until corrective action is taken to successfully correct the problem. [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
18	NOx (Total) <= 4.34 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by periodic emission monitoring every quarter if the actual operation exceeds 200 hours during that quarter, but at least annually, except when the engine did not operate during that period. Quarters shall begin January 1, April 1, July 1 and October 1 of each year. The periodic monitoring procedure shall be carried out in accordance with the procedure specified in BTS Technical Manual 1005.  [N.J.A.C. 7:27-22.16(o)].	NOx (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event and retain the following records:  (1) Date and time of PMP;  (2) PMP results and calculations in accordance with the procedure specified in the latest version of EPA CTM-034. PMP results must be recorded in the same units as permit limits;  (3) Description of corrective action taken if needed;  (4) Date and time of corrective action taken, if applicable. [N.J.A.C. 7:27-22.16(o)]	Other (provide description): Upon occurrence of event If the PMP test result exceeds the permit limit, the permittee shall do the following:  (1) Verify that the equipment and/or control device is operating according to manufacturer's specifications and the operating permit compliance plan. If the equipment or control device is not operating properly, the permittee shall take corrective action immediately to eliminate the excess emissions.  (2) If the corrective action taken in step (1) does not correct the problem within 24 hours, the applicant shall perform a repeat the PMP test. Such test shall be conducted each day until corrective action is taken to successfully correct the problem. [N.J.A.C. 7:27-22.16(o)]
19	Hours of Operation <= 750 hr/yr. [N.J.A.C. 7:27-22.16(e)]	Hours of Operation: Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-22.16(e)]	Hours of Operation: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Also record hours of operation during each consecutive 12-month period. Maintain records for five years on site. [N.J.A.C. 7:27-22.16(e)]	None.
20	Once per calendar year, evaluate and calibrate the engine, if necessary, to verify that it is being operated within the manufacturer's operational limits. In addition, ensure that inspections and maintenance are being performed in support of running the engine with these operating limits. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by manual logging of parameter annually. [N.J.A.C. 7:27-16.10(e)]	None.
21	During the manufacturer's recommended inspections and planned shutdowns, inspect and clean the engine assemblies and replace or repair any defective components. [N.J.A.C. 7:27-22.16(a)]	None.	Other: Every 750 operating hours and during planned shutdowns.[N.J.A.C. 7:27-16.10(e)].	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
22	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: Region 2, Director, Air and Waste Management Division, US Environmental Protection Agency, 21st Floor, 290 Broadway, New York, NY 10007. [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)]
23	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 Central Regional Enforcement Office of NJDEP as required by 40 CFR 60. [40 CFR 60.4(b)]
24	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.
25	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 (NSPS Subpart A). [40 CFR 60.19]	None.	None.	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
26	The owner or operator must comply with the emissions standards for new CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power as follows: NOx ≤ 3.5 g/kW-hr, CO ≤ 3.5 g/kW-hr, PM ≤ 0.10 g/kW-hr, NMHC = 0.4 g/kW-hr. [40 CFR 60.4204(b)]	Other: The owner or operator of a 2007 model year or later engine must review manufacturer certification showing compliance with the applicable emission standards, for the same model year and maximum engine power, once initially. [40 CFR 60.4211].	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.
27	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 over the entire life of the engine. [40 CFR 60.4206]	Other: The owner or operator shall review the emission-related manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [40 CFR 60.4206].	Other: The owner or operator shall keep the manufacturer's emission-related written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, 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.
28	The permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(b) subject to 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, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 CFR 60.4207(b)]	Monitored by review of fuel delivery records once per bulk fuel shipment. For each diesel fuel 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, or 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 used 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.



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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
29	The owner or operator that must comply with the emission standards specified in 40 CFR 60 Subpart IIII must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator must also meet the requirements of 40 CFR parts 89, 94 and/or 1068 (General Compliance Provisions), as applicable. [40 CFR 60.4211(a)]	Other: The owner or operator shall review the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, once initially. [40 CFR 60.4211(a)].	Other: The owner or operator shall keep the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [40 CFR 60.4211(a)].	None.
30	The owner or operator must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(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. If the owner/operator does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or you change emission related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as prescribed in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]	Other: The owner or operator must review documentation once initially from the manufacturer that the engine is certified to meet the emission standards as applicable, for the same model year and maximum engine power. [40 CFR 60.4211(c)].	Other: The owner or operator must keep documentation for the life of the equipment from the manufacturer that the engine is certified to meet the emission standards as applicable, for the same model year and maximum engine power. [40 CFR 60.4211(c)].	None.
31	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(b)(3)]	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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Facility Specific Requirements**

Emission Unit: U5 Vegetative Tub Grinding

Operating Scenario: OS4 Tub grinder/ grinds vegetative material

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity: <= 20%. exclusive of water vapor, except for a period not longer than three minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 6.2(d)]	None.	None.	None.
2	Opacity: There shall be no visible emissions, exclusive of visible water vapor, except for a period no longer than three minutes in any consecutive thirty minute period. [N.J.A.C. 7:27-22.16(e)]	Opacity: Monitored by visual determination each month during operation The permittee shall conduct visual opacity inspections during daylight hours. Visual inspections shall consist of a visual survey to identify if the stack has visible emissions (other than condensed water vapor). [N.J.A.C. 7:27-22.16(o)]	Opacity: 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.
3	Particulate Emissions <= 0.5 lb/hr based on 0.02 gr/scf. [N.J.A.C. 7:27- 6.2(a)]	None.	None.	None.
4	TSP <= 0.274 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	TSP: Monitored by calculations once initially based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(o)]	TSP: 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)]	None.
5	PM-10 (Total) <= 0.114 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	PM-10 (Total): Monitored by calculations once initially based on AP-42 emission factor. [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 once initially. [N.J.A.C. 7:27-22.16(o)]	None.
6	PM-2.5 (Total) <= 0.114 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	PM-2.5 (Total): Monitored by calculations once initially based on AP-42 emission factor. [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 once initially. [N.J.A.C. 7:27-22.16(o)]	None.
7	Total Production Rate <= 24,375 tons/yr of vegetative material. [N.J.A.C. 7:27-22.16(a)]	Total Production Rate: Monitored by material feed/flow monitoring upon occurrence of event. [N.J.A.C. 7:27-22.16(o)]	Total Production Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of total production rate during each calendar month and each consecutive 12-month period. [N.J.A.C. 7:27-22.16(o)]	None.

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Facility Specific Requirements**

Emission Unit: U5 Vegetative Tub Grinding

Operating Scenario: OS5 Brush conveyor/ moves processed wood dust

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity: <= 20%. exclusive of water vapor, except for a period not longer than three minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 6.2(d)]	None.	None.	None.
2	Opacity: There shall be no visible emissions, exclusive of visible water vapor, except for a period no longer than three minutes in any consecutive thirty minute period. [N.J.A.C. 7:27-22.16(e)]	Opacity: Monitored by visual determination each month during operation The permittee shall conduct visual opacity inspections during daylight hours. Visual inspections shall consist of a visual survey to identify if the stack has visible emissions (other than condensed water vapor). [N.J.A.C. 7:27-22.16(o)]	Opacity: 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.
3	Particulate Emissions <= 0.5 lb/hr based on 0.02 gr/scf. [N.J.A.C. 7:27- 6.2(a)]	None.	None.	None.
4	TSP <= 0.094 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	TSP: Monitored by calculations once initially based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(o)]	TSP: 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)]	None.

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Emission Unit: U5 Vegetative Tub Grinding

Operating Scenario: OS6 Tub grinder/diesel engine

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity: no visible emissions, exclusive of visible condensed water vapor, except for a period of not longer than three minutes in any consecutive 30-minute period [N.J.A.C. 7:27-22.16(a)]	Opacity: Monitored by visual determination each month during operation. [N.J.A.C. 7:27-22.16(o)]	Opacity: Recordkeeping by manual logging of parameter each month during operation. [N.J.A.C. 7:27-22.16(o)]	None.
2	Opacity <= 20 %. Visible emissions from stationary internal combustion engines no greater than 20%, exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
3	Maximum Gross Heat Input <= 5.26 MMBTU/hr (HHV). [N.J.A.C. 7:27-22.16(a)]	None.	Other: maintain documentation of burner rated heat input.[N.J.A.C. 7:27-22.16(o)].	None.
4	Particulate Emissions <= 3.08 lb/hr. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
5	Sulfur Content in Fuel <= 15 Parts per Million. [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.
6	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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	The owner or operator of a stationary reciprocating engine that has a maximum rated power output of 37 kW or more shall adjust the combustion process in accordance with the procedure set forth at N.J.A.C. 7:27-19.16 and in accordance with the manufacturer's recommended procedures and maintenance schedules. [N.J.A.C. 7:27-16.10(e)] and [N.J.A.C. 7:27-19.8(f)]	Monitored by periodic emission monitoring upon performing combustion adjustment. Monitoring shall be performed in accordance with the specific procedures for combustion adjustment monitoring specified in NJDEP Technical Manual 1005.  [N.J.A.C. 7:27-19.16(g)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon performing combustion adjustment. The permittee shall record the following information for each adjustment in a log book or computer data system: 1. The date and times the adjustment began and ended; 2. The name, title, and affiliation of the person who performed the procedure and adjustment; 3. The type of procedure and maintenance performed; 4. The concentration of NO <sub>x</sub> , CO, and O <sub>2</sub> measured before and after the adjustment was made; and 5. The type and amount of fuel use over the 12 months prior to the adjustment. The records shall be kept for a minimum of 5 years and be readily accessible to the Department upon request. [N.J.A.C. 7:27-19.16(h)]	None.
8	Carbon monoxide <= 500 ppmvd @ 15% O <sub>2</sub> . [N.J.A.C. 7:27-16.10(b)]	Carbon monoxide: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. See stack test requirements OS Summary. [N.J.A.C. 7:27-16.23]	Carbon monoxide: Recordkeeping by stack test results upon occurrence of event. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]
9	NO <sub>x</sub> (Total) <= 8 grams/brake horsepower-hour. [N.J.A.C. 7:27-19.8(c)]	NO <sub>x</sub> (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.160]	NO <sub>x</sub> (Total): Recordkeeping by stack test results upon occurrence of event. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]
10	Fuel use limited to diesel. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
11	TSP <= 0.05 lb/hr based on 40CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	TSP: Monitored by calculations once initially based on Tier 4 equivalent emission factors. [N.J.A.C. 7:27-22.16(o)]	TSP: 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)]	None.
12	VOC (Total) <= 0.24 lb/hr based on 40CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	VOC (Total): Monitored by calculations once initially using Tier 4 equivalent emission factors. [N.J.A.C. 7:27-22.16(o)]	VOC (Total): 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)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	CO <= 4.34 lb/hr based on 40CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	CO: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results upon occurrence of event. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]
14	NOx (Total) <= 4.34 lb/hr based on 40CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	NOx (Total): Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results upon occurrence of event. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. See stack test requirements OS Summary. [N.J.A.C. 7:27-22.16(o)]
15	CO <= 4.34 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by periodic emission monitoring annually. The periodic monitoring procedure shall be carried out in accordance with the procedure specified in BTS Technical Manual 1005.  [N.J.A.C. 7:27-22.16(o)].	CO: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event and retain the following records:  (1) Date and time of PMP;  (2) PMP results and calculations in accordance with the procedure specified in the latest version of EPA CTM-034. PMP results must be recorded in the same units as permit limits;  (3) Description of corrective action taken if needed;  (4) Date and time of corrective action taken, if applicable. [N.J.A.C. 7:27-22.16(o)]	Other (provide description): Upon occurrence of event If the PMP test result exceeds the permit limit, the permittee shall do the following:  (1) Verify that the equipment and/or control device is operating according to manufacturer's specifications and the operating permit compliance plan. If the equipment or control device is not operating properly, the permittee shall take corrective action immediately to eliminate the excess emissions.  (2) If the corrective action taken in step (1) does not correct the problem within 24 hours, the applicant shall perform a repeat the PMP test. Such test shall be conducted each day until corrective action is taken to successfully correct the problem. [N.J.A.C. 7:27-22.16(o)]

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	NOx (Total) <= 4.34 lb/hr based on 40 CFR 60.4204(b). [N.J.A.C. 7:27-22.16(a)]	Other: Monitored by periodic emission monitoring annually. The periodic monitoring procedure shall be carried out in accordance with the procedure specified in BTS Technical Manual 1005.  [N.J.A.C. 7:27-22.16(o)].	NOx (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event and retain the following records:  (1) Date and time of PMP;  (2) PMP results and calculations in accordance with the procedure specified in the latest version of EPA CTM-034. PMP results must be recorded in the same units as permit limits;  (3) Description of corrective action taken if needed;  (4) Date and time of corrective action taken, if applicable. [N.J.A.C. 7:27-22.16(o)]	Other (provide description): Upon occurrence of event If the PMP test result exceeds the permit limit, the permittee shall do the following:  (1) Verify that the equipment and/or control device is operating according to manufacturer's specifications and the operating permit compliance plan. If the equipment or control device is not operating properly, the permittee shall take corrective action immediately to eliminate the excess emissions.  (2) If the corrective action taken in step (1) does not correct the problem within 24 hours, the applicant shall perform a repeat the PMP test. Such test shall be conducted each day until corrective action is taken to successfully correct the problem. [N.J.A.C. 7:27-22.16(o)]
17	Hours of Operation <= 750 hr/yr. [N.J.A.C. 7:27-22.16(e)]	Hours of Operation: Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-22.16(e)]	Hours of Operation: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Also record hours of operation during each consecutive 12-month period. Maintain records for five years on site. [N.J.A.C. 7:27-22.16(e)]	None.
18	Once per calendar year, evaluate and calibrate the engine, if necessary, to verify that it is being operated within the manufacturer's operational limits. In addition, ensure that inspections and maintenance are being performed in support of running the engine with these operating limits. [N.J.A.C. 7:27-22.16(a)]	None.	Recordkeeping by manual logging of parameter annually. [N.J.A.C. 7:27-16.10(e)]	None.
19	During the manufacturer's recommended inspections and planned shutdowns, inspect and clean the engine assemblies and replace or repair any defective components. [N.J.A.C. 7:27-22.16(a)]	None.	Other: Every 750 operating hours and during planned shutdowns.[N.J.A.C. 7:27-16.10(e)].	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	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 over the entire life of the engine. [40 CFR 60.4206]	Other: The owner or operator shall review the emission-related manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [40 CFR 60.4206].	Other: The owner or operator shall keep the manufacturer's emission-related written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, 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.
21	The owner or operator must comply with the certification emissions standards in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104 (interim provisions), 40 CFR 1039.105 (smoke standards), 40 CFR 1039.107, and 40 CFR 1039.115, for the same model year and maximum engine power as follows: NMHC $\leq$ 0.19 g/KW-hr, NO <sub>x</sub> $\leq$ 3.5 g/KW-hr, CO $\leq$ 3.5 g/KW-hr, PM $\leq$ 0.04 g/KW-hr. [40 CFR 60.4204(b)]	Other: The owner or operator of a 2007 model year or later engine must review manufacturer certification showing compliance with the applicable emission standards, for the same model year and maximum engine power, once initially. [40 CFR 60.4211].	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.
22	The permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(b) subject to 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, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [40 CFR 60.4207(b)]	Monitored by review of fuel delivery records once per bulk fuel shipment. For each diesel fuel 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, or certificate of analysis. [N.J.A.C. 7:27-22.16(o)] or [N.J.A.C. 7:27- 8.13(a)]	Recordkeeping by invoices / bills of lading / certificate of analysis once per bulk fuel shipment. The owner or operator shall keep records of fuel used 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)] or [N.J.A.C. 7:27- 8.13(a)]	None.



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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
23	Owners and operators of a 2007 and later model year stationary CI internal combustion engines must follow the deadline for installing or importing CI ICE produced in the previous model year as specified in 40 CFR 60.4208(a) through (g), 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.
24	The owner or operator that must comply with the emission standards specified in 40 CFR 60 Subpart IIII must operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator must also meet the requirements of 40 CFR parts 89, 94 and/or 1068 (General Compliance Provisions), as applicable. [40 CFR 60.4211(a)]	Other: The owner or operator shall review the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, once initially. [40 CFR 60.4211(a)].	Other: The owner or operator shall keep the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [40 CFR 60.4211(a)].	None.

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
25	The owner or operator of a 2007 model year and later stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder complying with the emission standards specified in 40 CFR 60.4204(b), must comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(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. If the owner/operator does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or you change emission related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as prescribed in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]	Other: The owner or operator must review documentation once initially from the manufacturer that the engine is certified to meet the emission standards as applicable, for the same model year and maximum engine power. [40 CFR 60.4211(c)].	Other: The owner or operator must keep documentation for the life of the equipment from the manufacturer that the engine is certified to meet the emission standards as applicable, for the same model year and maximum engine power. [40 CFR 60.4211(c)].	None.
26	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: U7 Heater, 1.2 MM Btu/hr

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No visible emissions exclusive of condensed water vapor, except for no more than 3 minutes in any consecutive 30-minute period. [N.J.A.C. 7:27-3.2(a)] and [N.J.A.C. 7:27- 3.2(c)]	Other: Periodic visual inspections.[N.J.A.C. 7:27-22.16(o)].	None.	None.
2	Natural Gas Usage <= 9.934 MMft <sup>3</sup> /yr. [N.J.A.C. 7:27-22.16(e)]	Natural Gas Usage: Monitored by fuel flow/firing rate instrument continuously, based on a consecutive 12 month period (rolling 1 month basis) The permittee shall install and operate a totalizing fuel flow meter to monitor the total amount of fuel burned per year by the heater. [N.J.A.C. 7:27-22.16(e)]	Natural Gas Usage: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation The permittee shall record in either a log book, or in a readily accessible computer memory, the fuel type and monthly amount of fuel burned by the heater. All records shall be maintained on site for a period of five (5) years. [N.J.A.C. 7:27-22.16(e)]	None.
3	Maximum Gross Heat Input <= 1.2 MMBTU/hr (HHV). [N.J.A.C. 7:27-22.16(a)]	None.	Other: Maintain documentation of burner rated capacity.[N.J.A.C. 7:27-22.16(o)].	None.
4	NOx (Total) <= 0.497 tons/yr. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
5	CO <= 0.417 tons/yr. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
6	TSP <= 0.05 lb/hr. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
7	NOx (Total) <= 0.1134 lb/hr. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
8	CO <= 0.0953 lb/hr. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.

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

**Emission Unit:** U14 GEO Building Emergency Generator

**Operating Scenario:** OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Summary of Applicable Federal Requirements:  40 CFR 60 Subpart A 40 CFR 60 Subpart IIII [None]	None.	None.	None.
2	Opacity <= 20 % , exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
3	Particulate Emissions <= 1.05 lb/hr. Particulate emission limit from the combustion of fuel based on rated heat input of source. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
4	Sulfur Content in Fuel <= 15 ppmw (0.0015% by weight). Effective 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 showing fuel sulfur content. [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	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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.
6	Generator fuel limited to B20 biodiesel or diesel fuel. [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><b>FOR OPERATING PERMITS ONLY</b></p> <p>Each 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> <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 power outage or the primary source of mechanical or thermal energy fails because of an emergency, or</p> <p>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]</p>	<p>Monitored by hour/time monitor continuously.</p> <p>In addition, the owner or operator shall monitor, once per month, the total operating time from the generator's hour meter; hours of operation for emergency use; hours of operation for testing and maintenance; and the total fuel usage calculated by the following:</p> <p>Fuel Usage (Gallons per month) = (Hours of operation per month) x (Maximum emergency generator fuel usage rate in gallons per hour).</p> <p>Hours of operation for emergency use (per month) = (The monthly total operating time from the generator's hour meter) - (The monthly total operating time for testing or maintenance) [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 the following information:</p> <p>1. Once per month, the total operating time from the generator's hour meter, the fuel usage (gallons per month) and the hours of operation for emergency use (per month). Document if the emergency use was due to internal or external loss of primary source of energy. If internal loss at the facility, document the emergency that occurred, the damages to the primary source of energy and the amount of time needed for repairs.</p> <p>2. For each time the emergency generator is specifically operated for testing or maintenance:</p> <ol style="list-style-type: none"> <li>The reason for its operation;</li> <li>The date(s) of operation and the start up and shut down time;</li> <li>The total operating time for testing or maintenance based on the generator's hour meter; and</li> <li>The name of the operator; and</li> </ol> <p>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.</p> <p>The owner or operator of an emergency generator shall maintain the above records for a period no less than 5 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. 7:27-22.16(o)] and [N.J.A.C. 7:27-19.11]</p>	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	<p>This emergency generator shall not be used:</p> <p>1. 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" as defined in the EPA's Air Quality Index at <a href="http://airnow.gov/">http://airnow.gov/</a>, as supplemented or amended and incorporated herein by reference, 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's air quality permitting 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>2. 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.</p> <p>[N.J.A.C. 7:27-19.2(d)]</p>	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	Hours of Operation <= 100 hr/yr for testing and maintenance. The limit on the allowable hours for testing and maintenance in accordance with the documentation from manufacturer, the vendor, or the insurance company associated with the engine. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation: Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator shall maintain on site and record the following information:  For each time the emergency generator is specifically operated for testing or maintenance: i. The reason for its operation; ii. The date(s) of operation and the start up and shut down time; iii. The total operating time for testing or maintenance based on the generator's hour meter; and iv. The name of the operator. [N.J.A.C. 7:27-19.11]	None.
10	Maximum Gross Heat Input <= 1.757 MMBTU/hr (HHV). [N.J.A.C. 7:27-22.16(a)]	None.	Other: Keep records showing maximum heat input rate.[N.J.A.C. 7:27-22.16(o)].	None.
11	VOC (Total) <= 0.015 tons/yr. Annual emission limit based on the permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	NOx (Total) <= 0.138 tons/yr. Annual emission limit based on the permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
13	CO <= 0.016 tons/yr. Annual emission limit based on the permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
14	SO2 <= 0.026 tons/yr. Annual emission limit based on the permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
15	TSP <= 0.004 tons/yr. Annual emission limit based on the permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	PM-10 (Total) <= 0.004 tons/yr. Annual emission limit based on the permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
17	Copies of all information submitted to EPA pursuant to 40 CFR Part 60, must be submitted to the appropriate Regional Enforcement Office of NJDEP. [40 CFR 60.4(b)]	None.	None.	Submit a report: Other To the approved Regional Enforcement Office of NJDEP as required by 40 CFR 60. [40 CFR 60.4(b)]
18	Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification as follows:  1) A notification of the date construction (or reconstruction as defined under 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. 2) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date. 3) A 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 in 60.14(e). [40 CFR 60.7(a)]	None.	None.	Submit notification: Other. As required by 40 CFR 60 to EPA Region II. [40 CFR 60.7(a)]
19	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.



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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
20	The owner or operator shall notify the Administrator of the proposed replacement of components. [40 CFR 60.15]	None.	None.	Submit notification: Other. The notification shall include information listed under 40 CFR Part 60.15(d). The notification shall be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced. [40 CFR 60.15(d)]
21	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.
22	The owner or operator of a pre-2007 model year emergency generator with a displacement of < 10 liters per cylinder and a maximum engine power of equal to or more than 175 HP ( $\geq 130$ kW) must comply with the emissions standards in table 1 to NSPS IIII as follows: NO <sub>x</sub> $\leq 6.9$ g/HP-hr, HC $\leq 1.0$ g/HP-hr, CO $\leq 8.5$ g/HP-hr, PM $\leq 0.40$ g/HP-hr. [40 CFR 60.4205(a)]	None.	Other: The owner or operator of a pre 2007 model year engine must keep documentation demonstrating compliance with the applicable emission standards, for the same model year and maximum engine power. [40 CFR 60.4211].	None.
23	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 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. [40 CFR 60.4206]	None.	Other: The owner or operator shall keep the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. [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
24	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 fuel oil 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 once per bulk fuel shipment. The owner of 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.
25	Beginning October 1, 2010, 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 (b) that contains the following per gallon standards: 15 ppm (0.00155 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 fuel oil 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 once per bulk fuel shipment. The owner of 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.
26	Emergency generators may be operated for the purpose of maintenance checks and readiness testing limited to 100 hours per year, provided those tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. [40 CFR 60.4211(e)]	The owner or operator of an emergency stationary internal combustion engine must install a non-resettable hour meter prior to startup of the engine. Monitored by hour/time monitor continuously. [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 size of the engines 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 60.4202, applicable to non-emergency engines, in the applicable model year. [40 CFR 60.4214(b)]	None.

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

**Emission Unit:** U14 GEO Building Emergency Generator

**Operating Scenario:** OS1 GEO Building Emergency Generator

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	TSP <= 0.08 lb/hr. Maximum emission rate from the Operating Permit Significant Modification Application. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	PM-10 (Total) <= 0.08 lb/hr. Maximum emission rate from Operating Permit Significant Modification Application. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	VOC (Total) <= 0.3 lb/hr. Maximum emission rate from the Operating Permit Significant Modification Application. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
4	CO <= 0.3 lb/hr. Maximum emission rate from Operating Permit Significant Modification Application. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
5	SO2 <= 0.51 lb/hr. Maximum emission rate from the Operating Permit Significant Modification Application. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
6	NOx (Total) <= 2.76 lb/hr. Maximum emission rate from the Operation Permit Significant Modification Application. [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**

Emission Unit: U15 CNG Station Emergency Generator

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Summary of Applicable Federal Requirements:  40 CFR 60 Subpart A 40 CFR 60 Subpart IIII [None]	None.	None.	None.
2	Opacity <= 20 % , exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
3	Maximum Gross Heat Input <= 2.12 MMBTU/hr (HHV). [N.J.A.C. 7:27-22.16(a)]	None.	Other: Keep records showing maximum heat input rate.[N.J.A.C. 7:27-22.16(o)].	None.
4	Particulate Emissions <= 1.27 lb/hr Particulate emission limit from the combustion of fuel based on rated heat input of source. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
5	Sulfur Content in Fuel <= 15 ppmw (0.0015% by weight). Effective 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.
6	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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.
7	Generator fuel limited to distillate oil, #2 fuel oil or lighter, from minor modification BOP080003. [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
8	<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 the 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</p> <p>In addition, the owner or operator shall monitor, once per month, the total operating time from the generator's hour meter; hours of operation for emergency use; hours of operation for testing and maintenance; and the total fuel usage calculated by the following:</p> <p>Fuel Usage (Gallons per month) = (Hours of operation per month) x (Maximum emergency generator fuel usage rate in gallons per hour).</p> <p>Hours of operation for emergency use (per month) = (The monthly total operating time from the generator's hour meter) - (The monthly total operating time for testing or maintenance)  . [N.J.A.C. 7:27-22.16(o)]</p>	<p>Recordkeeping by other recordkeeping method (provide description) each month during operation. The owner or operator shall maintain on site and record 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, the fuel usage (gallons per month) and the hours of operation for emergency use (per month). Document if the emergency use was due to internal or external loss of primary source of energy. If internal loss at the facility, document the emergency that occurred, the damages to the primary source of energy and the amount of time needed for repairs.</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 5 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. 7:27-22.16(o)] and  . [N.J.A.C. 7:27-19.11]</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
9	<p>This emergency generator shall not be used:</p> <p>1. 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" as defined in the EPA's Air Quality Index at <a href="http://airnow.gov/">http://airnow.gov/</a>, as supplemented or amended and incorporated herein by reference, unless required in writing by a Federal or State law or regulation. Procedures for determining the air quality forecast for New Jersey are available at the Department's air quality permitting web site at <a href="http://www.state.nj.us/dep/aqpp/apforecast">http://www.state.nj.us/dep/aqpp/apforecast</a>; and</p> <p>2. 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>	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
10	Hours of Operation <= 100 hr/yr for testing and maintenance. The limit on the allowable hours for testing and maintenance in accordance with the documentation from manufacturer, the vendor, or the insurance company associated with the engine. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation: Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator shall maintain on site and record the following information:  For each time the emergency generator is specifically operated for testing or maintenance:  i. The reason for its operation;  ii. The date(s) of operation and the start up and shut down time;  iii. The total operating time for testing or maintenance based on the generator's hour meter; and iv. The name of the operator. [N.J.A.C. 7:27-19.11]	None.
11	VOC (Total) <= 0.002 tons/yr Annual emission limit based on 100 hours per year of operation from BOP10001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	NOx (Total) <= 0.1 tons/yr Annual emission based on 100 hours per year of operation from BOP100001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
13	CO <= 0.01 tons/yr Annual emission based on 100 hours per year of operation from BOP100001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
14	SO2 <= 0.03 tons/yr Annual emission based on 100 hours per year of operation from BOP100001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
15	TSP <= 0.002 tons/yr Annual emission based on 100 hours per year of operation from BOP100001. [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
16	PM-10 (Total) <= 0.002 tons/yr. Annual emission based on 100 hours per year of operation from BOP100001.. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
17	Copies of all information submitted to EPA pursuant to 40 CFR Part 60, must be submitted to the appropriate Regional Enforcement Office of NJDEP. [40 CFR 60.4(b)]	None.	None.	Submit a report: Other To the approved Regional Enforcement Office of NJDEP as required by 40 CFR 60. [40 CFR 60.4(b)]
18	Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification as follows:  1) A notification of the date construction (or reconstruction as defined under 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. 2) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date. 3) A 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 in 60.14(e). [40 CFR 60.7(a)]	None.	None.	Submit notification: Other. As required by 40 CFR 60 to EPA Region II. [40 CFR 60.7(a)]
19	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.



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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 shall notify the Administrator of the proposed replacement of components. [40 CFR 60.15]	None.	None.	Submit notification: Other. The notification shall include information listed under 40 CFR Part 60.15(d). The notification shall be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced. [40 CFR 60.15(d)]
21	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.
22	The date of construction and model year of the engine driven electric generator trigger applicability under NSPS Subpart IIII. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
23	The owner or operator of a 2007 model year and later emergency generator with a displacement of < 10 liters per cylinder and a maximum engine power $\geq 37$ kW (HP $\geq 50$ ) and no greater than 3,000HP ( $\leq 2,237$ kW) must comply with the certification emissions standards in 40 CFR 89.112 and smoke standards in 40 CFR 89.113 for the same model year and maximum engine power. [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.
24	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 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. [40 CFR 60.4206]	None.	Other: The owner or operator shall keep the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. [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
25	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.
26	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 use 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. 7:27-22.16(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.
27	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. [40 CFR 60.4208]	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
28	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 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as applicable. [40 CFR 60.4211(a)]	None.	Other: The owner or operator shall keep the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. [40 CFR 60.4211(a)].	None.
29	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 specifications. [40 CFR 60.4211(c)]	None.	Other: The owner or operator must keep documentation for the life of the equipment from the manufacturer that the engine is certified to meet the emission standards as applicable, for the same model year and maximum engine power. [40 CFR 60.4211(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
30	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(e)]	Monitored by hour/time monitor continuously. The owner or operator of an emergency stationary internal combustion engine 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 size of the engine 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. [40 CFR 60.4214(b)]	None.
31	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:** U17 Maintenance Center Emergency Generator**Operating Scenario:** OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Summary of Applicable Federal Requirements:  40 CFR 60 Subpart A 40 CFR 60 Subpart JJJJ 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	Opacity <= 20 % , exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	None.	None.	None.
3	Particulate Emissions <= 1.2 lb/hr. Particulate emission limit from the combustion of fuel based on rated heat input of source. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
4	Generator fuel limited to natural gas. [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
5	<p>Each 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> <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 power outage or the primary source of mechanical or thermal energy fails because of an emergency, or</p> <p>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]</p>	<p>Monitored by hour/time monitor continuously.</p> <p>In addition, the owner or operator shall monitor, once per month, the total operating time from the generator's hour meter; hours of operation for emergency use; hours of operation for testing and maintenance; and the total fuel usage calculated by the following:</p> <p>Fuel Usage (Cubic feet per month) = (Hours of operation per month) x (Maximum emergency generator fuel usage rate in cubic feet per hour).</p> <p>Hours of operation for emergency use (per month) = (The monthly total operating time from the generator's hour meter) - (The monthly total operating time for testing or maintenance) [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 the following information:</p> <p>1. Once per month, the total operating time from the generator's hour meter, the fuel usage (cubic feet per month) and the hours of operation for emergency use (per month). Document if the emergency use was due to internal or external loss of primary source of energy. If internal loss at the facility, document the emergency that occurred, the damages to the primary source of energy and the amount of time needed for repairs.</p> <p>2. For each time the emergency generator is specifically operated for testing or maintenance:</p> <ol style="list-style-type: none"> <li>The reason for its operation;</li> <li>The date(s) of operation and the start up and shut down time;</li> <li>The total operating time for testing or maintenance based on the generator's hour meter; and</li> <li>The name of the operator; and</li> </ol> <p>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.</p> <p>The owner or operator of an emergency generator shall maintain the above records for a period no less than 5 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. 7:27-22.16(o)] and [N.J.A.C. 7:27-19.11]</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
6	<p>This emergency generator shall not be used:</p> <p>1. 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" as defined in the EPA's Air Quality Index at <a href="http://airnow.gov/">http://airnow.gov/</a>, as supplemented or amended and incorporated herein by reference, 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's air quality permitting 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>2. 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.</p> <p>[N.J.A.C. 7:27-19.2(d)]</p>	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	The Emergency Generator may be operated at other locations (within the State of New Jersey) only in the event of an emergency, as defined at N.J.A.C. 7:27-19.1. [N.J.A.C. 7:27-22.16(a)]	Monitored by hour/time monitor upon occurrence of event. [N.J.A.C. 7:27-22.16(o)]	<p>Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. 1. For each time the emergency generator is operated at a location other than the facility for which it is originally permitted in the event of an emergency, the Permittee of the emergency generator shall record the following: i) Document the location (name of facility with address) where the emergency generator is operated; ii) Document the emergency that occurred and describe whether the emergency was due to internal or external loss of primary source of energy at the location; iii) If emergency is due to internal loss at the location, document the damages to the primary source of energy and the amount of time needed for repairs; iv) Document the date(s) of operation and the start up and shut down time on each date; v) Document the total operating time at the location based on the generator's hour meter and the total amount of fuel and fuel type used for the duration of the emergency; vi) The name and contact information of the operator of the emergency generator at the location.</p> <p>2. 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.</p> <p>The Permittee of the emergency generator shall have the above records on site within 30 days of the occurrence of the emergency event, maintain the record for a period of no less than 5 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. 7:27-22.16(o)]</p>	Submit notification: Upon occurrence of event the Permittee of the emergency generator must submit the Recordkeeping Requirements to the Regional Enforcement Office within 30 days of the occurrence of the emergency event. [N.J.A.C. 7:27-22.16(o)]



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**Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	Hours of Operation <= 100 hr/yr for testing and maintenance. The limit on the allowable hours for testing and maintenance in accordance with the documentation from manufacturer, the vendor, or the insurance company associated with the engine. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation: Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator shall maintain on site and record the following information:  For each time the emergency generator is specifically operated for testing or maintenance: i. The reason for its operation; ii. The date(s) of operation and the start up and shut down time; iii. The total operating time for testing or maintenance based on the generator's hour meter; and iv. The name of the operator. [N.J.A.C. 7:27-19.11]	None.
9	Maximum Gross Heat Input <= 2.16 MMBTU/hr (HHV). [N.J.A.C. 7:27-22.16(a)]	Other: Engine Rated Capacity. [N.J.A.C. 7:27-22.16(o)].	None.	None.
10	VOC (Total) <= 0.023 tons/yr. Annual emission limit based on the permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
11	NOx (Total) <= 0.033 tons/yr. Annual emission limit based on the permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	CO <= 0.067 tons/yr. Annual emission limit based on the permitted hours per year of operation. [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
13	The owner or operator of the new emergency stationary spark ignition internal combustion engine (SI ICE) with a maximum engine power of HP $\geq$ 130 (kW $\geq$ 100) combusting natural gas or lean burn Liquefied Petroleum Gas (LPG), manufactured on or after January 1, 2009 must comply with the emissions standards in Table 1 to 40 CFR 60 Subpart JJJJ as follows, in units either g/HP-hr or ppmvd at 15 percent O <sub>2</sub> : NO <sub>x</sub> $\leq$ 2.0 g/HP-hr, CO $\leq$ 4.0 g/HP-hr, VOC $\leq$ 1.0 g/HP-hr or NO <sub>x</sub> $\leq$ 160 ppmvd at 15% O <sub>2</sub> , CO $\leq$ 540 ppmvd at 15% O <sub>2</sub> , VOC $\leq$ 86 ppmvd at 15% O <sub>2</sub> . [40 CFR 60.4233(e)]	Other: Monitored by engine manufacturer data. [N.J.A.C. 7:27-22.16(o)] or [N.J.A.C. 7:27- 8.13(a)].	Other: The owner or operator of a SI ICE engine must keep documentation demonstrating compliance with the applicable emission standards. [40 CFR 60.4245(a)(4)].	None.
14	The owner or operator of stationary spark ignition internal combustion engine (SI ICE) must operate and maintain SI ICE that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine. [40 CFR 60.4234]	Other: Monitored by engine manufacturer data. [N.J.A.C. 7:27-22.16(o)] or [N.J.A.C. 7:27- 8.13(a)].	Other: The owner or operator must keep records of the documentation that the engine meets the emission standards. [40 CFR 60.4245(a)(4)].	None.
15	The owner or operator may not install emergency stationary spark ignition internal combustion engine (SI ICE) with a maximum engine power of greater than 19 kW (25 HP) that do not meet the applicable requirements in 40 CFR 60.4233 after January 1, 2011, except for engines that have been modified or reconstructed or for engines that were removed from one existing location and reinstalled at a new location. [40 CFR 60.4236(c)]	Other: Monitored by engine manufacturer data. [N.J.A.C. 7:27-22.16(o)] or [N.J.A.C. 7:27- 8.13(a)].	Other: The owner or operator must keep records of the documentation that the engine meets the emission standards. [40 CFR 60.4245(a)(4)].	None.
16	Starting on January 1, 2011, if the emergency stationary spark ignition internal combustion engine (SI ICE) that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter. [40 CFR 60.4237(b)]	Monitored by hour/time monitor continuously. The owner or operator of an emergency stationary internal combustion engine must install a non-resettable hour meter upon startup of the engine. [40 CFR 60.4245(b)]	Other: For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. [40 CFR 60.4245(b)].	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
17	Emergency stationary spark ignition internal combustion engine (SI ICE) may be operated for the purpose of maintenance checks and readiness testing limited to 100 hours per year, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator 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 60.4243(d)(2)(i)]	Other: Monitored by hours of operation. [40 CFR 60.4245(b)].	Other: The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [40 CFR 60.4245(b)].	None.
18	Owners and operators of all stationary spark ignition internal combustion engines (SI ICE) must keep records of the information in 40 CFR 60.4245(a)(1) through (4) as follows: All notification submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification; maintenance conducted on the engine; for a certified engine, keep documentation from the manufacturer that the engine is certified; if engine is not a certified engine or is a certified engine operating in a non-certified manner, documentation that the engine meets the emission standards. [40 CFR 60.4245(a)]	None.	Other: The owner or operators of all SI ICE must keep records of the information in 40 CFR 60.4245(a)(1) through (4) as follows: (1) All notification submitted to comply with 40 CFR 60 Subpart JJJJ and all documentation supporting any notification; (2) maintenance conducted on the engine; (3) for a certified engine, keep documentation from the manufacturer that the engine is certified; (4) if engine is not a certified engine or is a certified engine operating in a non-certified manner, documentation that the engine meets the emission standards. [40 CFR 60.4245(a)].	None.
19	The owner or operator of stationary spark ignition internal combustion engine (SI ICE) shall comply with the applicable General Provisions in 40 CFR 60 Subpart A as listed in Table 3 in 40 CFR 60 Subpart JJJJ. [40 CFR 60.4246]	None.	None.	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
20	A new or reconstructed stationary reciprocating internal combustion engine (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 JJJJ. [40 CFR 63].	Other: Comply with all applicable provisions at NSPS JJJJ. [40 CFR 63].	None.

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Facility Specific Requirements**

**Emission Unit:** U17 Maintenance Center Emergency Generator**Operating Scenario:** OS1 Maintenance Center Emergency Generator

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	NOx (Total) <= 0.67 lb/hr from BOP160001 based on g/hp-hr emission rates as specified in EPA certificate of conformity.. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	CO <= 1.34 lb/hr from BOP160001 based on g/hp-hr emission rates as specified in EPA certificate of conformity. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	VOC (Total) <= 0.47 lb/hr from BOP160001 based on g/hp-hr emission rates as specified in EPA certificate of conformity. [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**

**Emission Unit:** U99 Gas Collection System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Operating Scenario:** OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Summary of Applicable Federal Requirements:  40 CFR 60 Subpart A 40 CFR 61 Subpart M 40 CFR 62 Subpart OOO 40 CFR 63 Subpart A 40 CFR 63 Subpart AAAA  [40 CFR Federal Rules Summary]	None.	None.	None.
2	Refer to Subject Item Group 1 (GR1) for federal regulations applicable to this emission unit. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Design Capacity: The maximum expected landfill gas generation rate shall be determined using the maximum design capacity, Total Design Capacity of the landfill = 11.7 million metric tons (megagrams, Mg) from BOP080001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
4	VOC (Total) <= 14.8 tons/yr Annual emission limit of uncollected VOC based on the expected gas generation, collection system efficiency and no co-disposal. tons/yr from BOP080001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
5	Methane <= 5,541 tons/yr , annual emission limit from BOP140001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
6	Hydrogen sulfide <= 12.9 tons/yr annual emission limit from BOP080001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

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Facility Specific Requirements**

**Emission Unit:** U99 Gas Collection System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Operating Scenario:** OS1 Gas Collection System

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	VOC (Total) <= 3.38 lb/hr maximum emission rate from BOP080001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	Methane <= 1,226.25 lb/hr maximum emission rate from BOP140001. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Hydrogen sulfide <= 5.01 lb/hr maximum emission rate from BOP080001. [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**

**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Subject Item:** CD100 Open Flare

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Each flare shall be operated and maintained in accordance with manufacturers recommended procedures and control device operating parameters. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	The flare shall have a smokeless design. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
3	The permittee shall monitor the flare pilot burners by a thermocouple or any equivalent device to ensure the presence of a pilot flame. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
4	The permittee shall inspect the flare before May 1 of each year to verify that the flare continues to be operated in accordance with the manufacturer's specifications for the operation of the flare. [N.J.A.C. 7:27-16.13(c)]	Monitored by visual determination annually. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by manual logging of parameter or storing data in a computer data system annually before May 1 of each year. The permittee shall record the following: 1. The name of the person conducting the inspection; 2. The date on which the inspection is conducted; 3. An entry indicating which flare was inspected; 4. Any changes or adjustments made to the flare as a result of the inspection; and 5. A statement indicating that the flare is currently being operated in compliance with the manufacturer's specifications. [N.J.A.C. 7:27-16.13(c)]	Submit a report: Upon occurrence of event. The owner or operator shall ensure that an annual adjustment/inspection report is submitted electronically to the Department within 45 days after the inspection is completed. [N.J.A.C. 7:27-22.18(h)]



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Facility Specific Requirements**

**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Subject Item:** CD101 New Enclosed Flare

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Each flare shall be operated and maintained in accordance with manufacturers recommended procedures and control device operating parameters. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	The enclosed flare (CD101) shall reduce the concentration of Non-methane Organic Carbon (NMOC) by no less than 98% or to 20 ppmvd @ 3% O <sub>2</sub> expressed as Hexane. The flare shall be installed, operated and maintained in accordance with the specifications provided by the manufacturer. [N.J.A.C. 7:27-22.16(a)]	Monitored by stack emission testing every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by stack test results every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
3	Total Throughput <= 2,102.4 MMft <sup>3</sup> per any consecutive 12 month period. The maximum amount of LFG combusted in the enclosed flare, CD101 shall not exceed 2102.4 MMscf per any consecutive 12 month period, corrected to 50 percent methane. [N.J.A.C. 7:27-22.16(a)]	Total Throughput: Monitored by gas flow rate instrument continuously. LFG flow to the flare shall be monitored by a non-resettable gas flow meter. [N.J.A.C. 7:27-22.16(o)]	Total Throughput: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Keep records showing the volume of landfill gas combusted each month and each consecutive 12 month period. [N.J.A.C. 7:27-22.16(o)]	None.
4	Maximum Gross Heat Input: <= 1,072,224 MMBTU (HHV) per any 12 consecutive month period. [N.J.A.C. 7:27-22.16(a)]	Maximum Gross Heat Input: 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)]	Maximum Gross Heat Input: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Keep records showing the heat input to the flare for each month and each consecutive 12 month period. [N.J.A.C. 7:27-22.16(o)]	None.
5	The flare shall have a smokeless design. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
6	The permittee shall monitor the flare pilot burners by a thermocouple or any equivalent device to ensure the presence of a pilot flame. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	The permittee shall inspect the flare before May 1 of each year to verify that the flare continues to be operated in accordance with the manufacturer's specifications for the operation of the flare. [N.J.A.C. 7:27-16.13(c)]	Monitored by visual determination annually. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by manual logging of parameter or storing data in a computer data system annually before May 1 of each year. The permittee shall record the following: 1. The name of the person conducting the inspection; 2. The date on which the inspection is conducted; 3. An entry indicating which flare was inspected; 4. Any changes or adjustments made to the flare as a result of the inspection; and 5. A statement indicating that the flare is currently being operated in compliance with the manufacturer's specifications. [N.J.A.C. 7:27-16.13(c)]	Submit a report: Upon occurrence of event. The owner or operator shall ensure that an annual adjustment/inspection report is submitted electronically to the Department within 45 days after the inspection is completed. [N.J.A.C. 7:27-22.18(h)]
8	Minimum Operating Temperature at the Exit of the Combustion Section $\geq$ 1,600 degrees F. The flare shall be designed to operate at no less than the minimum operating temperature, except during periods of startup and shutdown, where temperatures may be below the minimum operating temperature. Startup and shutdown should not exceed a duration of 30 minutes. [N.J.A.C. 7:27-22.16(a)]	Minimum Operating Temperature at the Exit of the Combustion Section: Monitored by temperature instrument continuously based on a 15 minute block average. The owner or operator shall install, operate and maintain an operational warning system, properly shielded from direct contact with the flame, consisting of an automated low-temperature alarm and a gas feed cut-off point based on continuous flare temperature measurements in order to ensure that the flare is not operated below the required temperature except as allowed during limited during start-up and shutdown periods. The warning system will notify the operator prior to the temperature reaching the minimum operating temperature. 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)]	Minimum Operating Temperature at the Exit of the Combustion Section: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	Submit a report: 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) in a format acceptable to the Southern Regional Enforcement office stating if any deviations have occurred. The report will include the temperature reading, date, time, and duration of any deviations that have occurred. [N.J.A.C. 7:27-22.16(o)]

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

**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Subject Item:** CD102 H2S Gas Treatment Unit

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	H2S <= 35 ppmv. When landfill gas is routed to the RNG plant (CD103), the landfill gas H2S treatment system shall reduce H2S concentration to 35 ppmv at the outlet. [N.J.A.C. 7:27-22.16(a)]	H2S: Monitored by gas sampling quarterly: once per quarter; quarters shall begin on January 1, April 1, July 1, and October 1 of each year. The Permittee shall sample and analyze the landfill gas taken from the main well header. [N.J.A.C. 7:27-22.16(o)]	H2S: Recordkeeping by manual logging of parameter or storing data in a computer data system quarterly: once per quarter; quarters shall begin on January 1, April 1, July 1, and October 1 of each year. [N.J.A.C. 7:27-22.16(o)]	None.
2	H2S <= 300 ppmv. When landfill gas is routed to the open flare (CD100) or the enclosed flare (CD101), the landfill gas H2S treatment system shall reduce H2S concentration to 300 ppmv at the outlet. [N.J.A.C. 7:27-22.16(a)]	H2S: Monitored by gas sampling each week during operation. The Permittee shall sample and analyze the landfill gas taken from the main well header. [N.J.A.C. 7:27-22.16(o)]	H2S: Recordkeeping by manual logging of parameter or storing data in a computer data system each week during operation. [N.J.A.C. 7:27-22.16(o)]	None.

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Facility Specific Requirements**

**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Subject Item:** CD103 Thermal Oxidizer for RNG Plant

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The thermal oxidizer (CD103) shall reduce the concentration of Non-methane Organic Carbon (NMOC) by no less than 98% or to 20 ppmvd @ 3% O <sub>2</sub> expressed as Hexane. The thermal oxidizer shall be installed, operated and maintained in accordance with the specifications provided by the manufacturer. [N.J.A.C. 7:27-22.16(a)]	Monitored by stack emission testing once initially and every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by stack test results once initially and every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
2	Minimum Operating Temperature at the Exit of the Combustion Section $\geq$ 1,500 degrees F. [N.J.A.C. 7:27-22.16(a)]	Minimum Operating Temperature at the Exit of the Combustion Section: Monitored by temperature instrument continuously. An alarm or other operational warning system shall be installed, properly shielded from direct contact with the flame and shall be designed to sound when temperatures less than the permitted operating temperature are detected at any time. The owner or operator 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)]	Minimum Operating Temperature at the Exit of the Combustion Section: Recordkeeping by data acquisition system (DAS) / electronic data storage continuously. [N.J.A.C. 7:27-22.16(o)]	None.
3	Residence Time $\geq$ 0.5 seconds for waste gas flow. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
4	Total Throughput $\leq$ 690.6 MMft <sup>3</sup> per any consecutive 12 month period. The maximum amount of waste gas combusted in the thermal oxidizer, CD103 shall not exceed 690.6 MMscf per any consecutive 12 month period, corrected to 50 percent methane. [N.J.A.C. 7:27-22.16(a)]	Total Throughput: Monitored by gas flow rate instrument continuously. Waste gas flow to the oxidizer shall be monitored by a non-resettable gas flow meter. [N.J.A.C. 7:27-22.16(o)]	Total Throughput: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Keep records showing the volume of landfill gas combusted each month and each consecutive 12 month period. [N.J.A.C. 7:27-22.16(o)]	None.

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Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	Maximum Gross Heat Input $\leq$ 127,900 MMBTU (HHV) per any 12 consecutive month period . [N.J.A.C. 7:27-22.16(a)]	Maximum Gross Heat Input: 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)]	Maximum Gross Heat Input: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Keep records showing the heat input to the flare for each month and each consecutive 12 month period. [N.J.A.C. 7:27-22.16(o)]	None.
6	Maximum Gross Heat Input $\leq$ 14.6 MMBTU/hr (HHV). Combined for waste gas flow and natural gas usage. [N.J.A.C. 7:27-22.16(a)]	None.	Other: Keep records showing the maximum heat input rate.[N.J.A.C. 7:27-22.16(o)].	None.

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**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Subject Item:** CD104 Off-Specification Gas Utility Flare for RNG Plant

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Each flare shall be operated and maintained in accordance with manufacturers recommended procedures and control device operating parameters. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	The flare shall have a smokeless design. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	The permittee shall monitor the flare pilot burners by a thermocouple or any equivalent device to ensure the presence of a pilot flame. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
4	The permittee shall inspect the flare before May 1 of each year to verify that the flare continues to be operated in accordance with the manufacturer's specifications for the operation of the flare. [N.J.A.C. 7:27-16.13(c)]	Monitored by visual determination annually. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by manual logging of parameter or storing data in a computer data system annually before May 1 of each year. The permittee shall record the following: 1. The name of the person conducting the inspection; 2. The date on which the inspection is conducted; 3. An entry indicating which flare was inspected; 4. Any changes or adjustments made to the flare as a result of the inspection; and 5. A statement indicating that the flare is currently being operated in compliance with the manufacturer's specifications. [N.J.A.C. 7:27-16.13(c)]	Submit a report: Upon occurrence of event. The owner or operator shall ensure that an annual adjustment/inspection report is submitted electronically to the Department within 45 days after the inspection is completed. [N.J.A.C. 7:27-22.18(h)]

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Facility Specific Requirements**

**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Operating Scenario:** OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Summary of Applicable Federal Regulations: 40 CFR 60 Subpart A 40 CFR 61 Subpart M 40 CFR 62 Subpart OOO 40 CFR 63 Subpart A 40 CFR 63 Subpart AAAA [40 CFR Federal Rules Summary]	None.	None.	None.
2	Refer to Subject Item Group 1 (GR1), for federal regulations applicable to this emission unit. [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
3	<p>INITIAL STACK TESTING SUMMARY: OS1</p> <p>The permittee shall conduct a stack test using a protocol approved by the Department to demonstrate compliance with emission limits for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub> and Methane as specified in the compliance plan for OS1; and to demonstrate compliance with Non-Methane Organic Carbon (NMOC) emission limit or NMOC reduction efficiency as specified in the compliance plan for CD101.</p> <p>Testing must be conducted at worst-case permitted operating conditions with regard to meeting the applicable emission standards, but without creating an unsafe condition.</p> <p>THIS STACK TEST IS SUBJECT TO THE SIGNIFICANT MODIFICATION SUPPLEMENTAL FEES PURSUANT TO N.J.A.C. 7:27-22.31. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Other: The stack test must be conducted either within 180 days after initial startup of the new or modified source or within 60 days of approval of a timely submitted protocol, whichever comes later.</p> <p>[N.J.A.C. 7:27-22.16(o)].</p>	<p>Other: Recordkeeping as required under the applicable operating scenario(s). [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 Emission Measurement Section (EMS) at Mail Code: 09-01, PO Box 420, Trenton, NJ 08625 within 60 days from the date of the approved initial (or modified) operating permit. The protocol and test report must be prepared and submitted on a CD using the Electronic Reporting Tool (ERT), unless another format is approved by EMS. The ERT program can be downloaded at: <a href="https://www.epa.gov/chief">https://www.epa.gov/chief</a>. Within 30 days of protocol approval or no less than 60 days prior to the testing deadline, whichever is later, the permittee must contact EMS at 609-984-3443 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 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. [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>INITIAL STACK TESTING SUMMARY: OS3</p> <p>The permittee shall conduct a stack test using a protocol approved by the Department to demonstrate compliance with emission limits for NO<sub>x</sub>, CO and VOC as specified in the compliance plan for OS3; and to demonstrate compliance with Non-Methane Organic Carbon (NMOC) emission limit or NMOC reduction efficiency as specified in the compliance plan for CD103.</p> <p>Testing must be conducted at worst-case permitted operating conditions with regard to meeting the applicable emission standards, but without creating an unsafe condition.</p> <p>THIS STACK TEST IS SUBJECT TO THE SIGNIFICANT MODIFICATION SUPPLEMENTAL FEES PURSUANT TO N.J.A.C. 7:27-22.31. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Other: The stack test must be conducted within 180 days after initial startup of the new or modified source or within 60 days of approval of a timely submitted protocol, whichever comes later.</p> <p>If a source is subject to NSPS, extending the testing date beyond 180 days after the source's initial startup requires prior approval from US EPA. [N.J.A.C. 7:27-22.18] and [N.J.A.C. 7:27-22.16(o)].</p>	<p>Other: Recordkeeping as required under the applicable operating scenario(s). [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 Emission Measurement Section (EMS) at Mail Code: 09-01, PO Box 420, Trenton, NJ 08625 within 60 days from the date of the approved initial (or modified) operating permit. The protocol and test report must be prepared and submitted on a CD using the Electronic Reporting Tool (ERT), unless another format is approved by EMS. The ERT program can be downloaded at: <a href="https://www.epa.gov/chief">https://www.epa.gov/chief</a>. Within 30 days of protocol approval or no less than 60 days prior to the testing deadline, whichever is later, the permittee must contact EMS at 609-984-3443 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 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. [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
5	<p>5-YEAR STACK TESTING SUMMARY: OS1 and OS3</p> <p>The permittee shall conduct a stack test no later than every five years (see General Provisions) from the last stack test using an approved protocol to demonstrate compliance with emission limits for NO<sub>x</sub>, CO, VOC, SO<sub>2</sub> and Methane as specified in the compliance plan for OS1; to demonstrate compliance with NO<sub>x</sub>, CO and VOC as specified in the compliance plan for OS3; and to demonstrate compliance with Non-Methane Organic Carbon (NMOC) emission limit or NMOC reduction efficiency as specified in the compliance plan for CD101 and CD103.</p> <p>Testing must be conducted at worst-case permitted operating conditions with regard to meeting the applicable emission standards, but without creating an unsafe condition. [N.J.A.C. 7:27-22.16(a)]</p>	Other: Monitoring as required under the applicable operating scenario(s). [N.J.A.C. 7:27-22.16(o)].	Other: Recordkeeping as required under the applicable operating scenario(s). [N.J.A.C. 7:27-22.16(o)].	<p>Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Submit a stack test protocol to the Emission Measurement Section (EMS) at Mail Code: 09-01, PO Box 420, Trenton, NJ 08625 no later than 12 months prior to the completion of the five year period since the last stack test. The protocol and test report must be prepared and submitted on a CD using the Electronic Reporting Tool (ERT), unless another format is approved by EMS. The ERT program can be downloaded at: <a href="https://www.epa.gov/chief">https://www.epa.gov/chief</a>. Within 30 days of protocol approval or no less than 60 days prior to the testing deadline, whichever is later, the permittee must contact EMS at 609-984-3443 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 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. [N.J.A.C. 7:27-22.18(e)] and . [N.J.A.C. 7:27-22.18(h)]</p>
6	Opacity <= 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. 7:27-22.16(a)]	None.	None.	None.
7	No Visible Emissions, exclusive of condensed water vapor, except for no more than 3 minutes in any consecutive 30-minute period. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT A/

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	Comply with the approved Odor Management Plan (See ATTACHMENTS TO FACILITY SPECIFIC REQUIREMENTS). [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
9	SO <sub>2</sub> ≤ 2,000 ppmv at standard conditions. Emission limit applies at all times, including startup and shutdown. [N.J.A.C. 7:27-7.2(b)1]	None.	None.	None.
10	NO <sub>x</sub> (Total) ≤ 32.15 tons/yr based on the annual throughput limit for volume of landfill gas sent to the enclosed flare (CD101) and the manufacturer's emission factor for CD101. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
11	CO ≤ 107.2 tons/yr based on the annual throughput limit for volume of landfill gas sent to the enclosed flare (CD101) and the manufacturer's emission factor for CD101. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	VOC (Total) ≤ 2.18 tons/yr based on the annual throughput limit for volume of landfill gas sent to the enclosed flare (CD101) and the VOC destruction efficiency of CD101. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
13	SO <sub>2</sub> ≤ 51.55 tons/yr based on the annual throughput limit for volume of landfill gas sent to the H <sub>2</sub> S Treatment Unit (CD102) and the H <sub>2</sub> S control efficiency of CD102. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
14	TSP ≤ 8.94 tons/yr based on the annual throughput limit for volume of landfill gas sent to the enclosed flare (CD101) and AP42 (Table 2.4-5) emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
15	PM-10 (Total) ≤ 8.94 tons/yr based on the annual throughput limit for volume of landfill gas sent to the enclosed flare (CD101) and AP42 (Table 2.4-5) emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT A/

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	PM-2.5 (Total) <= 8.94 tons/yr based on the annual PM-10 emission limit for landfill gas sent to the enclosed flare (CD101). [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
17	Methane <= 218.65 tons/yr based on the annual throughput limit for volume of landfill gas sent to the enclosed flare (CD101) and the methane destruction efficiency of CD101. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
18	Arsenic compounds <= 0.00000683 tons/yr based on annual natural gas usage for CD103 and AP-42 (Table 1.4-4) emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
19	Cadmium compounds <= 0.0000376 tons/yr based on annual natural gas usage for CD103 and AP-42 (Table 1.4-4) emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
20	Cobalt compounds <= 0.00000287 tons/yr based on annual natural gas usage for CD103 and AP-42 (Table 1.4-4) emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
21	Formaldehyde <= 0.00256 tons/yr based on annual natural gas usage for CD103 and AP-42 (Table 1.4-3) emission factor for natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
22	Hydrogen chloride <= 4.12 tons/yr based on the annual throughput limit for volume of landfill gas sent to the enclosed flare (CD101) and the chlorine concentration in the landfill gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
23	Tetrachloroethane (1,1,2,2-) <= 0.000562 tons/yr based on a concentration of 0.1 ppmv in landfill gas and annual landfill gas flow to CD103. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
24	HAPs (Total) <= 4.12 tons/yr based on the sum of individual annual HAP limits. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
25	<p>While the RNG Plant is not operating, all emissions from this emission unit shall be vented to the enclosed flare (CD101). The open flare (CD100) shall only be used while the RNG plant is not operating, during the following situations:</p> <p>1. During an emergency. Emergencies are limited to situations that arise from sudden and reasonably unforeseeable events beyond the control of an owner or operator of a facility, such as an unforeseen system capacity shortage, that requires immediate corrective action to prevent system collapse or to restore normal operations at the facility.</p> <p>2. During scheduled maintenance on the enclosed flare CD101 [See OS2], or</p> <p>3. During episodes of low landfill gas (LFG) flow. Episodes of low LFG flow are those where there is not enough LFG to operate the enclosed flare CD101. The minimum LFG flow rate for the enclosed flare is 500 scfm @ 50% CH<sub>4</sub>. [See OS2] [N.J.A.C. 7:27-22.16(a)]</p>	None.	<p>Other: When the open flare (CD100) is used during an emergency, the facility shall comply with these recordkeeping requirements. The owner or operator shall maintain on site and record the following information:</p> <p>1. Once per month, the total operating time of the open flare. Document the type of emergency.</p> <p>2. For each time the open flare is specifically operated for emergency:</p> <p>i. The reason for its operation;</p> <p>ii. The date(s) of operation and the start up and shut down time;</p> <p>iii. The total operating time for emergency use; and</p> <p>iv. The name of the operator.</p> <p>The owner or operator of an open flare shall keep the above records for a period no less than 5 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. 7:27-22.16(o)].</p>	<p>Submit a report: Every quarter (three months) beginning on the first of the month of the first full quarter following the effective date of the approved permit. Quarters shall begin on January 1, April 1, July 1, and October 1 of each year. When the open flare (CD100) is used during an emergency, the facility shall comply with these submittal/action requirements. The quarterly report should be submitted to the Southern Region Enforcement Office. The report shall include all of the information listed in the recordkeeping requirement. The quarterly report is not necessary if the open flare does not operate. [N.J.A.C. 7:27-22.16(o)]</p>
26	<p>The Permittee shall sample and analyze the quality and quantity of the landfill gas, taken from the main well header, for Hazardous Air Pollutants (using the current EPA Method for HAPs analyses), Chloride (Cl), Methane and Hydrogen Sulfide (H<sub>2</sub>S). [N.J.A.C. 7:27-22.16(a)]</p>	<p>Monitored by gas sampling annually, based on an instantaneous determination using EPA Method TO-14 for HAPs analyses. [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 annually. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Submit a report: Within 60 days of sampling. The report shall be submitted to the Regional Enforcement Office. [N.J.A.C. 7:27-22.16(o)]</p>

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
27	H2S <= 30 ppbv at the property's fenceline. [N.J.A.C. 7:27- 7.3]	<p>Other: For H2S &lt;= 30 ppbv:</p> <ol style="list-style-type: none"> <li>1. Monitored by Department-approved periodic emission monitoring protocol once per operating day to obtain a 30-minute average (5-minute block basis) reading between the hours of 7PM and 7AM.</li> <li>2. Monitoring shall be performed downwind of the landfill at the property's fenceline.</li> <li>3. Monitoring frequency may be reduced to once per week, after each daily 30-minute average result for a full quarter (3 months) shows H2S &lt;=30 ppbv.</li> </ol> <p>For H2S &gt; 30 ppbv:</p> <ol style="list-style-type: none"> <li>1. If any weekly 30-minute average monitoring result shows H2S &gt; 30 ppbv or if there is a verified odor complaint, the frequency shall be reverted to daily monitoring.</li> <li>2. If three consecutive daily H2S readings show H2S &gt; 30 ppbv, daily monitoring shall be conducted at the closest neighborhood downwind from the landfill.</li> <li>3. If the H2S concentration in the closest neighborhood downwind from the landfill is &gt; 30 ppbv, the facility shall implement the corrective actions in the Odor Management Plan until the H2S concentration is &lt;= 30 ppbv.</li> </ol> <p>After installing and commencing operation of a landfill gas treatment/removal system for H2S, ACUA may request to reduce the H2S monitoring frequency to quarterly by submitting an operating permit modification application to the Department. [N.J.A.C. 7:27-22.16(o)].</p>	<p>H2S: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. Record Date, Time, Name of Persons conducting monitoring, Wind Speed, Wind Direction, Location of Measurement, H2S concentrations, and equipment calibration/ maintenance records. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Other (provide description): Upon occurrence of event. For updates to an approved monitoring protocol, submit protocol change request(s) to the Bureau of Air Monitoring, 401 E State St, PO Box 420, Mail Code 401-07H, Trenton, NJ 08625-0420, for review and approval. Notify the regional enforcement office of all monitoring frequency changes within 3 days of the change. Call the Department Hotline at 1-877-WARNDEP (927-6337) if monitoring at the property's fenceline indicates H2S concentration is greater than 30 ppbv. [N.J.A.C. 7:27-22.16(o)]</p>

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**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Operating Scenario:** OS1 MSW Landfill & Gas Collection and Enclosed Flare

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	NOx (Total) <= 7.34 lb/hr. Maximum permitted emission rate based on the emission factor provided on the flare specification sheet. [N.J.A.C. 7:27-22.16(a)]	NOx (Total): Monitored by stack emission testing every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
2	CO <= 24.5 lb/hr. Maximum permitted emission rate based on the emission factor provided on the flare specification sheet. [N.J.A.C. 7:27-22.16(a)]	CO: Monitored by stack emission testing every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
3	VOC (Total) <= 0.5 lb/hr. Maximum permitted emission rate based on average VOC concentrations from test results. [N.J.A.C. 7:27-22.16(a)]	VOC (Total): Monitored by stack emission testing every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
4	SO2 <= 25 lb/hr (in any 60-minute period), for the enclosed flare (CD101), based on the calculation procedure at N.J.A.C. 7:27-7.2(r). Emission limit applies at all times, including startup and shutdown. [N.J.A.C. 7:27- 7.2(b)2]	None.	None.	None.
5	SO2 <= 11.8 lb/hr. Maximum permitted emission rate based on landfill gas sampling and analysis and operation of the landfill gas H2S treatment system. [N.J.A.C. 7:27-22.16(a)]	SO2: Monitored by stack emission testing every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	SO2: Recordkeeping by stack test results every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
6	TSP <= 2.04 lb/hr. Maximum permitted emission rate based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
7	PM-10 (Total) <= 2.04 lb/hr. Maximum permitted emission rate based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
8	PM-2.5 (Total) <= 2.04 lb/hr. Maximum permitted emission rate based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT A/

OS1

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	Methane $\leq$ 49.9 lb/hr. Maximum permitted emission rate based on landfill gas with a 50% methane content. [N.J.A.C. 7:27-22.16(a)]	Methane: Monitored by stack emission testing every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	Methane: Recordkeeping by stack test results every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
10	Hydrogen chloride $\leq$ 0.94 lb/hr based on annual landfill gas sampling and analysis for Chloride (Cl). [N.J.A.C. 7:27-22.16(a)]	Hydrogen chloride: Monitored by calculations annually to convert the measured Chloride (Cl) concentration to HCl mass emission rate. [N.J.A.C. 7:27-22.16(o)]	Hydrogen chloride: Recordkeeping by manual logging of parameter or storing data in a computer data system annually. [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:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Operating Scenario:** OS2 MSW Landfill & Gas Collection and Open Flare - maintenance of Enclosed Flare and low landfill gas flow

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	This operating scenario represents emissions vented to the open flare (CD100) during scheduled maintenance for the enclosed flare (CD101) and low landfill gas flow episodes. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	Hours of Operation <= 500 hr/yr for testing and maintenance for the enclosed flare (CD101) and for low landfill gas flow episodes (<500 acfm). The limit on the allowable hours for testing and maintenance of the enclosed flare is in accordance with the documentation from the manufacturer of the enclosed flare. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation: Monitored by hour/time monitor continuously. [N.J.A.C. 7:27-20.16(o)]	Hours of Operation: Recordkeeping by data acquisition system (DAS) / electronic data storage upon occurrence of event. The owner or operator shall maintain on site and record the following information:  For each time the open flare is operated due to the enclosed flare being down for testing or maintenance: i. The reason for its operation; ii. The date(s) of operation and the start up and shut down time; iii. The total operating time for testing or maintenance ; and iv. The name of the operator. For each time the open flare is used due to low flow episodes: i The LFG flow rate. ii. The date(s) of operation and the start up and shut down time; iii. The total operating time during the low flow episode ; and iv. The name of the operator.. [N.J.A.C. 7:27-22.16(o)]	None.
3	NOx (Total) <= 3.83 lb/hr based on flare specifications. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
4	CO <= 20.8 lb/hr based on flare specifications. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
5	VOC (Total) <= 0.23 lb/hr based on landfill gas specifications. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	SO <sub>2</sub> ≤ 15 lb/hr (in any 60-minute period), for the open flare (CD100), based on the calculation procedure at N.J.A.C. 7:27-7.2(r). Emission limit applies at all times, including startup and shutdown. [N.J.A.C. 7:27- 7.2(b)2]	None.	None.	None.
7	SO <sub>2</sub> ≤ 5.52 lb/hr based on landfill gas specifications. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
8	TSP ≤ 1.12 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
9	PM-10 (Total) ≤ 0.94 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
10	PM-2.5 (Total) ≤ 0.94 lb/hr based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
11	Methane ≤ 46 lb/hr based on landfill gas specifications. [N.J.A.C. 7:27-22.16(e)]	None.	None.	None.
12	Hydrogen chloride ≤ 0.44 lb/hr based on landfill gas specifications. [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**

**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Operating Scenario:** OS3 MSW Landfill & Gas Collection and RNG Plant. Waste Gas Stream Controlled by Thermal Oxidizer CD103

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 % , exclusive of condensed water vapor, except for 3 minutes in any consecutive 30-minute period. [N.J.A.C. 7:27-6.2(d)] and [N.J.A.C. 7:27- 6.2(e)]	None.	None.	None.
2	No Visible Emissions, exclusive of condensed water vapor, except for no more than 3 minutes in any consecutive 30-minute period. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	Particulate Emissions <= 0.5 lb/hr based on 0.02 grains per standard cubic foot of source gas emitted from source operation. [N.J.A.C. 7:27- 6.2(a)]	None.	None.	None.
4	NOx (Total) <= 0.876 lb/hr. Maximum permitted emission rate based on the manufacturer's emission factor for CD103. [N.J.A.C. 7:27-22.16(a)]	NOx (Total): Monitored by stack emission testing once initially and every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	NOx (Total): Recordkeeping by stack test results once initially and every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
5	CO <= 2.92 lb/hr. Maximum permitted emission rate based on the manufacturer's emission factor for CD103. [N.J.A.C. 7:27-22.16(a)]	CO: Monitored by stack emission testing once initially and every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	CO: Recordkeeping by stack test results once initially and every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
6	VOC (Total) <= 0.39 lb/hr. Maximum permitted emission rate based on average VOC concentrations from sampling. [N.J.A.C. 7:27-22.16(a)]	VOC (Total): Monitored by stack emission testing once initially and every 5 years (based on completion date of the last stack test), based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-22.16(o)]	VOC (Total): Recordkeeping by stack test results once initially and every 5 years (based on completion date of the last stack test). [N.J.A.C. 7:27-22.16(o)]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. [N.J.A.C. 7:27-22.16(o)]
7	SO2 <= 0.45 lb/hr. Maximum permitted emission rate based on landfill gas sampling and analysis and operation of the landfill gas H2S treatment system. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT A/

OS3

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	TSP <= 0.25 lb/hr. Maximum permitted emission rate based on AP-42 (Table 2.4-5) emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
9	PM-10 (Total) <= 0.25 lb/hr. Maximum permitted emission rate based on the permitted TSP emission limit. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
10	PM-2.5 (Total) <= 0.25 lb/hr. Maximum permitted emission rate based on the permitted TSP emission limit. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
11	Arsenic compounds <= 0.00000156 lb/hr Maximum permitted emission rate based on combustion of natural gas for pilot flame and AP 42 (Table 1.4-4) emission factor for natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
12	Cadmium compounds <= 0.00000858 lb/hr Maximum permitted emission rate based on combustion of natural gas for pilot flame and AP 42 (Table 1.4-4) emission factor for natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
13	Cobalt compounds <= 6.55E-7 lb/hr Maximum permitted emission rate based on combustion of natural gas for pilot flame and AP 42 (Table 1.4-4) emission factor for natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
14	Formaldehyde <= 0.000585 lb/hr Maximum permitted emission rate based on combustion of natural gas for pilot flame and AP 42 (table 1.4-3) emission factor for natural gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
15	Hydrogen chloride <= 0.586 lb/hr Maximum permitted emission rate based on combustion of landfill gas and AP 42 (Section 2.4.4.2) emission factor for landfill gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

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Facility Specific Requirements**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	Tetrachloroethane (1,1,2,2-) <= 0.000128 lb/hr Maximum permitted emission rate based on combustion of landfill gas with a concentration of 0.1 ppm in landfill gas. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

BOP230003

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

**Emission Unit:** U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

**Operating Scenario:** OS4 MSW Landfill & Gas Collection and RNG Plant. Off-Spec gas and natural gas unable to be injected into pipeline controlled by utility flare CD104

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	<p>Maximum Gross Heat Input <math>\leq</math> 117,750 MMBTU (HHV) per any 12 consecutive month period.</p> <p>Gas flow from the RNG plant shall only be directed to the open flare CD104 if the product does not meet natural gas specifications or the natural gas product cannot be injected into a natural gas pipeline. [N.J.A.C. 7:27-22.16(a)]</p>	<p>Maximum Gross Heat Input: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis).</p> <p>Monitor the methane content of the waste gas and the waste gas flow rate continuously.</p> <p>Calculate the total heat input for each calendar month based on the measured methane content and the measured waste gas flow rate.</p> <p>The annual gross heat input for any given month shall be calculated by summing the total heat input for that month with the total heat input for each of the immediately preceding 11 calendar months. [N.J.A.C. 7:27-22.16(o)]</p>	<p>Maximum Gross Heat Input: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation.</p> <p>Maintain record of the methane content of the waste gas and the waste gas flow rate every 15 minutes, during operation.</p> <p>Maintain record of the gross heat input to the flare for each month and each consecutive 12 month period. [N.J.A.C. 7:27-22.16(o)]</p>	None.
2	NOx (Total) $\leq$ 5.34 lb/hr. Maximum permitted emission rate based on manufacturer emission factor and permitted heat input rate. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	CO $\leq$ 24.3 lb/hr. Maximum permitted emission rate based on manufacturer emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
4	VOC (Total) $\leq$ 0.425 lb/hr. Maximum permitted emission rate based on AP 42 (table 2.4-2) emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
5	SO2 $\leq$ 0.929 lb/hr. Maximum permitted emission rate based on landfill gas sampling and analysis and operation of the landfill gas H2S treatment system. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

U100 Gas Control System subject to 40 CFR 62 Subpart OOO and MACT A/

OS4

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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>
6	TSP <= 1.33 lb/hr. Maximum permitted emission rate based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
7	PM-10 (Total) <= 1.33 lb/hr. Maximum permitted emission rate based on AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
8	PM-2.5 (Total) <= 1.33 lb/hr. Maximum permitted emission rate based on the permitted PM-10 emission limit. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
9	Hydrogen chloride <= 0.635 lb/hr. Maximum permitted emission rate based on AP 42 (Section 2.4.4.2) emission factor for landfill gas. [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**

Emission Unit: U101 Waste Oil Heater

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	All other emissions are below the reporting threshold of N.J.A.C 7:27-22, Appendix. [N.J.A.C. 7:27-22]	None.	None.	None.
2	Used oil generated off-site and combusted or blended on-site, shall be limited to on-specification used oil as defined at N.J.A.C. 7:26A-6.2(a). These specifications are as follows: Arsenic <= 5 ppmw Cadmium <= 2 ppmw Chromium <= 10 ppmw Lead <= 100 ppmw Flash point >= 100° F Total halogens <= 1000 ppmw [N.J.A.C. 7:27-20]	Monitored by review of fuel delivery records per delivery. Obtain a copy of the certified lab analysis from the supplier showing the constituents and properties listed in the Applicable Requirement. [N.J.A.C. 7:27-22.16(o)]	Recordkeeping by certified lab analysis results per delivery showing the constituents and properties listed in the Applicable Requirement. [N.J.A.C. 7:27-22.16(o)]	None.
3	On-specification used oil or processed used oil fuel may be blended with commercial fuel oil. The blend must meet the applicable sulfur standard of N.J.A.C. 7:27-9 and the ash content provisions of N.J.A.C. 7:27-20.8. [N.J.A.C. 7:27-20.6]	None.	None.	None.
4	Ash content <= 0.15 weight %. Maximum allowable ash content of on-specification used oil or any blends of on-specification used oil or processed used oil fuel with commercial fuel oil. [N.J.A.C. 7:27-20.8(a)]	Monitored by fuel sampling (e.g. oil) per delivery and measured with ASTM Standard Test Method for Ash from Petroleum Products by ASTM D 482-91. Obtain a copy of the certified lab analysis from the supplier showing ash content. [N.J.A.C. 7:27-20.8(c)] and [N.J.A.C. 7:27-20.8(d)]	Recordkeeping by certified lab analysis results per delivery showing ash content [N.J.A.C. 7:27-22.16(o)]	None.
5	Sulfur Content in Fuel <= 15 ppmw (0.0015% by weight). Effective 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 showing fuel sulfur content. [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.



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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	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 stored in New Jersey may be used in New Jersey after the operative date of the applicable standard in Table 1B. [N.J.A.C. 7:27- 9.2(b)]	None.	None.	None.
7	Particulate Emissions <= 0.2 lb/hr based on the heat input rate of the oil heater. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
8	TSP <= 0.006 lb/hr. [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**

Emission Unit: U102 Vermeer TR626 Portable Trommel Screener

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No Visible Emissions, exclusive of condensed water vapor, except for no more than 3 minutes in any consecutive 30-minute period. [N.J.A.C. 7:27-22.16(a)]	<p>Monitored by visual determination each month during operation. Conduct visual inspections during daylight hours to identify if there are visible emissions, other than condensed water vapor. Select an observation position enabling clear view of emission point(s), minimum 15 feet away without sunlight shining directly into the eyes. Observe for a minimum duration of 30 minutes. Clock observation with two stopwatches starting the 1st watch at the commencement of the 30-minute observation period and starting and stopping the 2nd watch every time visible emissions are first seen and when they cease, and record the observation. If visible emissions are observed for more than 3 minutes in the 30-consecutive minutes:</p> <p>(1) Verify the equipment and/or control device causing visible emissions is operating according to manufacturer's specifications. If it is not operating properly, take corrective action immediately to eliminate the excess emissions. (2) If the visible emissions problem is not corrected within 24 hours, a certified opacity reader shall perform an opacity observation, in accordance with N.J.A.C. 7:27B-2. Conduct opacity observations, in accordance with N.J.A.C. 7:27B-2, each day until the opacity problem is successfully corrected. [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 each month during operation. Record and retain the following:</p> <p>(1) Date and time of inspection;  (2) Emission Point number;  (3) Operational status of equipment;  (4) Observed results and conclusions;  (5) Description of corrective action taken if needed;  (6) Date and time opacity problem was solved, if applicable;  (7) N.J.A.C. 7:27B-2 results if conducted; and  ((8) Name of person(s) conducting inspection. [N.J.A.C. 7:27-22.16(o)]</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
2	Hours of Operation <= 750 hours during any consecutive 12 month period. [N.J.A.C. 7:27-22.16(a)]	Hours of Operation: Monitored by hour/time monitor continuously. The screener shall be equipped with a nonresettable hour meter. [N.J.A.C. 7:27-22.16(o)]	Hours of Operation: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Hours of operation during any consecutive 12 month period shall be calculated by the sum of the hours of operation during any one month added to the sum of the hours of operation during the preceding 11 months. [N.J.A.C. 7:27-22.16(o)]	None.
3	Total Throughput <= 5,400 ft <sup>3</sup> /hr based on manufacturer specifications. [N.J.A.C. 7:27-22.16(a)]	None.	Other: Maintain records showing maximum equipment capacity.[N.J.A.C. 7:27-22.16(o)].	None.
4	TSP <= 0.54 tons/yr based on permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
5	PM-10 (Total) <= 0.22 tons/yr based on permitted hours per year of operation. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
6	PM-2.5 (Total) <= 0.1 tons/yr based on permitted hours per year of operation. [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**

**Emission Unit:** U102 Vermeer TR626 Portable Trommel Screener**Operating Scenario:** OS1 Screen Conveyor 1, OS2 Screen Conveyor 2

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	TSP <= 0.31 lb/hr for each conveyor. Based on maximum hourly throughput limit and AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	PM-10 (Total) <= 0.11 lb/hr for each conveyor. Based on maximum hourly throughput limit and AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	PM-2.5 (Total) <= 0.11 lb/hr for each conveyor. Based on maximum hourly throughput limit and AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

BOP230003

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

**Emission Unit:** U102 Vermeer TR626 Portable Trommel Screener**Operating Scenario:** OS3 Screener

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	TSP <= 0.82 lb/hr based on maximum hourly throughput limit and AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
2	PM-10 (Total) <= 0.36 lb/hr based on maximum hourly throughput limit and AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.
3	PM-2.5 (Total) <= 0.048 lb/hr based on maximum hourly throughput limit and AP-42 emission factor. [N.J.A.C. 7:27-22.16(a)]	None.	None.	None.

**Odor Management Plan**

**Atlantic County Utilities Authority Solid Waste Facility**

**6700 Delilah Road**

**Egg Harbor Township, New Jersey**



**Atlantic County  
Utilities Authority**

**Date: July 2, 2015**

**Revised: February 21, 2017**

**Revised: April 28, 2017**

**Revised: August 25, 2017**

**Revised: March 28, 2018**

**Revised: July 19, 2018**

**Revised: August 31, 2023**

**Odor Management Plan**  
**AT Atlantic County Utilities Authority (ACUA) Solid Waste Facility**

**FACILITY INFORMATION**

Facility/Company (Operator of Facility)	Atlantic County Utilities Authority
Facility/Company Address	6700 Delilah Road, Egg Harbor Township, NJ 08234
Name of Responsible Facility Representative	Gary L. Conover
Title	ACUA Vice President of Solid Waste
Signature	
Date	August 31, 2023

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## **H<sub>2</sub>S Monitoring Protocol Attachments**

- Attachment 1:** ACUA Landfill H<sub>2</sub>S Monitoring Locations
- Attachment 2:** ACUA Landfill H<sub>2</sub>S Monitoring Locations w/nearest residential properties
- Attachment 3:** ACUA's H<sub>2</sub>S Monitoring Form
- Attachment 4:** Jerome 631-X H<sub>2</sub>S Analyzer User Manual/Operations Guide
- Attachment 5:** NJDEP Bureau of Air Monitoring letters dated 2/8/17 & 2/15/17
- Attachment 6:** ACUA Employee List, by Title, who will/may perform Odor Monitoring Surveys



## **1.0 Introduction**

### **1.1 Background**

The Atlantic County Utilities Authority (ACUA) Solid Waste Facility is located on 360 acres, of which approximately 102 acres has been permitted as a sanitary landfill. NJDEP Solid Waste Facility Program Interest No. 143393, Permit No. SWF060001 and Title V Air Pollution Control Operating Permit Program Interest No. 70506, Permit Activity No. BOP140001. The landfill was constructed in 1991 and original was permitted as a limited use landfill accepting only non-putrescible waste such as bulky waste, construction and demolition waste and incinerator ash. The landfill's proximity to the Atlantic City International Airport and the potential of attracting large numbers of seagulls, which are hazardous to air transportation, was the main reason for this restricted use.

In July 2000, ACUA successfully completed a pilot project with guidance of avian experts in which municipal solid waste was landfilled at night when seagulls return to the coast to roost. Trash is covered at the end of the nighttime work shift. Wildlife biologists are on site dawn to dusk daily to monitor and deter activity of birds that could present a danger to air traffic.

The organic matter in municipal solid waste breaks down as it reacts with water and oxygen that pass through the material. As the waste decomposes, methane and other gases are formed. Gas extraction wells collect methane and other gases from the landfill. Gas can be destroyed in a flare or converted to electricity at the landfill gas to energy project to prevent the methane and other gases from entering the atmosphere.

ACUA's solid waste facility includes: a 102 acre sanitary landfill, approximately a 10 acre yard waste composting facility, a single stream recycling center, a maintenance shop, a truck wash, a scale house, a diesel and unleaded gas fuel island, a CNG fueling Station and ACUA's Main Administrative Office.

### **1.2 Purpose of the Odor Management Plan**

This Odor Management Plan is intended to become an integrated part of daily operations at the ACUA Solid Waste Facility so as to effect diligent identification and remediation of odors generated at this facility.

## **2.0 Odor Monitoring**

This odor monitoring program has been designed to provide guidance in the identification and documentation of odors through the utilization of self-inspections and odor complaint investigations. In addition, this program outlines the general methods by which odor sources can be identified and resolved. At ACUA's solid waste facility there are several potential sources of odor, such as: fugitive landfill gas (of which a component are sulfur compounds such as hydrogen sulfide), leachate, yard waste composting facility and the active workforce at the landfill. Odor Monitoring shall include, but not be limited to, these identified potential sources.

## 2.1 Identifying the presence of odor

The first step in the process of controlling odors is to determine if odors are present. Two methods of identifying odors and how they are implemented as part of this Odor Management Plan are discussed in the following sections.

### Routine Employee Observations

When any on-site facility employee detects an odor that has sufficient, intensity or volume that it could lead to detection off-site, it will be reported to the **Solid Waste Manager** or the **Landfill Systems Manager** who will investigate to determine the source. The investigator will then assign the proper staff to restore the source area to normal operation to eliminate the odor source. Such on-site investigation, reporting, and remediation are inherent components of the site's standard operating procedures.

### Daily Self-Inspection

The primary objective of this method is to identify and mitigate odors from the facility before the odors can result in off-site migration. This is accomplished through the use of daily self-inspections. The self-inspection may be performed at random times with daily and weekly variability plus after any reported odor complaint regardless on the source of the complaint. The self-inspections listed here are in addition to the existing H<sub>2</sub>S **Fence Line Monitoring Protocol**, please see **attachment 3**.

Self-inspection at the facility will be performed on a once daily basis, at a minimum, during days when the facility is open to the public. The inspection will be performed by a Solid Waste Division employee or their designee as directed by the Solid Waste Director. The inspection will consist of one of these individuals touring the facility perimeter along a pre-planned and consistent route, please see **attachment 1**. The focus of this inspection is limited specifically to tasks detailed in this plan.

The results of the daily odor inspection will be documented on an ACUA Odor Monitoring Data form. These forms will be stored electronically for retrieval later as needed. Any odors identified through self-inspection shall be mitigated in accordance with guidance for mitigation provided in the site's Operations & Maintenance Manual and/or as found in this Odor Management Plan. The Final and NJDEP approved version of the ACUA Odor Management Plan and H<sub>2</sub>S Fence Line Monitoring Protocol shall be incorporated into the site's Operations & Maintenance Manual.

The process of self-inspection will be as follows:

- Originating from the ACUA Solid Waste Facility located at 6700 Delilah Rd in Egg Harbor Twp. NJ, the inspecting party will drive one of the two designated routes (either SWE 1-11 or B-1 thru B-8) as shown on Attachment 1 in numerical order. SWE 1-11 route will be the primary route used for the daily self-inspections. SWE 1-11 route represents a 360 degree path around our solid waste facility. B-(1-8) route shall be used depending on the staff performing the daily self-inspection and for odor complaint investigations to near down the source of odor at the landfill.
- This drive shall be performed with the windows down (weather dependent) at a slow rate of speed.



- At each of the eleven (11) designated locations, in the case of SWE sites, or eight (8) designated locations, in the case of the Biologist sites, the inspecting party will stop (where safe and in compliance with all traffic laws), turn off the vehicle engine, exit the vehicle, and record any odor observations on the ACUA Odor Monitoring Data Sheet (attachment 2).
- If an odor is documented with an intensity rating of 2 (light) or higher (i.e. 3 – Moderate, 4 – Strong or 5 – Very Strong) the inspecting party shall notify the Solid Waste Director or his designee immediately, such as the Solid Waste Manager or the Landfill Systems Manager. All significant off-site odors (i.e. an intensity rating of 32 or greater) that are originating from ACUA's Solid Waste Facility are to have the source and corrective action applied documented.

### **Odor Complaint Investigation**

One of ACUA's goals is to be a good neighbor and a contributor to the local community. All real-time odor complaints received will be investigated as soon as is practical within the confines of proper safety protocols and site logistics. A real-time odor complaint is defined as a complaint filed within two (2) hours of the observation time and prior to any significant change in meteorological conditions. **All odor complaints, real-time or otherwise, shall be investigated.** The goal of the investigation will be to determine if an odor originates from the solid waste site and, if so, to determine the specific source and cause of the odor, and then remediate the odor. Upon receipt of an odor complaint, the following actions will be taken:

- The complaint will be investigated by the Solid Waste Director or designee.
- The investigation will be documented on an ACUA odor monitoring data sheet including the intensity rating.
- If a complaint is verified (the ACUA investigator confirms that an odor is present and that the landfill or the yard waste composting facility can't be ruled out as the source), the investigator will be responsible for tracking back to the source of the odor, requesting the necessary repair or mitigation, and documenting that mitigation has occurred.

All off-site odor complaints will be logged in order to provide data for trending analysis of odor complaints in order to better schedule self-inspections and understand potential site problems.

Complaints that are received, greater than two (2) hours after the time specified in the complaint, prior to a significant change in meteorological conditions, or on a different date will be investigated as a non-real time complaint. Non-real time complaints and real-time complaints received during periods when real-time investigation can't be conducted for safety or site logistics restrictions should still be investigated through a combination of most recent inspection data, weather data, and site work schedules in order to determine if the odor could possibly have originated from the ACUA Solid Waste Facility.

### **Equipment for Odor Inspection and Investigation**

The transmission of odor depends on a number of variables including atmospheric conditions. As a result, the on-site weather station, which is part of the **NJ Weather & Climate Network**, will be employed to track wind speed, wind direction, humidity, precipitation, and other factors that can impact odor

transmission. If the on-site weather station can't be accessed the data from the NOAA Weather Station at the Atlantic City International Airport (ACY) can be utilized. In addition to the on-site weather station the ACUA owns a **Jerome 631-X H<sub>2</sub>S Analyzers or equivalent**. If the description of the odor indicates that the source is a sulfur or hydrogen sulfide odor then this meter maybe utilized to track the source. Detailed information on this unit can be found in **attachment 3**.

## **2.2 Identifying the Source of Odor**

Once the presence of odor is identified through either self-inspection or through investigation of an odor complaint, the source of the odor needs to be identified and coded based on the odor descriptors listed during the self-inspection or investigation. If the source of the odor is not obvious and cannot be traced immediately to an issue or an activity at the facility, the following steps may be used to identify the source of the odor:

- Use data from on-site weather station. Determine the wind direction, speed, and barometer reading at the time the odor was identified.
- Collect daily ACUA Odor Monitoring Data Sheet from the site's records/files.
- Using an aerial photograph or plan of the facility, draw a vector in the same direction as the wind, and intersect the location where the odor was identified. If the vector crosses the facility and the facility is in an upwind position compared to the location where the odor was identified, then determine the facility features and activities that lie along the vector. Compare the identified odor to any potential odor sources along the vector path and then inspect these potential odor sources in the field to identify the source.
- Collaborate with the Solid Waste Manager and/or the Landfill Systems Manager to prioritize the repair and remediation efforts on potential sources of off-site odor.
- Perform a follow up self-inspection of the previously impacted areas to verify successful elimination of off-site odors. If not eliminated, repeat this process at varying times of the day, under varying operational conditions, and with varying wind directions until the source of odor is identified and repaired or remediated.

## **2.3 Odor Management**

Odor management and landfill gas management are inter-related. Odor management, for purposes of this Plan, will be temporary measures employed during any work activity at the site that might generate odors such as excavation, significant well maintenance, well installation, etc.

### **Odor Management during Excavation**

Any or all of the following may be used to manage odors during excavations into waste material:

- Minimize aerial extent of excavation to the extent required to maintain safe working conditions.
- Minimize the time duration that any excavation shall remain open before it can be backfilled.



- Use daily cover or approved alternative daily cover on the excavated waste to assist with odor control.

#### **Odor Management during Horizontal & Vertical LFG well installations**

- To the extent possible monitor wind speed, wind direction and barometric pressure before scheduled LFG well installations.
- To the extent possible ensure that wind speed is of sufficient strength to dilute any offensive odor emission during these activities or wind direction is such that it is away from our nearest neighbors.
- Any excavated waste should be transported to the current active landfill area and covered with clean fill and or approved alternative daily cover (ADC) as soon as possible.

#### **Leachate, standing Leachate & Leachate seeps**

- On occasion, especially after heavy rain events, standing ponds/puddles of leachate may occur.
- Landfill staff will address any area when leachate may collect as soon as possible.
- This maybe accomplished by regrading the area or excavating a section of landfill to allow the leachate to percolate into the leachate collection system and recovering the area.
- All leachate seeps will be addressed by the landfill staff in the course of the daily landfill operations.

#### **Additional Landfill Odor Management Techniques**

- Adding additional cover or approved alternative daily cover in an area that is deemed to be the odor source.
- Increase the LFG vacuum in areas which maybe the source of odors.
- Repair cracked or broken LFG header piping.
- Add horizontal LFG collectors in odor source area.
- Add vertical LFG wells in the odor source area (longer lead time).
- Add temporary or final capping in odor source area (longer lead time).

#### **Odor Management at the Yard Waste Composting Facility**

- During the summer season the yard waste composting facility may receive high volumes of grass. To minimize any potential odors from this material, mix the grass into existing windrows on a daily basis at a minimum.
- To integrate this material into existing windrow, try to turn the windrows on a daily basis.
- When in receipt of high volumes of grass try to turn the windrows when the wind direction is away from our nearest neighbors.

## **2.4 Required Documentation**

In order to successfully measure the effectiveness of odor remediation, trend the causes of odors, document complaint follow-up, and focus our efforts on the best possible solutions for odor management, it is necessary to create and maintain proper documentation. This documentation should consist of self-inspection reports and odor investigation reports, including odor mitigation efforts, and be stored in electronic archive listed by year, by month, by date and by report type.

### **Odor Mitigation Efforts**

When off-site odors necessitate the implementation of odor mitigation and control practices, outlined in section 2.3 of this plan, the effectiveness of these methods will be evaluated and documented for use by management staff in determining the effectiveness of each method. In the event that a mitigation method is attempted and found to be ineffective, another mitigation method must be attempted and/or outside experts must be contacted until the facility is successful in controlling odors. The decision-making process in choosing a method to control odor should also be documented. In documenting mitigation efforts, the following information must be recorded:

- The reasoning used in selecting the mitigation process.
- The manner and extent to which the mitigation efforts are made.
- The results of the mitigation effort.
- Time frame for corrective action(s) shall be the same day as the complaint was received and investigated.
- If short term mitigation efforts are unsuccessful a longer lead time may be needed for capital intensive improvements such as: installation of temporary landfill capping or the installation of additional landfill gas collection wells.
- All ACUA employee titles listed in attachment #6 of the ACUA H<sub>2</sub>S Monitoring Plan which has been incorporated into the ACUA Odor Management Plan shall receive initial training on this plan when hired and will receive an annual refresher training thereafter.

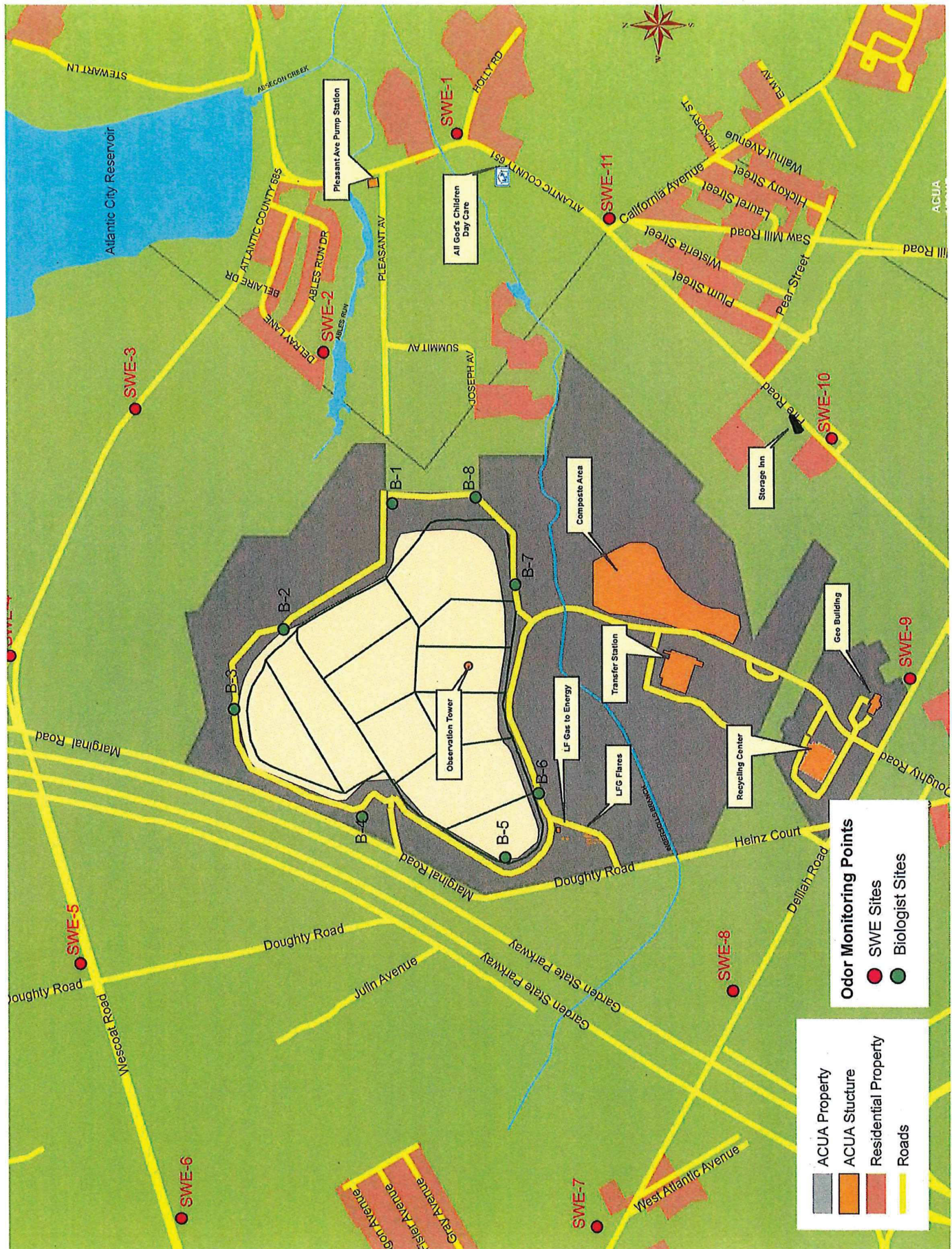
Recording these details may be done through a memorandum attached to the self-inspection odor monitoring form or the odor investigation form.

Whenever the daily odor self-inspection or odor complaint investigation is performed, the appropriate document should be completed and maintained on site as part of the site's records. All records shall be maintained for a minimum of six (6) years. In addition to maintaining these documents in the site's records, all efforts to mitigate odors must be documented in detail. It is important to document all efforts taken to mitigate odors whether or not there have been complaints from the public. The site's records are available to the NJDEP upon request.

## **Attachment 1**

### **ACUA Solid Waste Facility Site Plan with Odor Monitoring Points**







## **Attachment 2**

### **ACUA Odor Monitoring Data Sheet**



**Atlantic County  
Utilities Authority**  
Odor Monitoring Data Sheet

Inspector: \_\_\_\_\_

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

Time	Location	Intensity (0-5)	Descriptor (see reverse side for chart)	Comments

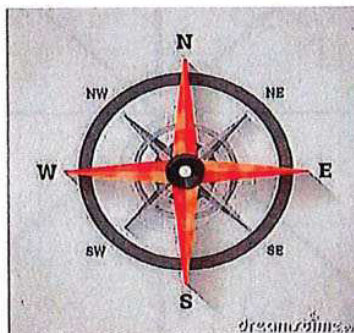
Weather Conditions

<input type="checkbox"/>	Mostly Sunny
<input type="checkbox"/>	Partly Cloudy
<input type="checkbox"/>	Mostly Cloudy
<input type="checkbox"/>	Overcast
<input type="checkbox"/>	Hazy

Precipitation

<input type="checkbox"/>	None
<input type="checkbox"/>	Fog
<input type="checkbox"/>	Rain
<input type="checkbox"/>	Sleet
<input type="checkbox"/>	Snow

Wind direction (Wind Source)



Wind Speed

<input type="checkbox"/>	Calm
<input type="checkbox"/>	Light Breeze (1-5 mph)
<input type="checkbox"/>	Moderate Wind (5-15 mph)
<input type="checkbox"/>	Strong Winds (15 mph or >)

Temperature: \_\_\_\_\_ F      Relative Humidity: \_\_\_\_\_ %

Weather Station at ACUA: <http://www.njweather.org/station/232>

Notes:

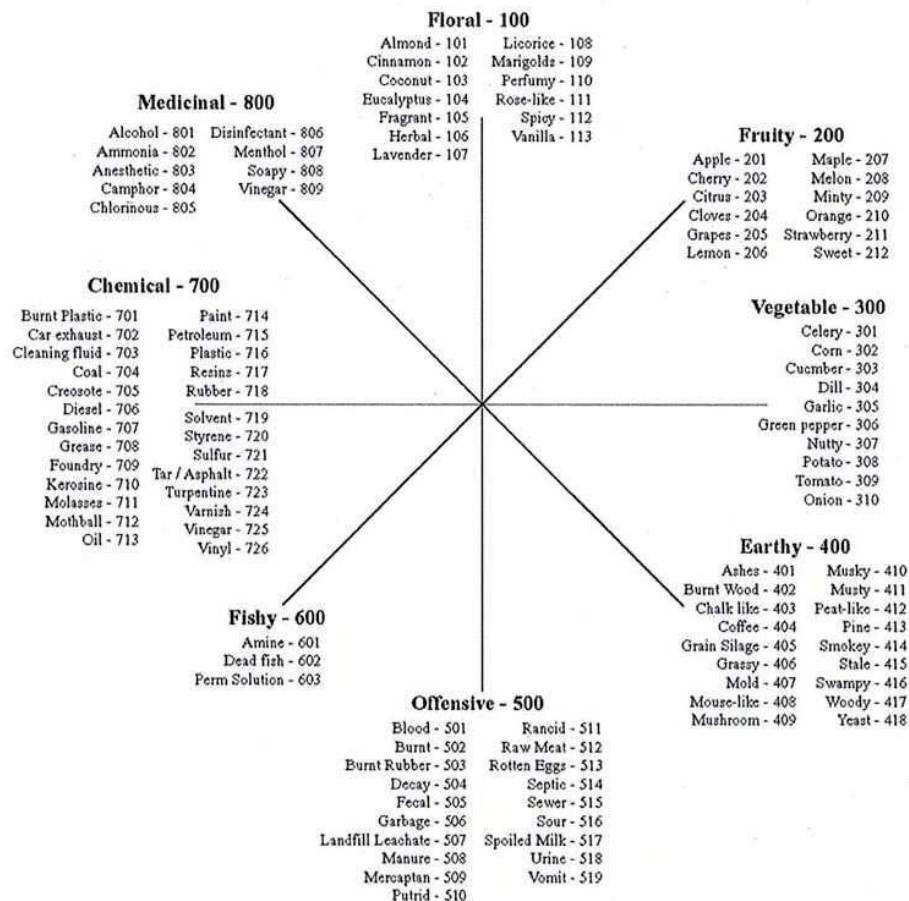
_____
_____
_____
_____



## Odor Monitoring Data Sheet

### Scale/Description Odor Intensity

- 0 – Not Detectable:** Odor not detectable by sense of smell
- 1 – Very light:** An odor present in the outdoor air which activates the sense of smell, but characteristics may not be distinguishable.
- 2 – Light:** An odor present in the outdoor air, which activates the sense of smell and is distinguishable and definite. This may not necessarily be objectionable in short durations, but maybe objectionable in longer durations.
- 3 – Moderate:** An odor present in the outdoor air which easily activates the sense of smell, is very distinct and clearly distinguishable and may tend to be objectionable and/or irritating.
- 4 – Strong:** An odor present in the outdoor air, which would be objectionable and cause a person to attempt to avoid it completely, and may cause physiological effects during prolonged exposure.
- 5 – Very Strong:** An odor present in the outdoor air, which is so strong, it is overpowering and intolerable for any length of time and causes physiological effects.



## **Attachment 3**

### **ACUA Landfill H<sub>2</sub>S Monitoring Protocol**

**ACUA Landfill Hydrogen Sulfide (H<sub>2</sub>S) Monitoring Protocol**

**Atlantic County Utilities Authority Solid Waste Facility**

**6700 Delilah Road**

**Egg Harbor Township, New Jersey**



**Date: September 22, 2016**

**Revised: February 13, 2017**

**Revised: March 28, 2018**

**Revised: August 31, 2023**

**FENCELINE AIR MONITORING PLAN FOR HYDROGEN SULFIDE  
AT Atlantic County Utilities Authority (ACUA) Landfill**

**FACILITY INFORMATION**

Facility/Company (Operator of Facility)	Atlantic County Utilities Authority
Facility/Company Address	6700 Delilah Road, Egg Harbor Township, NJ 08234
Name of Responsible Facility Representative	Gary Conover
Title	ACUA Vice President of Solid Waste
Signature	
Date	August 31, 2023

## **Table of Contents**

1. Introduction
  - 1.1 Background
  - 1.2 Purpose

**Table 1** – Action Levels for Fence Line Monitoring for H2S
2. Sample Locations

**Table 2** – Identified Downwind Monitoring Sites
3. Monitoring Equipment

**Table 3** – Specifications for H2S, Wind Speed & Wind Direction Equipment
4. Sampling Procedure
5. Data Management, Validation & Recordkeeping
6. Analytical Method
7. Quality Control
8. Hydrogen Sulfide Equipment Maintenance

## **Attachments**

**Attachment 1:** ACUA Landfill H2S Monitoring Locations

**Attachment 2:** ACUA Landfill H2S Monitoring Locations w/nearest residential properties

**Attachment 3:** ACUA's H2S Monitoring Form

**Attachment 4:** Jerome 631-X H2S Analyzer User Manual/Operations Guide

**Attachment 5:** NJDEP Bureau of Air Monitoring letters dated 2/8/17 & 2/15/17

**Attachment 6:** ACUA Employee List, by Title, who will/may perform Odor Monitoring Surveys



## **1. Introduction**

### **1.1 BACKGROUND**

The Atlantic County Utilities solid waste facility is located on 360 acres, of which approximately 102 acres has been permitted as a sanitary landfill. NJDEP Solid Waste Facility Program Interest No. 143393, Permit No. SWF060001. The landfill was constructed in 1991 and original was permitted as a limited use landfill accepting only non-putrescible waste such as bulky waste, construction and demolition waste and incinerator ash. The landfill's proximity to the Atlantic City International Airport and the potential of attracting large numbers of seagulls, which are hazardous to air transportation, was the main reason for this restricted use.

In July 2000, ACUA successfully completed a pilot project with guidance of avian experts in which municipal solid waste was landfilled at night when seagulls return to the coast to roost. Trash is covered at the end of the nighttime work shift. Wildlife biologists are on site dawn to dusk daily to monitor and deter activity of birds that could present a danger to air traffic.

The organic matter in municipal solid waste breaks down as it reacts with water and oxygen that pass through the material. As the waste decomposes, methane and other gases are formed. Gas extraction wells collect methane and other gases from the landfill. Gas can be destroyed in a flare or converted to electricity at the landfill gas to energy project to prevent the methane and other gases from entering the atmosphere.

### **1.2 PURPOSE**

The Atlantic County Utilities Authority (ACUA) is responsible for the operation of the ACUA Solid Waste Facilities which includes two municipal solid waste landfills. ACUA's solid waste facilities include, an active sanitary landfill located at 6700 Delilah Rd in Egg Harbor Township, NJ and also includes ACUA's Pinelands Park Landfill which is closed. This plan was drafted to comply with Administrative Consent Order (ACO), EA ID# NEA150001 – 70506. The ACO requires submittal of an ambient air monitoring protocol for H2S within sixty (60) days of the fully executed ACO. The ACO was fully executed on July 26, 2016 and the due date for the submittal of the ambient air monitoring protocol for H2S is September 24, 2016. The ACO requires ACUA to monitor H2S concentration at



our fence line between the hours of 7 pm and 7 am once per operating day. Once per operating day the ACUA will obtain a 30-minute average on a five (5) minute block basis.

For more details please see **Table 1 – Action Levels for Fence Line Monitoring of Hydrogen Sulfide (H<sub>2</sub>S).**

**Table 1 – Action Levels for Fence Line Monitoring of Hydrogen Sulfide (H<sub>2</sub>S).**

Daily 30-minute average H <sub>2</sub> S concentration, ppbv	ACTION
$\leq 30$ ppbv	<ol style="list-style-type: none"> <li>1. Monitoring by Department-approved periodic emission monitoring protocol once per operating day to obtain a 30-minute average (based on 5-minute blocks) reading between 7PM and 7AM. Monitoring performed downwind of the landfill at the property's fenceline.</li> <li>2. Monitoring frequency may be reduced to once per week after each daily 30-minute average result for a full quarter (3 months) shows H<sub>2</sub>S <math>\leq 30</math> ppbv.</li> <li>3. After installing and commencing operation of a landfill gas treatment/removal system for H<sub>2</sub>S, ACUA may request to reduce the H<sub>2</sub>S monitoring frequency to quarterly by submitting an operating permit modification application to the Department.</li> </ol>
$> 30$ ppbv	<ol style="list-style-type: none"> <li>1. If the H<sub>2</sub>S concentration at the property fenceline indicates H<sub>2</sub>S <math>&gt; 30</math> ppbv, call the Department Hotline at 1-877-WARNDEP (927-6337).</li> <li>2. If any weekly 30-minute average shows H<sub>2</sub>S <math>&gt; 30</math> ppbv or if there is a verified odor complaint, the frequency shall be reverted to daily monitoring.</li> <li>3. If three consecutive daily H<sub>2</sub>S readings show H<sub>2</sub>S <math>&gt; 30</math> ppbv, daily monitoring shall be conducted at the closest neighborhood downwind from the landfill.</li> <li>4. If the H<sub>2</sub>S concentration in the closest neighborhood downwind from the landfill is <math>&gt; 30</math> ppbv, the facility shall implement the corrective actions in the Odor Management Plan until the H<sub>2</sub>S concentration is <math>\leq 30</math> ppbv.</li> </ol>

## 2. Sampling Locations

Only one location downwind from the landfill is required to be monitored during each event. In order to meet this requirement, eight (8) monitoring locations have been identified in the cardinal directions where monitoring may be performed depending on wind direction at the time of the monitoring event. **Attachment 1** is a plan titled, “**ACUA Landfill H2S Monitoring Locations**” which depicts the monitoring locations. **Attachment 2** is a plan titled; “**ACUA Landfill HS Monitoring locations w/nearest residential neighborhoods**”. Please see Table 2 for the coordinates for the hydrogen sulfide (H2S) monitoring locations.

**Table 2: Identified Downwind Monitoring Sites**

MONITORING SITE	WIND DIRECTION	Alternate ID	COORDINATES (LAT, LON)
1	North	H2S-1	39.415620, -74.538031
2	Northeast	H2S-2	39.422800, -74.543174
3	East	H2S-3	39.427156, -74.542528
4	Southeast	H2S-4	39.429670, -74.514095
5	South	H2S-5	39.430805, -74.538026
6	Southwest	H2S-6	39.429586, -74.534528
7	West	H2S-7	39.427163, -74.532110
8	Northwest	H2S-8	39.423096, -74.533784
9 - Meteorological Station		Weather Station	39.419491, -74.537872
10 – Wind Sock 1		WS-1	39.251094, -74.321066 (compost)
11 – Wind Sock 2		WS-2	39.253179, -74.321329 (LF Tower)

### 3. Monitoring Equipment

The Jerome 631-X Hydrogen Sulfide analyzer or equivalent (see User Manual provided as **Attachment 4**) will be utilized to conduct H2S monitoring. Wind direction and speed will be determined using an one or two onsite windsocks, or data from the on-site weather station: <http://www.njweather.org/station/232> or data from National Oceanic and Atmospheric Administration(NOAA) /National Weather Service website: <http://www.weather.gov/phi/localclimate.html>.

The specifications for the equipment proposed to be utilized are listed in **Table 3**.

**Table 3**  
**3: Specifications for Hydrogen Sulfide and Wind Speed/Wind Direction Monitors**

	H <sub>2</sub> S	Wind Speed	Wind Direction	Wind Socks
Manufacturer	Arizona Instruments, LLC	R.M. Young Co.	R.M. Young Co.	
Model #	Jerome 631-X	03001	03001	
Measurement Range	1 – 50 ppb	0 -112 mph	360 degrees (displayed as cardinal direction)	
Units	ppb	mph	Cardinal direction	
Resolution/Detection Limit	1 ppb	1 mph	1 degree	
Accuracy	± 3 ppb @ 1 ppb	± 1.1 mph	± 5 degrees	
Average/Response Time	20 – 30 seconds	5 minutes	5 minutes	
Power Requirement	12VDC	solar	solar	



Operating Environment	Ambient Air	Ambient Air		
-----------------------	-------------	-------------	--	--

#### 4. Sampling Procedure

Technicians conducting H2S monitoring will follow all manufacturer specified procedures to properly operate the H2S analyzer. In addition, technicians will be required to perform basic data validation.

The technician will use the onsite windsock or data from the on-site weather station or NOAA weather service website to determine wind speed, direction and sampling location. Note: wind direction information is typically reported in the direction from which it originates, therefore, the sampling location in the opposite direction would be monitored.

The technician will monitor the specified monitoring location for 30 continuous minutes unless all readings are 0.00 ppb over the first five minutes of sampling (sample values below 3 ppb are recorded displayed as 0.00 ppb by the J631-X). If all readings are 0.00 ppb during the first 5 minutes, sampling will be considered complete and the sampling cycle will be halted. During the sampling the meter will be handheld by the technician at the selected sampling location. The H2S reading will be recorded and averaged by the meter.

#### 5. Data Management, Validation and Recordkeeping

The technician conducting the monitoring shall record the date, time, wind speed, wind direction, location of measurement and H2S concentration on the Hydrogen Sulfide Monitoring Data Form. A sample H2S Monitoring Form is included as **Attachment 3**.

Every sampling event is important since it can trigger a change in the sampling frequency or trigger the need to submit an odor minimization plan. Therefore, every sampling event must produce a valid H2S concentration. The technician will assess sampling results to determine validity. If the technician determines that the data is not valid, the sampling event should be repeated. If the data is determined to be valid, the technician reviews the sampling results and determines if the current sampling schedule should continue as is, if the sampling schedule should change according to Table 1, or if additional tests or investigations are required. Copies of completed and signed H2S Monitoring forms will be forwarded to the staff member responsible for operating air permit compliance (Solid Waste Director or his designee).

Upon receipt of the monitoring form, the Solid Waste Director or his designee, reviews the information and determines if the results of sampling trigger a call to the NJDEP Hotline, or submission of an Odor Minimization Plan according to Table 1. The Solid Waste Director or his designee files the monitoring form and/or may store the data in a computer data system.

## **6. Analytical Method**

The air sample is automatically drawn into the H2S analyzer's inlet by an internal sample pump. In the analyzer, the air sample passes over a gold film for a precise time period. The gold film adsorbs the H2S from the sample air, which causes an increase in electrical resistance in the gold film proportional to the mass of H2S in the sample. The analyzer's internal electronics determine the concentration of H2S, and the value is displayed in parts per billion (ppb). After the air sample is analyzed for H2S, the sample air is exhausted.

## **7. Quality Control**

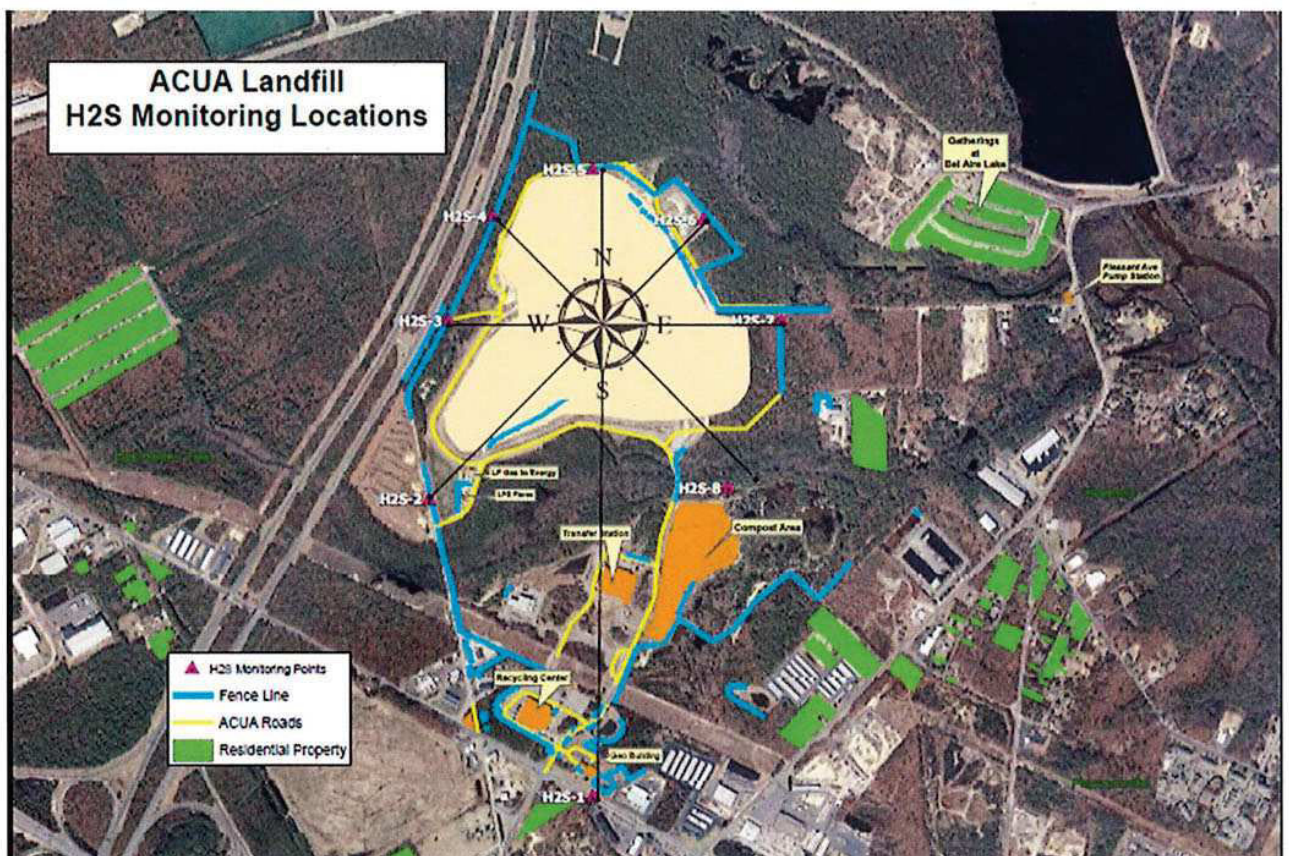
Quality control activities will be conducted in accordance with the manufacturer's specifications. The H2S Analyzer will be calibrated on an annual basis. A record of quality control activity will be kept and made available to NJDEP upon request.

## **8. Hydrogen Sulfide Equipment Maintenance**

The H2S analyzer will be maintained in accordance with manufacturer's specifications. A record of maintenance activity will be kept and made available to NJDEP upon request.

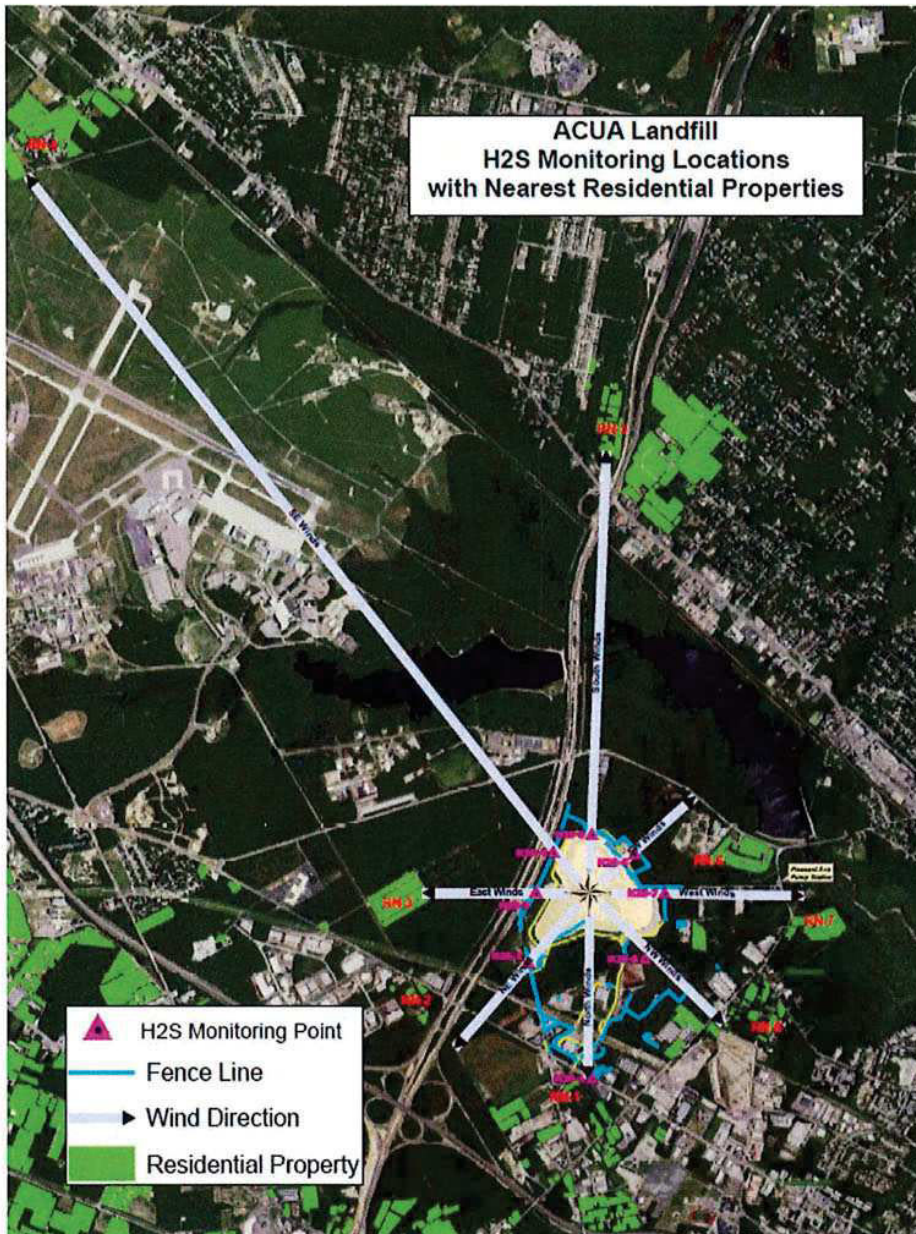


Attachment # 1





**Attachment # 2**



**Attachment # 3**

**ACUA's H2S Monitoring Form**



ACUA Landfill  
FENCELINE AIR MONITORING FOR HYDROGEN SULFIDE

**HYDROGEN SULFIDE MONITORING DATA FORM**

Sample Date	
Sampling Technician	
Zero Check	
Sensor Regeneration	
Location	
Begin/End Time	
Wind Speed	
Wind Direction	
Avg. H <sub>2</sub> S Concentration (ppbv)	
H <sub>2</sub> S Concentration (ppbv)	
Data Manager/Reviewer	

Sampling Technician  
Signature & Date \_\_\_\_\_

Sample data is:                      Valid ☐                      Invalid ☐

Data Manager/Reviewer  
Signature & Date \_\_\_\_\_

**Attachment # 4**

**Jerome 631-X H2S Analyzer User Manual/Operations Guide**



## **USER MANUAL**

# **JEROME® 631-X HYDROGEN SULFIDE ANALYZER OPERATION MANUAL**

April 2014

**ARIZONA INSTRUMENT LLC**  
3375 N Delaware Street | Chandler, AZ 85225 USA  
800.528.7411 | 602.470.1414 | f 602.281.1745

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**MADE IN THE USA**

**AZI P/N 700-0037-E**  
Last update April 2014

**JEROME® 631-X**

**Hydrogen Sulfide Analyzer**

**Operation Manual**



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An up-to-date electronic copy of this manual can be found at:

<http://www.azic.com/downloads.aspx>



## 1. FOR THOSE WHO CAN'T READ THE WHOLE MANUAL NOW

This manual contains details that will optimize the results and the life of your instrument. Read and refer to the manual for complete details on operation, maintenance and troubleshooting, special voltage inputs and data output.

The Jerome® 631-X is easy to operate and ready for use upon receipt from the factory.

- Remove the instrument from the packing material.



**Retain all packaging materials for any future shipment of the instrument.**

**If the instrument is returned to AZI for any reason, it must be placed in the original packaging materials that have been tested and proven to be effective protection during shipment.**



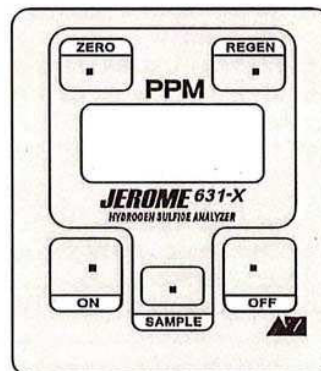
- Call AZI Customer Service at 800-528-7411 or 602-470-1414 for Return Material Authorization (RMA) information prior to returning a unit.
- For all shipments, boxes and packing materials are available from AZI.
- Pack the Jerome® instrument only in a Jerome® shipping container.




**AZI WILL NOT BE RESPONSIBLE FOR SHIPPING DAMAGE.  
IF YOU RETURN THE INSTRUMENT IMPROPERLY PACKAGED OR  
SHIPPED,  
YOU SHOULD INSURE IT FOR FULL VALUE.**



- Check for any damage and confirm receipt of all parts on your packing list. Contact Arizona Instrument Customer Service at (800) 528-7411 or (602) 470-1414 if you have any questions.
- Press the ON button. The display should read 000 in less than one second.
  - A LO BAT message appears briefly in the upper left corner.
  - If the LO BAT light persists, recharge the battery. See page 17.



- Check the voltage setting (110 or 220 VAC) on the back of the instrument. Ensure that it is set to the correct voltage. If the pointer is not aligned to the local voltage, turn the selector to point to the correct voltage.
- 
- Perform a sensor regeneration by following these steps:
    - Connect the line cord between the connector on the back of the 631-X and an AC power outlet.
    - Press the ON switch and then press the REGEN button.
      - ◆ The instrument will begin a 10 minute regeneration cycle, indicated by .H.H.H flashing on the display. **Do not interrupt this cycle.** For a complete description of this process, see page 12.
      - ◆ If any error message, such as .P.P.P, appears on the display, see the “Troubleshooting” section beginning on page 24.
  - When regeneration is complete, zero the sensor by pressing the ZERO button and turning the zero adjust screw, located under the handle, until the display reads 0.
  - The instrument is now ready to sample.
  - To ensure the input to the instrument contains no hydrogen sulfide or mercaptans, use a Zero Air Filter, AZI P/N Z2600 3905. The Zero Air Filter cleans the air sample and should produce sample readings of less than 0.003 ppm. Therefore, use the filter to:
    - Equilibrate the instrument to temperatures that are higher or lower than the instrument. Sample with filter installed until the reading is below 0.003 ppm.
    - Identify contamination within the unit.
    - Confirm the presence of hydrogen sulfide when readings are elevated. Install filter and verify that the readings go down with filter installed.
  - When the instrument measures hydrogen sulfide, the zero display will be replaced with a value.

#### CAUTION

Do not adjust the ZERO after the instrument has measured hydrogen sulfide or before the next regeneration. (Occasionally the display may drop to .L.L.L (indicating low) between the initial zeroing and the first sample. It is OK to readjust the ZERO if the instrument has not measured hydrogen sulfide.)

- The instrument is designed for ambient air monitoring. **DO NOT** allow the probe or the instrument's intake to be exposed to any liquid.
- The instrument is not explosion proof.
- Press the SAMPLE button to start a 10 second sampling cycle.
- Perform sensor regeneration after each day's testing.
- Perform another sensor regeneration and re-zero the instrument before each day's use.
- Perform sensor regeneration after 30 days of storage or inactivity.

Call AZI Customer Service, at (800) 528-7411 from the United States and Canada or (602) 470-1414 if you have any questions. If you prefer, you may send e-mail to [support@azic.com](mailto:support@azic.com)



## 2. INTRODUCTION

The Jerome® 631-X Hydrogen Sulfide Analyzer is an ambient air analyzer with a range of 0.003 ppm to 50 ppm (parts per million).



### CAUTION:



The Jerome® 631-X is for vapor use only.  
**DO NOT** allow the probe or the instrument's intake  
to be exposed to any liquid, dust  
or other foreign material.

The 631-X is designed to be easy to operate for quick and accurate analysis of hydrogen sulfide vapor levels. It has few maintenance requirements. However, please take a moment to read this manual before attempting operation. If you have any questions about your application or operation, please call AZI Customer Service at (800) 528-7411 or (602) 470-1414 or e-mail [support@azic.com](mailto:support@azic.com) for assistance.

### 631-X Features

- Accurate analysis of hydrogen sulfide in seconds
- Wide detection range allows multiple applications
- Survey mode for rapid source detection of hydrogen sulfide concentrations
- Rechargeable internal battery pack for portability
- Automatic backlight for LCD during low light conditions
- Microprocessor ensures a linear response throughout the entire range of the sensor
- Inherently stable gold film sensor

### Optional Accessories

- Data Logger, P/N Y990-0169, to record field monitoring information
- Jerome® Communication Software Kit, P/N Y990-0168, for unattended fixed-point sampling and downloading information from the data logger to a computer.
- Option Board (factory installed option) for external fresh air solenoid support, auto-zeroing, DC power operation, timed regeneration, 4-20 mA or 0-2 V analog output, and timed sampling
- Functional Test Module (FTM) (P/N Z2600 0918 or Z2600 0930) and Accessory Kit (Y2600 0920), for field verification of instrument functionality.
- Field Carrying Cases, hard sided P/N Y411 0904 or soft P/N 1400 0052, for versatile handling and additional storage
- Maintenance Kit, P/N Y631 0905 for routine maintenance and upkeep



## Applications

- Ambient air analysis
- Odor nuisance monitoring
- Regulatory compliance
- Control room corrosion monitoring
- Quality control
- Scrubber efficiency testing
- Accuracy check for other hydrogen sulfide monitors and control systems
- Hydrogen sulfide source detection
- Leak detection
- Portable hydrogen sulfide detection

The Jerome® 631-X can be operated from 100-120 or 200-240 VAC. To change the default voltage range, refer to "Setting the Input Voltage" on page 21.

## 3. PRINCIPLE OF OPERATION

A thin gold film, in the presence of hydrogen sulfide, undergoes an increase in electrical resistance proportional to the mass of hydrogen sulfide in the sample.

When the SAMPLE button is pressed, an internal pump pulls ambient air over the gold film sensor for a precise period. The sensor absorbs the hydrogen sulfide. The instrument determines the amount absorbed and displays the measured concentration of hydrogen sulfide in ppm. During normal sampling, the ambient air sample is diluted in the flow system at a ratio of 100:1. When sampling in Range 0, (where low levels of hydrogen sulfide are expected) undiluted air samples are drawn across the gold film sensor.

The instrument's microprocessor automatically re-zeroes the digital meter at the start of each sample cycle and freezes the meter reading until the next sample cycle is activated, thus eliminating drift between samples.

During the sample mode cycle, bars on the LCD represent the percentage of sensor saturation. Depending on the concentrations, 50 to 500 samples may be taken before the sensor reaches saturation. At that point, a 10-minute heat cycle must be initiated to remove the accumulated hydrogen sulfide from the sensor. During the sensor regeneration cycle, both solenoids are closed to cause air to pass through a scrubber filter and provide clean air for the regeneration process. The flow system's final scrubber filter prevents contamination of the environment.

The heat generated during the regeneration may cause some low level thermal drift. To ensure maximum sample accuracy, wait 30 minutes after regeneration before zeroing and using the instrument.

## Zero Air Filter

The Zero Air Filter removes mercury vapor, mercaptans, and hydrogen sulfide from the air sample. Readings with the filter installed should be near zero.

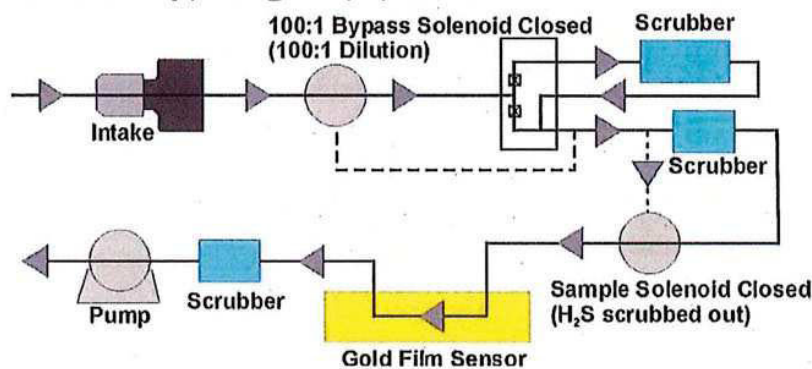
Because air that is cooler than the instrument will cause low readings and warmer air will cause higher readings, the Zero Air Filter should be used to equilibrate the unit to ambient air temperature. Continuous sampling with clean air will not cause saturation of the gold film sensor but will equalize temperatures faster to allow accurate analysis to begin sooner. For best results, be sure that the instrument is at the same temperature as the environment before testing.

The Zero Air Filter can also be used to identify contamination within the instrument. If the readings do not reduce to near zero with the filter installed, contamination should be suspected. If the readings do drop to near zero with the filter installed but elevate with the filter removed, the presence of hydrogen sulfide at the sampled location is confirmed.

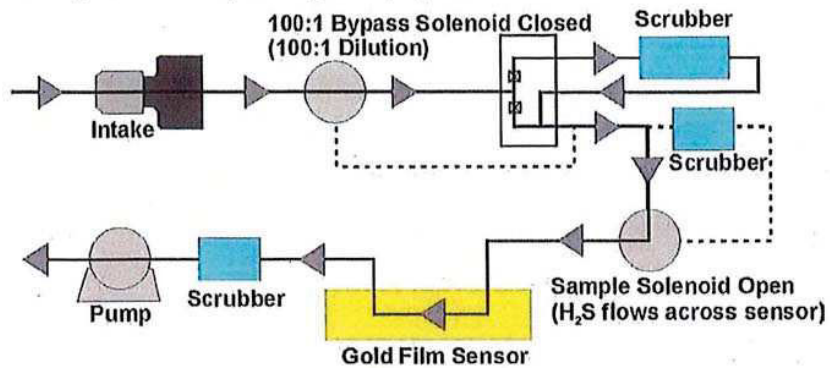
For more information on the use of the Zero Air Filter, contact customer service at 1-800-528-7411, 1-602-470-1414, or visit our web site at <http://www.azic.com>.

## Gas Flow Schematics

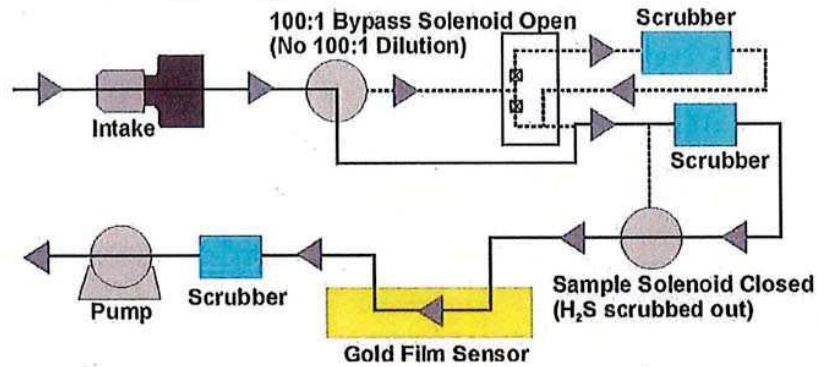
### Initial Pump, Ranges 1, 2, and 3



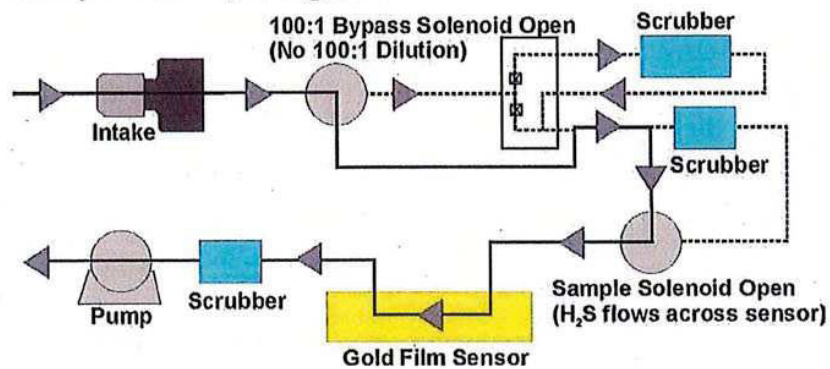
### Sample Period, Ranges 1, 2, and 3



### Initial Pump, Ranges 0



### Sample Period, Ranges 0





## 4. INSTRUMENT OPERATION

### LCD Codes

LCD CODE	EXPLANATION
000	Ready to sample
.000	No hydrogen sulfide reading
.8.8.8	Sensor saturated-regeneration needed (refer to page 12)
.H.H.H	Sensor regeneration in progress (.H.H.H flashes)
.L.L.L	Re-zero needed (refer to page 13)
.P.P.P	Power cord required or low line power, <100 VAC (or 200 VAC) (see pages 16 and 17, Changing the Fuse, if .P.P.P remains on after the cord is connected.)
.LO BAT	Recharge batteries (refer to page 17)
.E.E.E	Same as LO BAT, automatically shuts off
.HL	Very high concentration has been detected. Refer to your safety policy for additional direction to confirm the concentrations."
<b>DURING SAMPLING</b>	
.-	0-25% sensor saturation
.-.	25-50% sensor saturation
.-.-	50-75% sensor saturation
.-.-.	75-100% sensor saturation
<b>DURING SAMPLING, USING SURVEY MODE</b>	
-	Survey sampling (minus sign flashes continuously)
<b>WHEN ZERO IS DEPRESSED</b>	<b>Adjust to 0 <u>only</u> after sensor regeneration. It is normal for the display to read H after sampling has started.</b>
0	Zero, ready to sample
H	High, turn Zero potentiometer counterclockwise
L	Low, turn Zero potentiometer clockwise

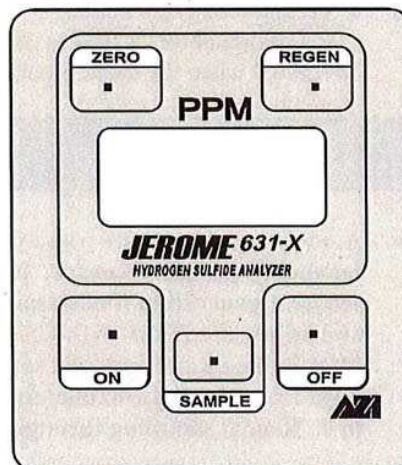
## Daily Operations

Before each day's use of the Jerome® 631-X, perform the following steps to verify proper instrument operation:

- Press the power ON button.
  - The digital meter displays 000.
    - ♦ (Disregard the digital meter's initial momentary reading.)
    - ♦ Recharge or replace the battery pack if the LO BAT indicator REMAINS ON. Refer to "Charging Batteries" on page 17 and/or "Replacing the Battery Pack" on page 21.
    - ♦ To ensure the instrument's electronics have stabilized, allow a 1-minute warm up before beginning the next step.
- Use the Zero Air Filter to equilibrate the instrument to ambient air temperature.
  - Install the Zero Air Filter in the instrument's intake.
  - Sample continuously until the readings stabilize.
- Perform sensor regeneration. Refer to page 12 for the procedure.
- Thirty minutes after sensor regeneration is complete, zero the instrument. See page 13.

**NOTE:** For maximum accuracy, such as when testing with the Functional Test Module, wait 30 minutes after the sensor regeneration cycle to re-zero the unit. For immediate use, the unit can be re-zeroed immediately after sensor regeneration. See the notes on page 13.

- Press the SAMPLE button.
  - During the sample cycle, the digital meter displays bars (-, --, or ---) to indicate the amount of sensor saturation.
- At the end of the sampling cycle, read the digital meter.
  - The number shown on the digital meter is the hydrogen sulfide concentration in ppm.
  - This value remains on the display until the next sample is taken.
  - The digital meter automatically zeroes at the start of each sample.
- At the end of each day's use, perform sensor regeneration as described in the next section.



**DO NOT ALLOW HYDROGEN SULFIDE TO STAY  
ON THE GOLD FILM SENSOR OVERNIGHT.**

## Sensor Regeneration

Sensor regeneration is needed to clear the 631-X sensor of any accumulated hydrogen sulfide. This simple procedure should be done:

- At the beginning of the day on which the instrument is to be used.
- During the day when the sensor becomes saturated.
- At the end of the day before storing the instrument.



### CAUTION:

Ensure the voltage selector on the back of the instrument, near the power cord inlet connector, points to the local AC power value. See "Setting the Input Voltage" on page 21.

To clean and protect the sensor, the supplied AC power must be 100 to 120 VAC or 220 to 240 VAC, depending on the available power source.

Once sensor regeneration is initiated, **DO NOT** interrupt the cycle.



- Attach the power cord to the 631-X and plug it into AC power. AC power is required to thermally regenerate the sensor.
- Press the power ON button.
- Press the REGEN button.
  - The digital meter flashes .H.H.H for the duration of the 10-minute cycle and displays .0.0.0 when the cycle is completed.

### DO NOT INTERRUPT THIS CYCLE.

Wait until the cycle is completed before continuing with the next step.

- A minimum 30-minute wait after the sensor regeneration cycle is complete ensures maximum sample accuracy. However, the unit can be used immediately following the sensor regeneration if necessary. When the sensor regeneration is complete, press ZERO and adjust the ZERO ADJUST pot until 0 appears on the display. Install the zero air filter in the intake and take several samples or lock the instrument into survey mode (see page 15). After approximately one minute, stop sampling and check the ZERO. Adjust to 0. Repeat sampling through the zero air filter until reading remains on 0.

**NOTE:** The digital meter will read .P.P.P after REGEN is activated if the power cord is not plugged in or if the instrument's fuse needs to be replaced. Connect the power cord, or if necessary, replace the fuse. See "Changing the Fuse" on page 22.



## Zero Adjust

- To ensure air entering the instrument is clean, install the zero air filter in the instrument's intake and sample until the readings stabilize.
- While pressing the ZERO button, turn the ZERO ADJUST potentiometer (shown at right) using the trimmer tool until the digital meter reads 0.
  - If the LCD reads H, turn the ZERO ADJUST counter-clockwise;
  - If the LCD reads L, turn the ZERO ADJUST clockwise.



**NOTE:** A minimum 30-minute wait after the sensor regeneration cycle is complete ensures maximum sample accuracy. The unit can be used immediately following the sensor regeneration if necessary. When the sensor regeneration is complete, press ZERO and adjust the ZERO ADJUST pot until 0 appears on the display. Install the zero air filter in the intake and take several samples or lock the instrument into survey mode (see page 15). After approximately one minute, stop sampling and check the ZERO. Adjust to 0 if necessary. Repeat sampling through the zero air filter until sensor remains on 0.

**NOTE:** When ZERO is pressed, depending upon internal configuration, a number between 00 and 100 may appear on the display instead of H, L, or 0. See APPENDIX C - INTERNAL DIP SWITCH SETTINGS, on page 39, for details. If the instrument is configured with an Option Board, see APPENDIX D - JEROME® 631-X OPTION BOARD beginning on page 40.

### CAUTION:

**Do not turn the ZERO ADJUST potentiometer between samples.**

Turn the ZERO ADJUST only after a sensor regeneration cycle, otherwise invalid readings will result.

- Press the power OFF button and disconnect the power cord.
- The Jerome® 631-X is ready for sampling.

### CAUTION:

**The Jerome® 631-X is intended for vapor use only. DO NOT allow the probe or the instrument's intake to be exposed to liquids, dust or other foreign material. Moisture or liquids drawn into the instrument can damage the sensor and flow system.**

## Sample Mode

This is the standard operation mode and is used for optimum accuracy.

- Press the power ON button.
  - The LCD displays 000.
  - Disregard the LCD's initial momentary readings.
  - Recharge or replace the battery pack if the LO BAT indicator REMAINS ON, see page 17 and/or page 21 if necessary.
- Allow a 1-minute warm up before beginning the next step to ensure the instrument's electronics have stabilized.
- Press the SAMPLE button.
  - During the sampling cycle, the bar (or bars) shown on the LCD indicates the current percentage of sensor saturation. (Refer to "LCD Codes" on page 10 for code descriptions.)
  - The length of the sample cycle depends on the concentration of hydrogen sulfide.

RANGE	CONCENTRATION	RESPONSE TIME	ACCURACY at MID-RANGE
0	0.001 to 0.099 ppm	30 Seconds	± 0.003ppm at 0.050ppm
1	0.10 to 0.99 ppm	25 Seconds	± 0.03ppm at 0.50ppm
2	1.0 to 9.9 ppm	16 Seconds	± 0.3ppm at 5.0ppm
3	10 to 50 ppm	13 Seconds	± 2ppm at 25ppm

- At the end of the sampling cycle, read the LCD.
  - The number shown on the digital meter is the hydrogen sulfide concentration in ppm.
  - As the instrument auto-ranges, the decimal point moves to the correct position to show the concentration.
  - The value remains displayed until the next sample is taken. The digital meter will then automatically zero before displaying the next sample value.
  - When elevated readings are detected:
    - ♦ Confirm the reading by taking an additional sample.
    - ♦ Install the zero air filter and verify that the readings reduce to zero or very near zero.
    - ♦ Remove the filter and sample the location again to verify that elevated readings do exist.
  - When the sensor is completely saturated, the LCD displays .8.8.8 instead of a value. No further operation is possible until sensor regeneration is performed. (Refer to "Sensor Regeneration" on page 12.)
- Press the power OFF button when not in use.

Note: The Jerome® 631-X operates approximately six (6) hours on a fully charged battery.



## Survey Mode

The survey mode takes samples every 3 to 20 seconds automatically. The length of time varies with the hydrogen sulfide concentration. Use this mode to locate the source of hydrogen sulfide, such as a leak, a hot spot, or to assess areas of potentially high hydrogen sulfide concentrations. After the survey mode is activated, the 631-X samples continuously.

- Press the power ON button.
  - The digital meter displays 000.
  - Disregard the LCD's initial momentary readings.
  - Recharge or replace the battery pack if the LO BAT indicator REMAINS ON, see page 17 and/or page 21 if necessary.
- Allow a 1-minute warm up before beginning the next step to ensure the instrument's electronics have stabilized.
- Lock the instrument in the survey mode:
  - Hold the SAMPLE button down until the sensor status indicator bar(s) begin flashing on the display.
  - Press the ZERO button, then release the SAMPLE button.
  - The pump should continue to run and the display should update every survey cycle.
- The instrument remains in the survey mode until one of the following occurs:
  - The sensor is saturated.
  - A LO BAT (low battery) signal is encountered.
  - An HL (high hydrogen sulfide level) is encountered.
  - The instrument is turned OFF.
- Press the power OFF button to end the survey mode.

RANGE	CONCENTRATION	RESPONSE TIME
0	0.001 to 0.099 ppm	20 Seconds
1	0.10 to 0.99 ppm	15 Seconds
2	1.0 to 9.9 ppm	6 Seconds
3	10 to 50 ppm	3 Seconds

NOTE: Approximately 100 samples at 0.5 ppm may be taken before the sensor saturates and regeneration is required.

### **Operating on AC Power or Generator**

- For stationary use, the 631-X may be operated on AC power.
  - Operating the instrument on AC power at all times eliminates the need for the battery pack and its necessary maintenance.
  - The battery may be unplugged or removed completely whenever the instrument is operating on AC power.
- When a generator is used to power the Jerome® 631-X, a high quality line conditioner or voltage regulator is required to ensure a pure sine wave and regulated voltage is applied to the instrument. The gold film sensor may be damaged by voltage that varies in amplitude or by surges, spikes, and/or noise on the power line.

### **Operating on Internal Battery Power**

- For portable use, the 631-X may be operated on Battery power.
  - When you operate the instrument on battery power, please be aware of the following:
    - ♦ A fully charged battery pack, AZI P/N Z4000 0907 (115V) or Z4000 0908 (230V), provides power for a minimum of six (6) hours of operation.
    - ♦ For operating more than six (6) hours, an extra fully charged battery pack is needed.
    - ♦ Complete battery recharging takes 14 hours. Refer to Charging Batteries on page 17.
    - ♦ The 631-X uses a rechargeable Nickel Cadmium (NiCad) battery. Dispose of worn-out batteries properly when you are replacing the battery pack.

### **External battery power**

A special version of the Jerome® 631-X and a DC Power Kit are available to operate the instrument from a secondary DC source. The source may be a car/truck battery or a storage cell used in conjunction with solar panels.

Call AZI Customer Service at 800-528-7411, 602-470-1414, or e-mail [support@azic.com](mailto:support@azic.com) for additional information.

## Charging Batteries

- Press the power OFF button.
- Connect the AC power cord between the 631-X power receptacle and an AC power source.
  - Complete battery recharging takes 14 hours.
  - The 631-X contains a trickle charger so it may be continually plugged into an AC power source without damaging the battery pack.
- The battery pack may be charged outside the instrument with an optional AZI IDC Battery Charger. (AZI P/N 4000-1011, for 115 VAC, P/N 4000-1012, for 230 VAC)

## Obtaining Maximum Battery Life

There are certain inherent limitations to NiCad batteries. The primary limitation is a memory effect that occurs when the batteries are partially discharged and then recharged, repeatedly. This memory leads to a drastic reduction in the usable battery life. To prevent this memory effect, periodically allow the battery pack to discharge completely, and then recharge the battery pack.

- To obtain maximum battery life, follow these three (3) steps:
  - At least once a month wait until LO BAT appears on the digital meter before recharging the battery pack.
  - Charge the battery pack when the LO BAT indicator comes on. Excessive discharge can damage the battery pack.
  - Before storing the instrument verify the power is OFF.
- When the batteries fail to hold a charge, the battery pack should be replaced.
  - Battery life under normal usage is approximately 1 year, depending on the number of charge and discharge cycles.



## 5. MAINTENANCE

### Preventive Maintenance Calendar

To keep the Jerome® 631-X operating at peak performance, follow the maintenance schedule below as a guide. Since maintenance is more a function of application and amount of use rather than time, your requirements may be different from the listed schedule. Call AZI Customer Service at 800-528-7411, 602-470-1414, or e-mail [support@azic.com](mailto:support@azic.com) for additional guidance for your environment and operation.

PART/COMPONENT	MAINTENANCE CYCLE	REFER TO PAGE
Charge batteries	At least once per month, after 1 month's storage, or when LO BAT appears	Page 17
Change 0.25 inch fritware	Weekly or as needed	Page 19
Change internal filters and tubing	After 6 months of use or as needed	Page 20
Replace zero air filter <sup>1</sup>	Annually	
Factory calibration	Annually	Page 23
Calibration check	Monthly or as needed	Appendix A, Page 36
Replace batteries	Annually or as needed. The battery pack contains NiCad batteries. Dispose of properly.	Page 21

**NOTE:** Install the zero air filter into the instrument's intake during storage.

<sup>1</sup> Zero air filters, LFS and LFD scrubber filters contain Resisorb®. Call AZI Customer Service at 800-528-7411, 602-470-1414, or e-mail [support@azic.com](mailto:support@azic.com) for a copy of the Material Safety Data Sheet. Dispose of all filters properly.

## Flow System

The Jerome<sup>®</sup> 631-X's flow system is the crucial link between the sensor and the sample. For the instrument to perform correctly, the flow system must be properly maintained. The user maintainable components of this system are the intake filter (0.25 inch fritware), two scrubber filters and connecting tubing.

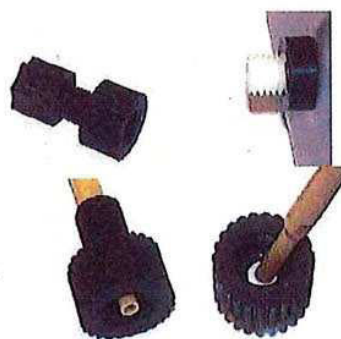
Check the Preventive Maintenance Calendar on page 18, for a suggested schedule for changing fritware and scrubber filters. The Tygon<sup>®</sup> tubing in the system must be free of crimps for proper flow.

Part	Part Number
Scrubber Filter	Z2600 3930
LFS Scrubber Filter	Z2600 3933
LFD Scrubber Filter	Z2600 3934
0.25 inch Fritware Filter	2600 3039
Tygon <sup>®</sup> Tubing (clear) 1/8" I.D. (1')	345-0050
Tygon <sup>®</sup> Tubing (clear) 1/16" I.D. (1')	345-0244
Tygon <sup>®</sup> Fluran Tubing (black) 1/16" I.D. (6")	345-0257

### 0.25 inch Fritware Filter

Replace the 0.25 inch fritware filter once each week or as needed. In dusty environments, the fritware filter may need to be replaced as often as once a day. Replacement 0.25-inch fritware filters are available from AZI, Consumable Sales at 800-528-7411 or 602-470-1414.

- Unscrew and remove the intake.
- Push the old fritware filter disc out of the intake with your trimmer tool.
- Avoid touching the new fritware disc with fingers. Use tweezers to insert the new fritware.
- Use the blunt end of the trimmer tool to seat the fritware disc firmly against the inner ledge of the intake.
- Screw the intake back on the Jerome<sup>®</sup> 631-X.



### CAUTION:

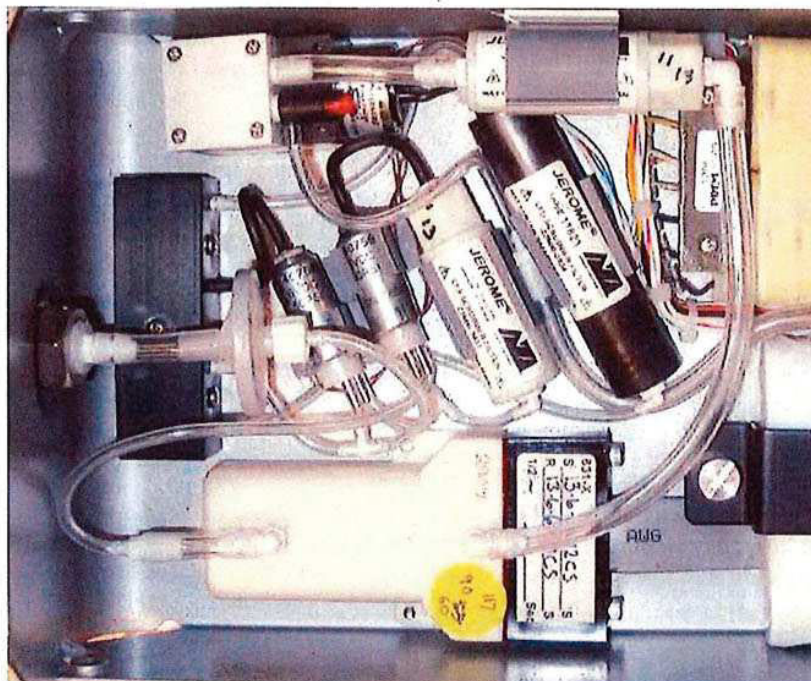
The stem coming from the instrument onto which the outer intake housing is attached must be securely held in place. If loose, the tubing inside the instrument can become twisted when the intake housing is replaced. It may be necessary to open the instrument and tighten the hold-down nuts inside the instrument. Call AZI Customer Service at 800-528-7411, 601-470-1414, or e-mail [support@azic.com](mailto:support@azic.com) if you have any questions





### Internal Filters

- Replace the internal filters after six (6) months of use, or as needed.
- Press the power OFF button and unplug the power cord.
- Remove the two (2) side screws from the intake end of the instrument and open the case.
- Carefully disconnect the Tygon® tubing from both ends of the filters and discard the old filters.



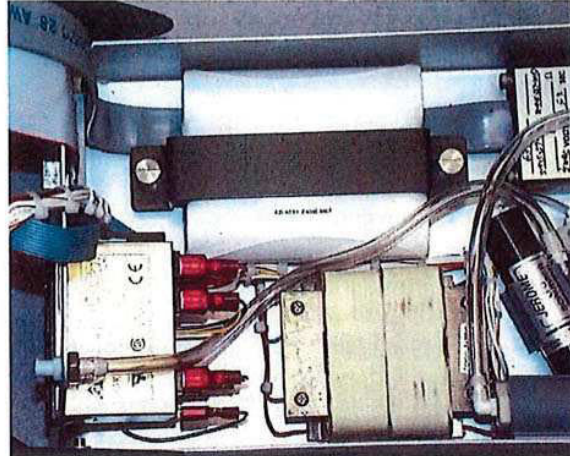
### CAUTION:

Scrubber filters contain Resisorb®. Used filters, especially the scrubber filter may contain hydrogen sulfide also. Use proper methods when disposing of used filters. Call AZI Customer Service at 800-528-7411, 601-470-1414, or e-mail [support@azic.com](mailto:support@azic.com) for a copy of the Resisorb® MSDS or for other questions.

- Connect the new filters to the Tygon® tubing, ensuring all straight hose barbs point toward the intake/pump corner of the case and elbow hose barbs point toward the sensor housing as shown in the illustration.
  - Push the Tygon® as far as it will go onto the filter fittings.
- Push the filters into the mounting clips.
- Remove any crimps or twists in the tubing and ensure that tubing connections are secure. If the tubing is loose, readings may not be accurate. Replace any tubing that has deteriorated due to heat and/or age.
- Close the case and replace the screws.
- Dispose of all filters in accordance with state and federal environmental regulations.

## Replacing the Battery Pack

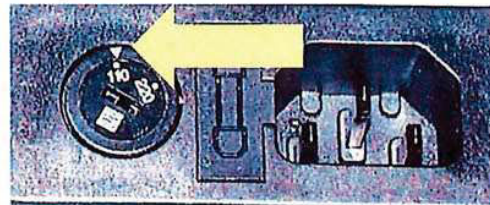
- Press the power OFF button.
- Unplug the power cord.
- Remove the two (2) side screws from the intake end of the instrument and open the case lid.
- Disconnect the battery connector from the board.
- Loosen the two (2) captive screws holding the battery bracket and remove the bracket.
- Remove the old battery pack and replace with a new battery pack.
- Replace the battery bracket and tighten the captive screws.
- Connect the new battery connector to the board.
- Close the case and replace the two (2) side screws.
- Dispose of the old NiCad battery in accordance with state and federal regulations.



## Setting the Input Voltage

Instruments are factory set and calibrated to use the power setting requested on the order. However, the voltage setting is easily changed to use either 110 or 220 VAC.

- Ensure the instrument is turned OFF and unplugged.
- Locate the voltage selector on the rear of the instrument.
- Insert a small screwdriver in the voltage selector slot and turn the selector until the arrow points toward your setting choice and a click is heard.

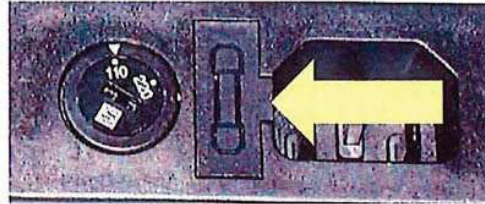




## Changing the Fuse

If the instrument display reads .P.P.P when the instrument is connected to AC power or when REGEN is pressed, or if the battery will not charge, the fuse may need to be replaced. The AC line power could also be less than 100 VAC (220 VAC). Check the fuse with an ohmmeter and the AC line power with a voltage meter.

- Locate the power receptacle on the rear of the instrument.
- Insert a small screwdriver in the slot, located in the power receptacle, and gently slide the fuse compartment out.
- If the fuse in the open-sided clip is open, remove and discard it.
- Replace the discarded fuse with the spare fuse located in the slide-out spare fuse compartment.
- Replace the fuse compartment in the power receptacle.
  - As soon as possible, replace the spare fuse with another 1A, 250V, time delay fuse, AZI P/N 5100 1012).





## 6. CALIBRATION

The Jerome® 631-X's gold film sensor is inherently stable and does not require frequent calibration. The interval between calibrations depends upon the application and frequency of use; however, the recommended interval is every 12 months.

The Jerome® 631-X has been factory calibrated using laboratory equipment containing NIST traceable permeation tubes. In order to calibrate the Jerome® 631-X, a sophisticated calibration system is required that ensures stability of the calibration gas source, eliminates any pressure in the calibration gas stream, and controls the temperature of the calibration environment. Calibration requires the controlled environment, gas source, and computer software available only at the factory or authorized repair/calibration facility.

We strongly recommend you take advantage of our calibration and maintenance service at Arizona Instrument. Call Customer Service at (800) 528-7411 or (602) 470-1414 to arrange re-calibration. A certificate of calibration is issued from AZI when your instrument is factory calibrated.

### Verification of Functionality and Quality Control

The Functional Test Module, AZI P/N Z2600 0918 or Z2600 0930, is used to determine if your instrument is functioning correctly between recommended annual factory calibrations. It allows you to have complete confidence in the sample results. This test verifies proper instrument operation through the introduction of a known concentration of hydrogen sulfide into the Jerome® analyzer.

**THIS IS A FIELD CHECK OF THE FUNCTIONALITY OF THE INSTRUMENT.**

**THIS TEST DOES NOT CALIBRATE THE INSTRUMENT.**

If your application requires frequent verification of instrument function, this test demonstrates the unit's operation and function. Recording FTM results in an instrument log provides a quality control/quality assurance record of instrument function between regular calibrations. If test results fall within the expected range, you may assume the instrument is functioning correctly.

See APPENDIX A - 631-X FUNCTIONAL TEST MODULE on page 36 for more information about the FTM procedures. Complete instructions for use are supplied with the test kit, AZI P/N Z2600 0918 or Z2600 0930.

To order the FTM, contact your AZI Sales Representative at (800) 528-7411 or (602) 470-1414.

## 7. 631-X TROUBLESHOOTING

Symptom	Possible Cause	Solution
<b>Power Problems</b>		
Unit does not turn ON. Unit turns on when power cord is plugged in. LCD displays 000 when instrument is operating on AC power.	Discharged battery or Dead battery.	Recharge battery for a minimum of 14 hours. Refer to page 17. Replace battery. Refer to page 21.
Unit does not turn on when connected to AC power cord.	Open fuse. Insufficient power. Internal component failure.	Replace fuse. Refer to page 22. Use a voltmeter to verify there is power to the AC outlet. Call AZI Customer Service for information at 800-528-7411 or 602-470-1414.
<b>Regeneration &amp; Zero Problems</b>		
LCD displays .8.8.8.	Sensor saturated.	Do not attempt to adjust zero pot. The sensor must be regenerated. Refer to page 12 for information.
LCD displays .L.L.L when taking first sample.	Changes in temperature.	Readjust zero pot. See page 13 for information.
LCD displays H at finish of sensor regeneration when zero is pressed.	Internal contamination may redeposit hydrogen sulfide from flow system onto gold film sensor.	Remove and replace fritware filter, intake filter disk, scrubber filters and Tygon <sup>®</sup> tubing. Refer to "Flow System" on page 19. Check tubing for kinks or crimps. Repeat regeneration cycle. Refer to page 12.
Zero adjust pot cannot be adjusted to 0.	Pot not turned sufficiently.  Sensor may be ruptured or pot may be broken.	1. Turn zero adjust up to 20 times to reach the end. Pot will "click" softly. 2. If no "0", turn pot slowly in opposite direction until display reads "0". 3. If still unchanged, call AZI Customer Service at (800) 528-7411 or 602-470-1414.

Sampling Problems		
Airflow is restricted during the sensor regeneration cycle, causing possible permanent damage.	Kinks and crimps in the Tygon® tubing.	Periodically check the Tygon® tubing inside the instrument. Refer to page 20.
High erratic results.	Internal hydrogen sulfide contamination.	<ol style="list-style-type: none"> <li>1. Install zero air filter in intake and tighten intake nut. Press SAMPLE button. After three samples, if readings are over 0.003 ppm, replace fritware filter, intake filter disk, and Tygon® tubing. Refer to page 19.</li> <li>2. Perform sensor regeneration with the zero air filter in intake. Refer to page 12. Retest if necessary. Replace scrubber filters and Tygon® tubing. Refer to page 20.</li> </ol>
High/erratic results	Intake and internal filters may become clogged and need replacement when sampling in a dusty or humid area.	<ol style="list-style-type: none"> <li>1. Open instrument and check for pinched, crimped or disconnected internal tubing.</li> <li>2. In extreme conditions, an additional particle filter may be installed on the intake.</li> </ol>
High/erratic results Readings vary more than 0.003 ppm when in survey mode.	Loose connections to gold film sensor.	Place a zero air filter into the intake. Place the instrument in survey mode. Move the unit as samples are being taken. Call AZI Customer Service at 800-528-7411 or 602-470-1414 for assistance.
Low response or erratic readings after a long period of non-use.	May need a second regeneration cycle.	<ol style="list-style-type: none"> <li>1. Wait 30 minutes and perform another sensor regeneration.</li> <li>2. Test with FTM. Refer to page 36.</li> <li>3. If still unresponsive,</li> </ol>
False readings, may go to .8.8.8 or .L.L.L.	Extremely cold or extremely warm air sampled into unit.	If sampling under these conditions, install zero air filter in intake. Sample until display reads 0.003 ppm or less. This equilibrates sensor temperature with the temperature of the sample air stream. Remove filter and take samples.



Miscellaneous Problems		
Display reads .P.P.P when regeneration is attempted.	Power cord not attached.	Check power cord for connection
	Blown fuse.	Replace fuse. Refer to page 22.
	Line voltage less than 100 VAC (or less than 200 VAC for 220V instruments).	Check line voltage settings. Refer to page 21.
	Cycles dipswitch set incorrectly.	Check input cycle settings. Refer to page 39.  If fuse and line voltage are OK, it may be circuit board adjustment or component failure. Call AZI Customer Service at 800-528-7411 or 602 470-1414.
Display reads .E.E.E	Very low battery.	Recharge battery. Refer to page 17. Replace battery. Refer to page 21.

## 8. JEROME® 631-X TECHNICAL SPECIFICATIONS

Range	0.003ppm (3ppb) to 50ppm H <sub>2</sub> S in four graduated ranges
Sensitivity	0.003ppm H <sub>2</sub> S
Precision	5% relative standard deviation
Accuracy	Range 0: ± 0.003ppm at 0.050ppm H <sub>2</sub> S Range 1: ± 0.03ppm at 0.50ppm H <sub>2</sub> S Range 2: ± 0.3ppm at 5.0ppm H <sub>2</sub> S Range 3: ± 2ppm at 25ppm H <sub>2</sub> S
Response time-sample mode	
10 to 50 ppm (Range 3)	13 seconds
1.0 to 10.0 ppm (Range 2)	16 seconds
0.10 to 1.00 ppm (Range 1)	25 seconds
0.001 to 0.100 ppm (Range 0)	30 seconds
Response time-survey mode	
10 to 50 ppm (Range 3)	3 seconds
1.0 to 9.9 ppm (Range 2)	6 seconds
0.10 to 0.99 ppm (Range 1)	15 seconds
0.001 to 0.099 ppm (Range 0)	20 seconds
Flow rate	150 ± 10ml/min (0.15 ± .01 liters/min)
Power requirements	100-120 V~, 50/60 Hz, 1 A or 220-240 V~, 50/60 Hz, 1 A
Fuse	F1A 250V, 5mm X 20mm
Internal battery pack	Rechargeable Nickel Cadmium
Operating environment	0° to 40 °C, non-condensing, non-explosive
Case construction	Aluminum alloy
Dimensions – standard model	33 cm L x 15 cm W x 10 cm H (13" L x 6" W x 4" H)
Dimensions – XE model	35 cm L x 18 cm W x 18 cm H (14" L x 7" W x 7" H)
Weight – standard model	3.18 kilos (7 pounds)
Weight – XE model	3.5 kilos (8 pounds)
Digital meter display	Liquid crystal display (LCD)
Certification	CE mark on 220-240 V~, 631-XE model only.

## Optional Communications Capability

Data output	1. RS-232 Serial, Baud Rate 1200 for use with data logger, and/or Jerome® communication program. 2. RS-232 Serial data format with 0 & 20mA current logic levels; Baud Rate 1200 (special industrial applications) and Analog 20 mA output.
-------------	--

**"OPTION BOARD"** - See APPENDIX D - JEROME® 631-X OPTION BOARD on page 40.

Analog output	0 to 2V or 4 to 20 mA
---------------	-----------------------

Auto sample interval	5, 15, 30, or 60 minutes <sup>2</sup>
----------------------	---------------------------------------

Auto regeneration interval	6, 12 or 24 hours
----------------------------	-------------------

## Instrument I/O Interface

The 631-X I/O port (25 pin D-sub) provides the following functions:

- Serial data communication
  - Interface type: RS-232C full duplex, DCE
  - Parameters: 1200 Baud, 1 start bit, 8 data bits, 2 stop bits, no parity
  - Pin assignments:

Pin 1	Protective ground
Pin 2	Data in
Pin 3	Data out
Pin 7	Data ground
- Serial current loop
  - Interface type: 20mA current loop, full duplex
  - Parameters - 1200 Baud, 1 start bit, 8 data bits, 2 stop bits, no parity
  - Pin assignments:

Pin 1	Protective ground
Pin 4	Data out (+)
Pin 5	Data in (+)
Pin 14	Data out (-)
Pin 16	Data in (-)

<sup>2</sup> When the instrument is used for continuous auto-sampling, the estimated life of the gold film sensor decreases and the sensor will become a maintenance item. For example, sensor life is reduced to approximately six months if the instrument is run continuously with a 30-minute sample interval and a 48-hour regeneration interval or reduced to three months when using a 15-minute sample interval and a 24-hour regeneration interval.

- Switched battery connection for data logger
  - Pin assignments:
 

Pin 9	Battery (+)
Pin 7	Battery ground (-)
Pin 23	Battery ground (-)
- Unswitched battery connection for external battery pack pin assignments
  - Pin assignments:
 

Pin 15	Battery (+)
Pin 19	Battery (+)
Pin 7	Battery ground (-)
Pin 23	Battery ground (-)

**NOTE:** Pins 6, 8, 11, 17, 18, 20 and 21 are non-standard and should not be connected.

### Potential Interferences

Potential interferences to the Jerome® hydrogen sulfide analyzers are rare and most of these can be eliminated with proper maintenance procedures. However, erroneously high readings can sometimes occur. Here are a few things to be aware of when using the instrument:

The gold film sensors used in the Jerome® hydrogen sulfide analyzers do not respond to the following compounds:

- Hydrocarbons
- CO, CO<sub>2</sub>, and SO<sub>2</sub>
- Water vapor (Note that water vapor condensation on the gold film can cause irreparable harm to the sensor and must be avoided.)

However, the following compounds may cause the gold film sensor to respond:

- Chlorine
- Ammonia
- NO<sub>2</sub>
- Most mercaptans (organic sulfur compounds or “thiols”)

Special filters designed to remove chlorine or ammonia gas are available from Arizona Instrument and may be ordered as Chlorine Filter, AZI P/N Z2600-3940 or Ammonia Filter, AZI P/N 990-0183. Visit the “Tech Notes” section at [www.azic.com](http://www.azic.com) for more information concerning the chlorine and ammonia filters.

Filter replacement at regular intervals, or when unexpectedly high readings are encountered in areas of these potential interferences, may resolve these problems.



## 9. ACCESSORIES & MAINTENANCE PARTS

PART #	ITEM DESCRIPTION
Y631 0901	<b>631 Accessory Kit</b> (See pictures beginning on page 32)
1400 2002	Probe
1400 3010	Tubing Adapter, 1/4" to 1/8"
2300 0001	Trimmer Tool
2600 3039	0.25 Fritware
6000 4003	Line Cord, 115 VAC - USA and Canada
Alt. 200-0003	Line Cord, 220-240 VAC - England
Alt. 200-0008	Line Cord, 220-240 VAC - Europe
Z2600 3905	Zero Air Filter
Z2600 0918 or Z2600 0930 & Y2600 0920	<b>631 Functional Test Module (FTM) or 631 Low-Level Functional Test Module FTM Accessory Kit</b> (See pictures beginning on page 32)
1300 0031	1/8" x 3/16" reducer
1400 3010	Tubing adaptor
2300 0003	Allen wrench
345-0050	1' of 1/8" Tygon® tubing
2500 3010	1' of 3/16" Tygon® tubing
2600 3010	Filter cap
2600 3055	1 Lb. Desiccant
2800 2044	(2) Guide pins
6000 4003	115 VAC Line Cord
	Permeation Tube Assembly
1400 3196	Perm Tube Housing
2600 3054	0.63" Diameter Fritware
1300 1025 or	Perm Tube (0.250 ppm / 250 ppb) (for Z2600 0918)
1300 1040	Perm Tube (0.030 ppm / 30 ppb) (for Z2600 0930)
700-0095	FTM Operation Manual
Y631 0905	<b>631 Maintenance Kit</b> (See pictures beginning on page 32)
345-0050	1' of 1/8" Tygon® clear tubing
345-0244	2' of 1/16" Tygon® clear tubing
345-0257	6" of 1/16" Tygon® Fluran black tubing
2600 3039	0.25 inch fritware
Z2600 3905	Zero Air Filter
Z2600 3930	Scrubber Filter
Z2600 3933	LFS Scrubber Filter
Z2600 3934	LFD Scrubber Filter
Z4000 0907	Battery Pack Assembly

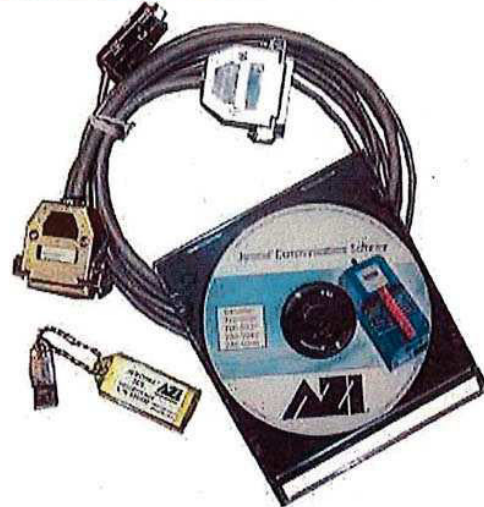


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**Jerome® Data Logger**  
Y990-0259 Includes the Jerome® Data  
Logger and JCS Software Kit.



Y990-0257  
(JCS kit  
without Data  
Logger) **Jerome® Communication  
Software Kit (JCS)**



---

**Hard Side Carry Case**  
Y411 0904 Includes a molded case with  
die cut foam rubber inserts to  
hold the Jerome® 631-X and  
accessories.



1400 0052 **Soft Field Carrying Case**  
Hand/shoulder case with  
pockets for accessories.



## Spare Parts

1400 2002 Probe

2300 0001 Trimmer

1300 0031 1/8" x 3/16" reducer



Z4000 0907 Battery Pack Assembly (115V)

Z4000 0908 Battery Pack Assembly (230V)



Z2600 3905 Zero air filter



Z2600 3933 LFS scrubber filter









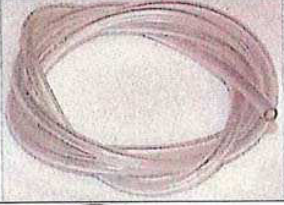



Z2600 3934 LFD scrubber filter



Z2600 3930 Scrubber filter



Z2600 3940	Chlorine Filter	
990-0183	Ammonia Filter	
1400 3010	Tubing adapter	
Y2600 3945	Intake Kit	 Includes mounting hardware.
PS-151	Tube Nut	
2600 3039	0.25 inch fritware	
2600 3061	Acrodisc® Filter	
345-0050	Tygon® tubing 1/8" I.D. (1 foot)	
345-0244	Tygon® tubing 1/16" I.D. (1 foot)	
345-0257	Tygon® Fluran tubing 1/16" I.D. (6 inches)	



4000 1011 115 VAC IDC battery charger  
(Used to charge an uninstalled battery)



4000 1012 230 VAC IDC battery charger  
(Used to charge an uninstalled battery)



6000 4003 100-120 VAC Line Cord



Alternate – 220-240 VAC Line Cord for  
200-0003 England



Alternate – 220-240 VAC Line Cord for  
200-0008 Europe



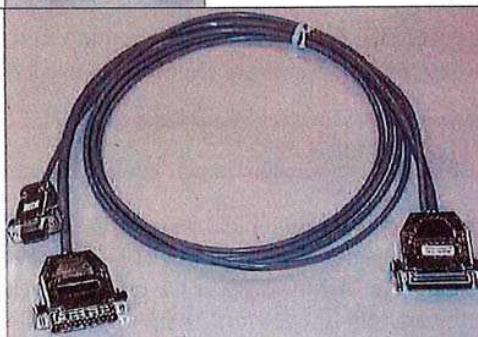
990-0225 10 to 1 Dilution Module



5100 1012 Spare Fuse



6000 1055 Jerome® Communication Cable



**For current prices and delivery information, call AZI Customer Service at (800) 528-7411 or (602) 470-1414.**

## **10. Factory Calibration Service**

Service includes filter replacement, component testing, and instrument calibration to NIST traceable standards.

**For scheduling and shipping authorization, call AZI Customer Service at (800) 528-7411 or (602) 470-1414.**

## **11. APPENDIX A - 631-X FUNCTIONAL TEST MODULE**

The Jerome<sup>®</sup> Hydrogen Sulfide Functional Test Module (FTM) provides a fast and easy method of verifying that Jerome<sup>®</sup> 631-X Hydrogen Sulfide Analyzers are functioning correctly.

**THIS IS A FIELD CHECK OF THE FUNCTIONALITY OF THE INSTRUMENT.**

**THIS TEST DOES NOT CALIBRATE THE INSTRUMENT.**

The Functional Test Module is beneficial:

- In applications where frequent verification of functionality is required, such as ISO 9000 documentation,
- To verify proper instrument operation when unexpected readings are obtained in normal sampling,
- As part of a weekly maintenance routine, and
- To determine if analyzer calibration is needed.

### **Simple Operation**

The Functional Test Module includes a permeation tube containing hydrogen sulfide. When activated, the test module releases this H<sub>2</sub>S from the permeation tube at a specific, known concentration. The H<sub>2</sub>S flows over the gold film sensor of the Jerome<sup>®</sup> analyzer, which then measures the amount of exposure to the gas. The flow rate and temperature of this release are factory set to provide a concentration of approximately 250 ppb (0.250 ppm)  $\pm 20\%$  when using FTM Z2600 0918 or approximately 30 ppb  $\pm 20\%$  when using the Low-Level FTM (Z2600 0930). The user then compares the reading on the Jerome<sup>®</sup> analyzer with the known concentration from the module. If the H<sub>2</sub>S level shown on the analyzer's display falls within the expected range for the FTM being used, the instrument is functioning properly. If the level is not in the expected range, it should be returned to the factory for NIST-traceable calibration.

See page 30 for a list of the components that make up the FTM and its accessory kit.

The FTM, with the exception of the permeation tube, carries a limited one-year warranty to be free from defects or workmanship. The permeation tube is warranted for 90 days. Refer to the FTM Operation Manual AZI P/N 700-0095 for complete operation and warranty information.



## 12. APPENDIX B - JEROME® COMMUNICATIONS SOFTWARE

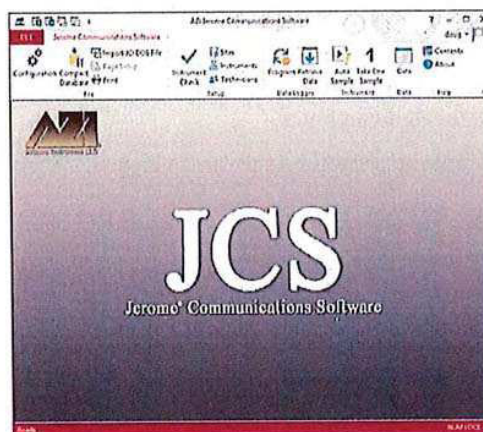
The Jerome® Communications Software (JCS) is used with 631-X Hydrogen Sulfide Analyzers that feature the communications configuration option.

- The JCS allows the user to program the instrument for unattended monitoring and to download recorded data stored in the Jerome® data logger.
- Automatic sampling can be initiated every one (1) to sixty (60) minutes with programmable audible alarm levels.

The Jerome® Communications Software (JCS) operates with the Jerome® 431-X Mercury Vapor and Jerome® 631-X Hydrogen Sulfide Analyzers that have the "Communications Configuration" option installed. The software can control instrument sampling for unattended continuous operation, collect data, graph this data in real time and perform statistical analysis.

The software can also program the Jerome® Data Logger, AZI P/N 6100-0010. This optional accessory enables data storage during manual sampling or portable automatic sampling without being attached to a computer. The data logger initiates automatic sampling, triggers alarms and stores data. The logged data may then be downloaded to the computer when it is convenient. The data logger stores up to 1,000 data points.

The JCS is menu-driven and easy to use. Each display screen is designed for clarity with self-explanatory menu options, such as "Operate Instrument" or "Display Stored Data." Select menu options using either a mouse or a track ball pointing device or a standard keyboard. The user creates records, or files, for computer storage of collected data. Data is easily retrieved for later viewing, graphing, printing or editing with spreadsheet or word processing software (not provided). Data can be used for ongoing record keeping or for fulfilling local regulatory requirements.



Before using this software, familiarization with the operation of the Jerome® Hydrogen Sulfide Analyzer or Mercury Vapor Analyzer is important. Also, prior to installation of this software you should be familiar with the personal computer and operating system you are using. If you have any questions about how to proceed, call AZI Customer Service at (800) 528-7411 or (602) 470-1414 or send an e-mail to [support@azic.com](mailto:support@azic.com) for assistance.

### **JCS Kit Contents**

- Jerome® Communication Software on CD-ROM with security key
- Jerome® Communication Cable, AZI P/N 6000 1055
- User's manual

### **System Requirements**

- Jerome® 631-X with the "Communications Option." These Jerome® instruments have a DB-25 connector and related internal hardware and firmware.
- Windows® 7 or 8
- At least one free serial port (or two free USB ports if using a RS-232/USB converter)
- One free USB port

Optional equipment:

- Jerome® Data Logger, AZI P/N 6100 0010 (to capture data without a computer nearby)

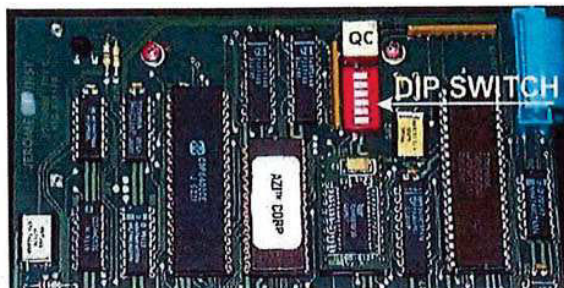
### **Data Logger Option**

The software can also program the Jerome® Data Logger (AZI P/N 6100 0010) used with the Jerome® analyzer. The computer programs the data logger that then attaches to the DB-25 connector on the rear of the instrument. The data logger initiates automatic sampling, triggers alarms and stores data. This optional accessory enables portable automatic sampling without a dedicated computer.



### 13. APPENDIX C - INTERNAL DIP SWITCH SETTINGS

The DIP switch identified as SW2 on the 631-X control board is located at the top center of the board.



#### CAUTION:

Switch the instrument's power to OFF before opening the instrument and changing DIP switch settings.

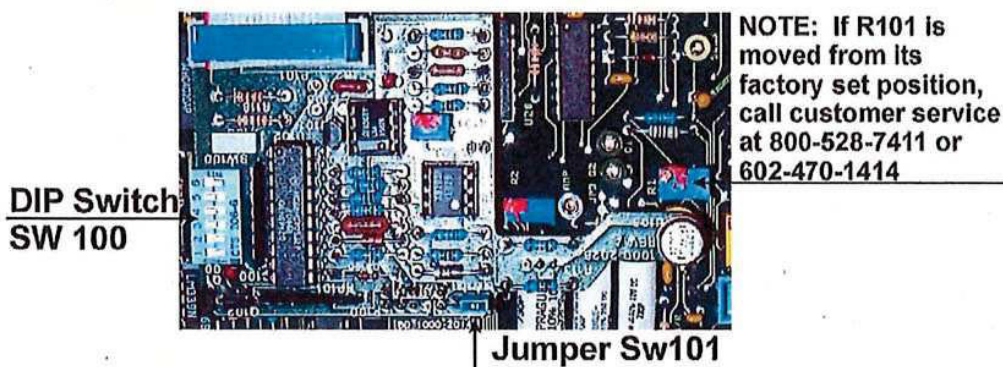
#### DIP Switch Settings:

Switch #	Position	Function	Comment
1	ON	AUTORANGE	DISABLED (SEE DIP SWITCHES 5 & 6)
1	OFF	AUTORANGE	ENABLED
2	X	NOT USED	
3	X	NOT USED	
4	ON	ZERO DISPLAY: 00-99	
4	OFF	ZERO DISPLAY: L-O-H	

Switch #	Function	Comment
5	RANGE	SAMPLE TIME
ON	0 (.000 - .099PPM)	30 SECONDS
ON	1 (0.10 - 0.99 PPM)	25 SECONDS
OFF	2 (01.0 - 09.9 PPM)	16 SECONDS
OFF	3 (10 - 50 PPM)	13 SECONDS

## 14. APPENDIX D - JEROME® 631-X OPTION BOARD

Proper use of this board requires that the base instrument be fully functional and set correctly for the intended operation.



### Auto-Zero

With the option board installed, the 631-X has a limited auto-zero function. This function cannot be disabled and is transparent to the user. The instrument can be manually zeroed as described in "Zero Adjust" on page 13. However, if the instrument is to be operated by personnel not familiar with the procedure or if it is operated unattended, the auto-zero function should satisfactorily zero the unit after each sensor regeneration.

### Instrument Zeroing

The Jerome® 631-X has essentially three ways to zero the sensor reading before samples are taken if the option board is installed.

- The instrument automatically re-zeroes between samples so that each sample is a unique reading. To take a sample, simply press the SAMPLE button.
- The manually adjusted zero, using the switch on the top of the 631-X is used to re-establish a baseline between the reference and sensor gold films **only after a sensor regeneration**. This zero is manually adjusted by pressing the ZERO button and turning the potentiometer on the top of the instrument until the display reads 0. **Adjust only after sensor regeneration**; it is normal for H to be displayed after sampling.
- The 631-X option board provides an auto-zero feature following regeneration that is invisible to the user.

- In some cases, the instrument cannot resume sampling after regeneration. .L.L.L appears on the display when the ZERO button is pressed and the error message “manual bridge adjust needed” is added to the notes column of the JCS text file when the JCS is used. If this problem persists, it may be necessary to re-set the auto-zero.
- When necessary to re-adjust the auto-zero point:
  - Turn the instrument off.
  - Make a note of the original DIP switch settings of SW100 on the option board.
  - On red DIP switch on the control board, SW2, turn DIP switch 4 to ON.
  - Set the switches on the option board’s blue DIP box, SW100, to 1,2,6 OFF; 3,4,5 ON.
  - Turn the instrument ON.
  - Press and hold the ZERO button and adjust the potentiometer on top of the instrument until the number 20 is displayed, then release the ZERO button.
  - Switch option board DIP #1 from OFF to ON three times, leaving it set to ON. (i.e. starting from OFF, switch it ON, OFF, ON, OFF, ON).
  - Press and hold the ZERO button while turning the potentiometer on the option board until the number 20 is displayed. Note the display may flicker one digit.
  - Return all switches to their original position.

**NOTE:** The higher the auto-zero number, the lower the sensor capacity and the more sensor regenerations are needed.

### Timed Regeneration

If the unit is to be operated unattended for extended periods, AZI recommends that the sensor be regenerated regularly. Operation under JCS or data logger control automatically regenerates saturated sensors. Regeneration will not occur as shown when sample streams have a very low concentration of H<sub>2</sub>S. The option board controls regeneration on a regular basis, every 6, 12 or 24 hours.

The regeneration intervals are set through a combination of switch settings as shown in the following table:

----- SW100----- Switch #1    Switch #2		REGENERATION Interval (Hrs.)
OFF	OFF	OFF
ON	OFF	6
OFF	ON	12
ON	ON	24



## Auto-Sample

If a data logger is connected and operating in the manual sampling mode or a data logger is not connected the following automatic sampling rates may be selected with SW100 dip switch settings:

Dip switch settings			Sampling frequency
3	4	5	
ON	ON	ON	No automatic sampling
OFF	ON	ON	5 minutes
OFF	OFF	ON	15 minutes
OFF	ON	OFF	30 minutes
OFF	OFF	OFF	1 hour

This auto-sample function will not function if a data logger is connected and operating in automatic sampler mode programmed through the JCS.

## 4-20 mA Analog Output

The analog output signal at pin 18 of the 25 pin connector can be configured to provide the instrument's native mode 0-2 Volt output or the optional 4-20 mA output by setting the option board jumper (SW101) to the "V" position for voltage, or the "I" position for current. (Pin 23 is the ground pin for the analog output function. Pin 18 is positive with respect to the ground pin).

- The 0-2 Volt output circuit can drive loads of 10 kilohms or higher.
- The 4-20 mA output is a passive transmitter and requires the connected receiver to supply between 10 and 28 volts DC.

The 631-X must have the auto ranging feature disabled in order to get accurate analog output readings. The approximate range of the H<sub>2</sub>S concentration must be known before the instrument can be set into that specific range (0, 1, 2 or 3). The analog output signal is based on each individual range and not the entire range (0-50 ppm).

Note that neither analog output circuit is floating. The negative terminals of both circuits are connected to the instrument's common ground bus.

### SW101 Functions:

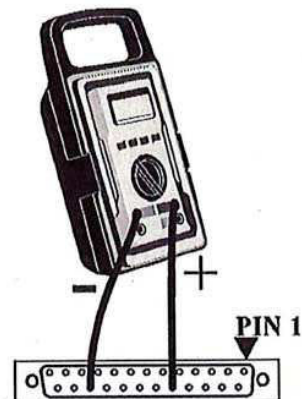
V =	0-2V analog output
I =	4-20 mA analog output

Jerome® 631-X instruments shipped after early 1995 are capable of providing 0-2 volts analog output. Instruments shipped before that time can be upgraded by a firmware update and adjustment.

Instruments that are capable of 0-2 volt output can be upgraded to the 4-20 mA output with the addition of an option board upgrade. This must be installed at the factory.

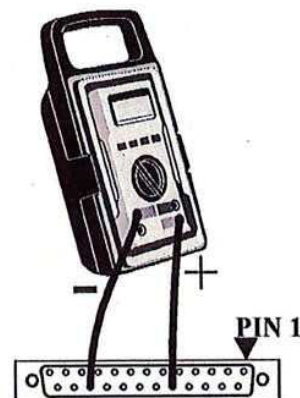
**Connection and Setup:**

- 0-2 volt devices connect as shown in Figure 1. If the instrument includes an option board, be sure its analog jumper (SW101) is set to the "V" position.



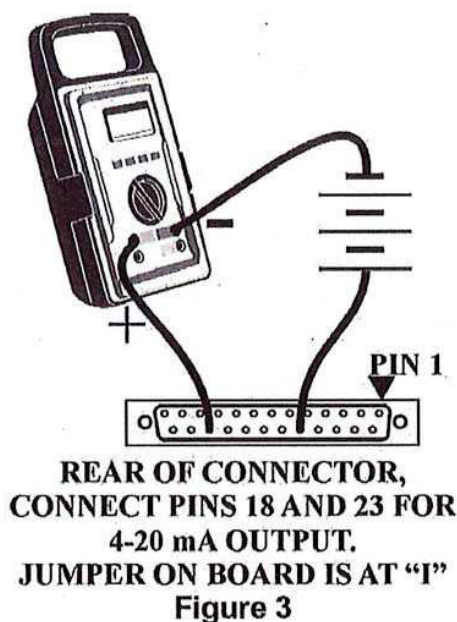
**REAR OF CONNECTOR,  
CONNECT PINS 18 AND 23 FOR  
0-2 VOLT OUTPUT.  
JUMPER ON BOARD IS AT "V"  
Figure 1**

- The 4-20 mA active receivers connect as shown in Figure 2. The active receiver contains a voltage source to power the loop current. The receiver must have an isolated input circuit. That is, it must not be connected to ground or to a voltage source referenced to ground. Be sure that jumper SW101 is set to the "I" position before power is applied.



**REAR OF CONNECTOR,  
CONNECT PINS 18 AND 23 FOR  
4-20 mA OUTPUT.  
JUMPER ON BOARD IS AT "I"  
Figure 2**

- The 4-20 mA passive receivers do not contain a voltage source to power the loop current. They require the addition of a separate isolated power supply. Typically a supply that delivers 15 to 20 volts DC at 50 mA is sufficient. Wire these as in Figure 3. Note that some 12-volt DC wall transformers (as used on portable equipment) may deliver 15 to 20 volts when they are lightly loaded. The Digi-Key T509-PIP-ND is a commonly available example of a 12 volt 200mA supply that will deliver around 18 volts nominal when loaded below 20 mA.
- Be sure that both the power supply used and the passive receiver are floating (not connected to earth ground). If either is not floating, the circuit will not work and damage may occur.
- Ensure that jumper SW101 is set to the "I" position before power-up.



#### Example Calculations:

- Example 1: Locked in Range 1 (0.10 to 1.00 ppm)
  - 631-X reading                      Current
 

0.10 ppm or less	4mA
1.00 ppm	20mA
  - The formula relating the current to the concentration is:  

$$\text{Concentration} = [\text{Range Maximum} \times (\text{Current} - 4)] / 16$$
  - An output current of 12mA (in Range 1) corresponds to a concentration of 0.500 ppm:  

$$\text{Concentration} = [1.00 \times (12 - 4)] / 16 = 0.500 \text{ ppm}$$
- Example 2: Locked in Range 2 (1.0 to 10.0 ppm)
  - 631-X reading                      Current
 

1.0 ppm or less	4mA
10.0 ppm	20mA
  - The formula relating the current to the concentration is:  

$$\text{Concentration} = [\text{Range Maximum} \times (\text{Current} - 4)] / 16$$
  - An output current of 12mA (in Range 2) corresponds to a concentration of 5.00 ppm:  

$$\text{Concentration} = [10.0 \times (12 - 4)] / 16 = 5.00 \text{ ppm}$$



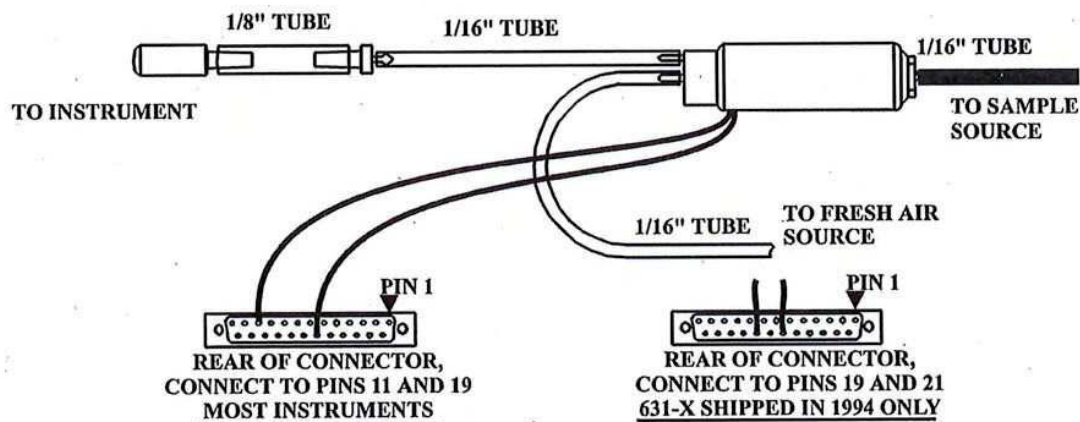
## Fresh Air Solenoid

An external three-way solenoid can be used to provide fresh air or conditioned air during sensor regeneration. This may be necessary if the sample stream lacks molecular oxygen. A low current six volt DC solenoid, connected between pins 19 and 11 of the 25 pin rear panel connector, will be energized during the regeneration cycle if the option board SW100 switch 6 is placed in the OFF position.

If needed, the circuit may be built from the following components and configured as shown in the following diagram. It will only function if the option board is installed in the 631-X instrument.

Required Parts:	Suggested Part	Similar AZI P/N
1 solenoid, 6volt 3way	Angar P/N 407569	1300 1004
1/8" to 1/16" tubing adaptor	Any	1300 0025
1/2" clamp, adhesive mount	Any	6000 0013
1/8" tube to instrument adaptor	Any	1400 3010
3' 1/8" clear tubing	Tygon® Formula 2375	345-0050
A/R 1/16" clear tubing (for adjacent solenoid ports)	Tygon® Formula 2375	345-0244
A/R 1/16" black tubing (for lone solenoid port)	Tygon® Fluran	345-0257
1 25 pin male DB-25 connector Solder-cup style	AMP 747912-2	None *
1 connector hood	AMP 749626-2	None *

\* These are types not stocked by AZI, but should be available overnight from many AMP stocking distributors such as Digi-Key Corporation. There are multiple suitable alternatives such as Radio Shack's 276-1547 and 276-1549.



## DC Power Operation

Instruments with the 631-X option board modification can be used with any +12 VDC source for continuous operation, if the AZI Power Inverter Kit, P/N Y031 0902 is installed along with the option board. To preserve the life of the DC power source, usually a car or truck battery, the power inverter will switch on automatically to supply the AC necessary for regeneration only. The external switch on the inverter should always be OFF to preserve battery life during normal sampling.

To work with the power inverter kit, place option board SW100 DIP Switch #6 to the ON position.

When the instrument starts a regeneration with option board SW100 DIP Switch #6 ON, the instrument sends a signal to close the relay on the DC Power Adaptor, AZI P/N 1000 0089, mounted between the data logger and the instrument. This switches the power inverter ON using the inverter's internal switch.

**NOTE:** When this mode is enabled, the instrument does NOT check for 115 VAC for the regeneration. If there is no AC power to the instrument, and a regeneration is initiated, the instrument will flash .H.H.H (rather than .P.P.P), however the sensor will not heat, nor will the sensor be cleaned.

### DC Power Adaptor Kit, AZI P/N Y031 0902

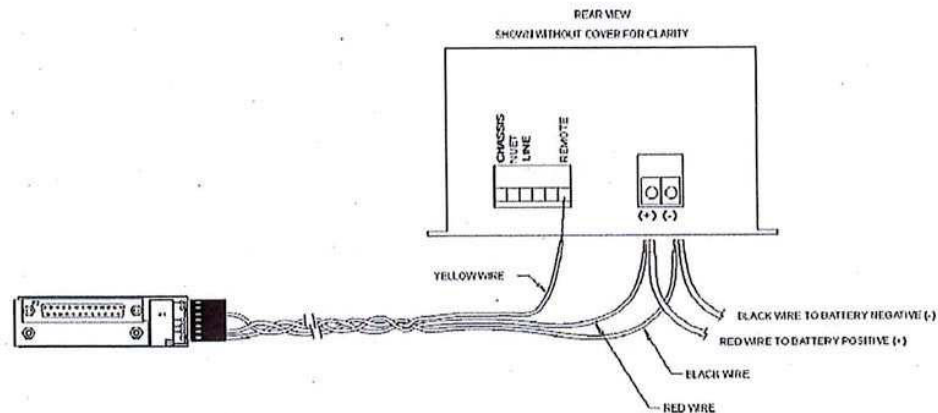
- The DC power adaptor kit consists of:
  - DC Power Adaptor, P/N 1000 0089
  - DC Power Inverter, P/N 4000 1021
  - DC Power Cable Assembly, P/N 6000 1093

#### Installation

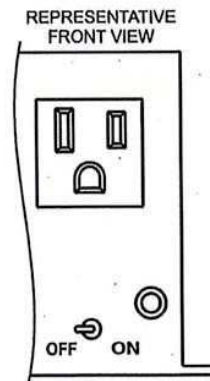
- Ensure that the instrument's option board switches are set correctly for the intended operation with the option board's SW100 DIP Switch #6 set to "ON" for DC operation.
- Mount the interface board to the rear of the instrument. Tighten the mounting screws.
- Place or mount the DC/AC power inverter in a secure position near the instrument.
- Connect the cable from the DC/AC power inverter to the matching connector on the interface board. Note that the connectors are keyed to prevent improper connection.
- Plug the instrument's AC power cord into the power inverter and connect it to the instrument.



Ensure that the inverter's power switch is in the "OFF" position. LEAVE the power switch in the "OFF" position at all times. The interface board will activate the inverter when necessary. If the inverter power switch is placed in the "ON" position, it will cause a continuous drain on the external 12-volt power system.



- Remove the screws from the rear cover of the inverter and remove the cover.
- Place the wires from the external DC source (battery) and the wires from the DC power cable through the holes in the end plate.
- Connect cables from the external 12-volt power source and the DC power cable assembly to the appropriate positive (+) and negative (-) terminals on the back of the inverter and tighten the hold down screws.
- Connect the yellow wire from the DC power cable to the "REMOTE" terminal on the power inverter and tighten the hold down screw.
- Reinstall the cover.
- If the external 12volt lines are not powered, power them now. (Connect them to the battery)
- Connect the instrument's AC power cord between the instrument and the front of the power inverter.
- Turn the instrument "ON."
- Press the "REGEN" switch on the instrument. Inverter operation can be verified in either of two ways:
  - Immediately after pressing "REGEN" the inverter will intermittently "sing." This tone slowly becomes nearly continuous and then ends after 64 seconds.
  - If the area is noisy, use a voltmeter or test lamp to verify that approximately 115 volts is present for about 64 seconds, starting when the "REGEN" switch is pressed.
- Allow the instrument to complete its regeneration before turning it off.
- With the instrument turned off, complete the installation (i.e. connect data logger, communications cables, or other devices and ensure that the DIP switches for the instrument and option board are set correctly.



## 15. WARRANTY

Arizona Instrument LLC (seller) warrants to buyer that Jerome® products delivered pursuant to this agreement shall, at the time of delivery, and for a period of one (1) year thereafter (the Internal Battery Pack, where applicable, is warranted for a period of ninety [90] days only), to be free from defects in material or workmanship and shall conform to seller's specifications or such other specifications as seller has agreed to in writing. Seller's obligations with respect to claims under this warranty shall be limited, at seller's option, either to the replacement of defective or non-conforming product or to an appropriate credit for the purchase price thereof subject to the provisions of seller's Warranty Policy as amended from time to time, said Policy being incorporated herein by reference.

Returned products under warranty claims will be shipped to seller's plant by buyer at buyer's expense and shall be accompanied by a statement of the reason for the return and an approved Return Material Authorization Number issued by seller. Buyer remains responsible for payment for products not accepted for warranty adjustment, handling costs, and freight costs associated therewith.

Notwithstanding the foregoing, no warranty shall be enforceable in the event that product has been subjected to environmental or stress testing by buyer or any third party without written approval of seller prior to such testing. Further, no warranty shall be enforceable if the alleged defect is found to have occurred because of misuse, neglect, improper installation, repair, alteration, accident, or improper return handling procedure by buyer.

Discontinued product is warranted only for a credit or replacement at seller's option.

THE EXPRESS WARRANTIES GRANTED ABOVE SHALL EXTEND DIRECTLY TO BUYER AND NOT TO BUYER'S CUSTOMERS, AGENTS, OR REPRESENTATIVES AND, EXCEPT FOR WARRANTY OF TITLE, IS IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, SUCH OTHER WARRANTIES BEING SPECIFICALLY DISCLAIMED BY SELLER. IN NO EVENT SHALL EITHER PARTY'S LIABILITY FOR ANY BREACH OR ALLEGED BREACH OF THIS AGREEMENT EXCEED THE TOTAL EXTENDED PRICE OR PRICES SHOWN ON UNFILLED ORDERS, NOR SHALL EITHER PARTY BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OR ALLEGED BREACH.

Notwithstanding the foregoing, if any product covered by order(s) placed hereunder is designated as "developmental," "prototype" or "experimental," no warranty whatsoever except a warranty of title to component materials, will be applicable thereto and buyer shall indemnify seller for any claims for liability asserted seller in connection therewith.

The foregoing state the entire liability of seller in connection with products supplied hereunder.

## **TRADEMARK AND COPYRIGHT PROTECTION**

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### **Arizona Instrument LLC**

### **Jerome<sup>®</sup> 631-X Hydrogen Sulfide Analyzer Operation Manual**

### **Part Number 700-0037**

If you have any questions regarding the operation of this instrument, please call our toll free number (800) 528-7411. Internationally, call (602) 470-1414 or fax (480) 804-0656.

**Attachment # 5**

**NJDEP Bureau of Air Monitoring letters dated 2/8/17 & 2/15/17**





State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

AIR QUALITY MONITORING AND MOBILE SOURCES

BUREAU OF AIR MONITORING

MAIL CODE: 401-02E

PO BOX: 420

TRENTON, NJ 08625-0420

Tel. (609) 292-0138

Fax (609) 777-1343

CHRIS CHRISTIE  
Governor

KIM GUADAGNO  
Lt. Governor

BOB MARTIN  
Commissioner

February 8, 2017

Gary Conover  
Solid Waste Director  
Atlantic County Utilities Authority  
P.O. Box 996  
Pleasantville, NJ 08232-0996

Dear Mr. Conover:

The Bureau of Air Monitoring has completed a review of the "ACUA Landfill Hydrogen Sulfide (H<sub>2</sub>S) Monitoring Protocol," and has the following comments:

1. The minimum duration of monitoring for hydrogen sulfide during each sampling event must be thirty (30) minutes. This requirement is effective for all sampling frequencies and regardless of the final concentration of hydrogen sulfide measured during each sampling event.
2. The DEP reserves the right to conduct audits on the hydrogen sulfide monitors.

The Protocol may be approved after these comments are addressed. If you have any questions, please call me at 609-633-1151.

Sincerely,

Luis Lim, Chief  
Bureau of Air Monitoring

c: Peg Hanna, Assistant Director  
Bachir Bouzid, Section Chief  
Mary Toogood, Manager



*State of New Jersey*

DEPARTMENT OF ENVIRONMENTAL PROTECTION

AIR QUALITY MONITORING AND MOBILE SOURCES

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Tel. (609) 292-0138

Fax (609) 777-1343

CHRIS CHRISTIE  
*Governor*

KIM GUADAGNO  
*Lt. Governor*

BOB MARTIN  
*Commissioner*

February 15, 2017

Gary Conover  
Solid Waste Director  
Atlantic County Utilities Authority  
P.O. Box 996  
Pleasantville, NJ 08232-0996

Dear Mr. Conover:

The Bureau of Air Monitoring has reviewed the revised "ACUA Landfill Hydrogen Sulfide (H<sub>2</sub>S) Monitoring Protocol" dated February 13, 2016. Please be advised that the Protocol is approved.

If you have any questions, please call me at 609-633-1151.

Sincerely,

Luis Lim, Chief  
Bureau of Air Monitoring

c: Peg Hanna, Assistant Director  
Bachir Bouzid, Section Chief  
Mary Toogood, Manager

**Attachment # 6**

**ACUA Employee List, by Title, who will/may perform Odor Monitoring  
Surveys**

**Attachment #6 – Listing of Employees, by Title, who will/may perform  
Odor Monitoring Surveys**

SOLID WASTE DIRECTOR

PROJECT ANALYST

ENVIRONMENTAL COMPLIANCE INSPECTOR

ENVIRONMENTAL RESEARCH ASST

SOLID WASTE MANAGER

LANDFILL SYSTEMS MANAGER

GROUP LEADER

LEAD EQUIPMENT OPERATOR

LANDFILL SYSTEMS TECHNICIAN

WILDLIFE BIOLOGIST



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

**Facility Name (AIMS):** Atlantic County Utilities Authority Landfill

**Facility ID (AIMS):** 70506

**Street** HANEMAN ENVIRONMENTAL PARK  
**Address:** 6700 DELILAH RD  
EGG HARBOR TOWNSHIP, NJ 08234

**Mailing** ATLANTIC COUNTY UTILITIES AUTHORITY  
**Address:** PO BOX 996  
PLEASANTVILLE, NJ 08232

**County:** Atlantic

**Location** Northwest of Egg Harbor village, on western  
**Description:** border of Absecon, south of Wescoat Road

**State Plane Coordinates:**

**X-Coordinate:** 2,036,000

**Y-Coordinate:** 215,500

**Units:** New Jersey State Plane 8

**Datum:** NAD27

**Source Org.:** Submittal Document

**Source Type:** Hard Copy Map

**Industry:**

**Primary SIC:** 4953

**Secondary SIC:**

**NAICS:** 562998

New Jersey Department of Environmental Protection  
Facility Profile (General)

**Contact Type: Air Permit Information Contact**

**Organization:** Atlantic County Utilities Authority

**Org. Type:** Auth/Dist/Comm

**Name:** Gary Conover

**NJ EIN:** 44028000017

**Title:** VP Solid Waste Division

**Phone:** (609) 272-6913 x

**Mailing Address:** PO Box 996

**Fax:** (609) 272-6941 x

Pleasantville, NJ 08232

**Other:** ( ) - x

**Type:**

**Email:** gconover@acua.com

---

**Contact Type: Consultant**

**Organization:** Trinity Consultants

**Org. Type:** Corporation

**Name:** Amanda Smith

**NJ EIN:** 10000000000

**Title:** Consultant

**Phone:** (609) 336-9159 x

**Mailing Address:** 15 Roszel Road

**Fax:** ( ) - x

Suite 105

**Other:** (215) 478-1886 x

Princeton, NJ 08540

**Type:** Mobile

**Email:** asmith@trinityconsultants.com

---

**Contact Type: County Govt Officer**

**Organization:** Atlantic County Utilities Authority

**Org. Type:** Auth/Dist/Comm

**Name:** Matthew Denafo

**NJ EIN:** 44028000017

**Title:** President

**Phone:** (609) 272-6950 x

**Mailing Address:** PO Box 996

**Fax:** (609) 272-6941 x

Pleasantville, NJ 08232

**Other:** ( ) - x

**Type:**

**Email:** mdenafo@acua.com

New Jersey Department of Environmental Protection  
Facility Profile (General)

**Contact Type: Fees/Billing Contact**

**Organization:** Atlantic County Utilities Authority

**Org. Type:** Auth/Dist/Comm

**Name:** Gary Conover

**NJ EIN:** 44028000017

**Title:** VP Solid Waste Division

**Phone:** (609) 272-6913 x

**Mailing** PO Box 996

**Fax:** (609) 272-6941 x

**Address:** Pleasantville, NJ 08232

**Other:** ( ) - x

**Type:**

**Email:** gconover@acua.com

-----  
**Contact Type: Operator**

**Organization:** Atlantic County Utilities Authority

**Org. Type:** County

**Name:**

**NJ EIN:** 44028000017

**Title:**

**Phone:** ( ) - x

**Mailing** PO Box 996

**Fax:** ( ) - x

**Address:** Pleasantville, NJ 08232-0996

**Other:** ( ) - x

**Type:**

**Email:**

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

**Organization:** Atlantic County Utilities Authority

**Org. Type:** County

**Name:**

**NJ EIN:** 44028000017

**Title:**

**Phone:** ( ) - x

**Mailing** PO Box 996

**Fax:** ( ) - x

**Address:** Pleasantville, NJ 08232-0996

**Other:** ( ) - x

**Type:**

**Email:**

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

**Contact Type:** Responsible Official

**Organization:** Atlantic County Utilities Authority

**Org. Type:** Auth/Dist/Comm

**Name:** Matthew Denafó

**NJ EIN:** 44028000017

**Title:** President

**Phone:** (609) 272-6950 x

**Mailing** PO Box 996

**Fax:** (609) 272-6941 x

**Address:** Pleasantville, NJ 08232

**Other:** ( ) - x

**Type:**

**Email:** mdenafo@acua.com

**ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)**  
**BOP230003**

Date: 03/19/2025

**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)
FG2	Site Vehicles and Equipment		0.000	0.000	0.000	0.000	24.970	6.252	0.000	0.00000000	0.000
Total			0.000	0.000	0.000	0.000	24.970	6.252	0.000	0.00000000	0.000

**ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)**  
**BOP230003**

Date:3/19/2025

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

IS NJID	Source/Group Description	Equipment Type	Location Description	Estimate of Emissions (tpy)								
				VOC (Total)	NOx	CO	SO	TSP	PM-10	Pb	HAPS (Total)	Other (Total)
IS1	Emergency Diesel Generators (2), (<1 MM Btu/hr) @ landfill office & transfer station	Emergency Generator	landfill office, & transfer station	0.100	1.210	0.260	0.080	0.080	0.080	0.000	0.00000000	0.000
IS2	Small Natural Gas Heaters (11)	Fuel Combustion Equipment (Other)	Recycling & Maintenance Centers, Transfer Station, Truck Wash	0.070	1.260	1.060	0.008	0.096	0.072	0.000	0.00000000	0.000
IS3	Parts Washer (<= 6 sq.ft., open top, <=100 gal. capacity, >= 2 gal. solvents, <5% VOC content)	Cleaning Machine (Open Top: Cold)	maintenance	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS4	Diesel Tanks (2)	Storage Vessel	central fuel facility	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS5	Emergency Diesel Generators (2), 64 HP, subject to 40 CFR Subpart IIII (<1 MM Btu/hr) @ fuel island & scale office	Emergency Generator	fuel island, & scale office	0.080	0.990	0.210	0.060	0.070	0.070	0.000	0.00000000	0.000
IS6	Propane Heaters	Fuel Combustion Equipment (Other)	Landfill							0.000	0.00000000	0.000
IS7	Hot Water Heater	Fuel Combustion Equipment (Other)	Truck Wash	0.017	0.312	0.262	0.002	0.024	0.024	0.000		
IS8	Small Kerosene Torpedo Heaters(6)	Fuel Combustion Equipment (Other)										

**ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)**  
**BOP230003**

Date: 3/19/2025

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

IS NJID	Source/Group Description	Equipment Type	Location Description	Estimate of Emissions (tpy)								
				VOC (Total)	NOx	CO	SO	TSP	PM-10	Pb	HAPS (Total)	Other (Total)
IS9	Diesel Engine for Vermeer TR626 (powering U102 equipment and < 1 MMBtu/hr max. heat input rate)	Fuel Combustion Equipment (Other)	Landfill	0.016	0.034	0.430	0.001	0.002	0.002	0.000	0.00000000	0.000
Total				0.303	3.806	2.222	0.151	0.272	0.248	0.000	0.00000000	0.000

**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>
E14	EDG-Geo Bldg	Geo Bldg Emergency Generator	Emergency Generator		8/1/2006	No		
E15	MAIN CTR EG	Maintenance Center Emergency Generator	Emergency Generator			No		
E99	Gas System	Landfill with Gas Collection	Landfill					
E100	Gas System	Landfill with control system	Landfill	PCP030001	1/1/2004	No		
E101		Solid Waste Transfer Station	Other Equipment	PCP020001		No		
E201		Recycling Center - Receiving Area	Other Equipment	PCP960002		No		
E501		Leachate Storage Tank 1	Storage Vessel	PCP990002		No		
E601		Leachate Storage Tank 2	Storage Vessel	PCP990002		No		
E701		Gasoline Tank with Stage 2 Vapor Recovery System	Storage Vessel	PCP960005 PCP960006 (Log 09-92-0013)		No		
E801		SWM Heater	Fuel Combustion Equipment (Other)	PCP990001	4/1/1992	No		
E901	Grinder	Tub Grinder that grinds vegetative material	Manufacturing and Materials Handling Equipment	PCP000002		No		
E902	Grinder	Brush conveyor that moves processed vegetative material	Manufacturing and Materials Handling Equipment	PCP000002		No		
E903	Grinder	Diesel engine for the grinder	Stationary Reciprocating Engine	PCP000002		No		



**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>
E904	CNG Emer Gen	CNG Station Emergency Generator	Emergency Generator					
E906	Heater	Waste Oil Heater	Fuel Combustion Equipment (Other)		3/26/2013	No		
E921	New Grinder	Morbark Tub Grinder	Manufacturing and Materials Handling Equipment			No		
E922	New Grinder	Morbark Brush Conveyor	Manufacturing and Materials Handling Equipment			No		
E923	New Grinder	Morbark Grinder Engine (Diesel)	Stationary Reciprocating Engine			No		
E924	Screen Conv1	Screen Conveyor 1	Manufacturing and Materials Handling Equipment		6/1/2021			
E925	Screen Conv2	Screen Conveyor 2	Manufacturing and Materials Handling Equipment		6/1/2021			
E926	Screen TR626	Screener	Manufacturing and Materials Handling Equipment		6/1/2021			

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E14 (Emergency Generator)  
Print Date: 3/19/2025

Make: 150 REOZJB  
Manufacturer: John Deere  
Model: 6068HF150

Maximum rated Gross Heat  
Input (MMBtu/hr-HHV): 1.76

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:

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E15 (Emergency Generator)  
Print Date: 3/19/2025

Make: Natural Gas Fired  
Manufacturer: MTU Onsite Energy  
Model: GG6RK183-GS200

Maximum rated Gross Heat  
Input (MMBtu/hr-HHV): 2.16

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:

## 70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E99 (Landfill)

Print Date: 3/19/2025

Solid Waste Facility

Permit Number:

108001165

Year Opened:

1992

Solid Waste Facility Permit

Issuance Date:

11/5/90

Expected Year of Closure:

2015

Actual Year of Closure:

Total Design Area (acres):

77.0

Total Design Capacity  
(million megagrams):

3.2

Active Area (acres):

5.0

Capped Area (acres):

Is the Landfill Lined?

☒ Yes ☐ NoWas the site used for the  
disposal of Hazardous  
Waste?☐ Yes ☒ NoWas there ever co-disposal  
of Industrial Waste or  
reason to believe that the  
Waste Stream into the  
Landfill contained large  
Waste or volatile  
compounds from  
commercial sources?☐ Yes ☒ NoMaximum Estimated Landfill  
Gas Generation Rate during  
the life of the Landfill (ft<sup>3</sup>/yr):

630000000

Model used to estimate  
Landfill Gas Production:

Landgem

Is there a Landfill Gas  
Pre-Treatment System?☒ Yes ☐ NoMethod of Landfill Gas  
Pre-Treatment:

Dewatering, filtering and compression

Design Capacity of Landfill  
Gas Collection System (acfm):

1,200.0

Overall Collection Efficiency(%):

99.0

Landfill Gas Mover/Blower  
size (hp):

20.0

Number of Extraction Wells:

65

Extraction Well Diameter (ft):

Extraction Well Depth (ft):

30.0

Extraction Well Overlap (%):

Extraction Well Operating  
Vacuum (in. H<sub>2</sub>O):

40.0

Have you attached Actual  
Landfill Gas Analysis?☐ Yes ☒ NoHave you attached a layout  
(plan view) of the wells and  
header piping?☐ Yes ☒ No

Have you attached a waste

**70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E99 (Landfill)**  
**Print Date: 3/19/2025**

deposition history (provide  
tons deposited for each  
operating year)?

<input type="radio"/>	Yes	<input checked="" type="radio"/>	No
-----------------------	-----	----------------------------------	----

Comments:

Pollutant	Concentration	Units
Amines		
CO2		
Chlorides		
H2S		
Mercaptans		
Mercury		
Methane		
Non-Methane Hydrocarbons		

**70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E100 (Landfill)**

Print Date: 3/19/2025

Solid Waste Facility Permit Number:	<input type="text" value="108001165"/>
Year Opened:	<input type="text" value="1992"/>
Solid Waste Facility Permit Issuance Date:	<input type="text" value="11/5/90"/>
Expected Year of Closure:	<input type="text" value="2015"/>
Actual Year of Closure:	<input type="text"/>
Total Design Area (acres):	<input type="text" value="77.0"/>
Total Design Capacity (million megagrams):	<input type="text" value="3.2"/>
Active Area (acres):	<input type="text" value="5.0"/>
Capped Area (acres):	<input type="text"/>
Is the Landfill Lined?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Was the site used for the disposal of Hazardous Waste?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Was there ever co-disposal of Industrial Waste or reason to believe that the Waste Stream into the Landfill contained large Waste or volatile compounds from commercial sources?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Maximum Estimated Landfill Gas Generation Rate during the life of the Landfill (ft <sup>3</sup> /yr):	<input type="text" value="630000000"/>
Model used to estimate Landfill Gas Production:	<input type="text" value="Landgem"/>
Is there a Landfill Gas Pre-Treatment System?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Method of Landfill Gas Pre-Treatment:	<input type="text" value="Dewatering, filtering and compression"/>
Design Capacity of Landfill Gas Collection System (acfm):	<input type="text" value="1,200.0"/>
Overall Collection Efficiency(%):	<input type="text" value="99.0"/>
Landfill Gas Mover/Blower size (hp):	<input type="text" value="20.0"/>
Number of Extraction Wells:	<input type="text" value="65"/>
Extraction Well Diameter (ft):	<input type="text"/>
Extraction Well Depth (ft):	<input type="text" value="30.0"/>
Extraction Well Overlap (%):	<input type="text"/>
Extraction Well Operating Vacuum (in. H2O):	<input type="text" value="40.0"/>
Have you attached Actual Landfill Gas Analysis?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached a layout (plan view) of the wells and header piping?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached a waste	

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E100 (Landfill)  
Print Date: 3/19/2025

deposition history (provide  
tons deposited for each  
operating year)?

☐ Yes ☒ No

Comments:

[Control System includes landfill gas treatment system](#)



Pollutant	Concentration	Units
Amines		
CO2		
Chlorides		
Greenhouse gases as CO2e		
H2S		
Mercaptans		
Mercury		
Methane		
Non-Methane Hydrocarbons		

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E101 (Other Equipment)  
Print Date: 3/19/2025

Make:	
Manufacturer:	
Model:	
Equipment Type:	Transfer Station
Capacity:	1,950.00
Units:	tons/day
Description:	
Have you attached a diagram showing the location and/or the configuration of this equipment?	Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?
<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No
Comments:	Accepts Types 10, 13, and 27 Waste

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E201 (Other Equipment)  
Print Date: 3/19/2025

Make:	
Manufacturer:	
Model:	
Equipment Type:	Transfer Station
Capacity:	300.00
Units:	tons/day
Description:	
Have you attached a diagram showing the location and/or the configuration of this equipment?	Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?
<input checked="" type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input checked="" type="radio"/> No
Comments:	Collects resyclables

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E501 (Storage Vessel)  
Print Date: 3/19/2025

What type of contents is this storage vessel equipped to contain by design?

Liquids Only

Storage Vessel Type:

Reservoir

Design Capacity:

50,000

Units:

gallons

Ground Location:

Above Ground

Is the Shell of the Equipment

Exposed to Sunlight?

Shell Color:

Description (if other):

Shell Condition:

Paint Condition:

Shell Construction:

Is the Shell Insulated?

Type of Insulation:

Insulation Thickness (in):

Thermal Conductivity of Insulation  
[(BTU)(in)(hr)(ft<sup>2</sup>)(deg F)]:

Shape of Storage Vessel:

Cylindrical

Shell Height (From Ground to Roof  
Bottom) (ft):

Length (ft):

Width (ft):

Diameter (ft):

20.00

Other Dimension

Description:

height

Value:

24.00

Units:

feet

Fill Method:

Top Pipe

Description (if other):

Maximum Design Fill Rate:

50.00

Units:

gal/min

Does the storage vessel have  
a roof or an open top?

Open Top

Roof Type:

Roof Height (From Roof  
Bottom

to Roof Top) (ft):

Roof Construction:

Primary Seal Type:

Secondary Seal Type:

Total Number of Seals:

Roof Support:

Does the storage vessel  
have a Vapor Return Loop?

Does the storage vessel

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E501 (Storage Vessel)

Print Date: 3/19/2025

Does the storage vessel  
have a Conservation Vent?

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

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

Comments:

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E601 (Storage Vessel)  
Print Date: 3/19/2025

What type of contents is this storage vessel equipped to contain by design?

Liquids Only

Storage Vessel Type:

Reservoir

Design Capacity:

50,000

Units:

gallons

Ground Location:

Above Ground

Is the Shell of the Equipment

Exposed to Sunlight?

Shell Color:

Description (if other):

Shell Condition:

Paint Condition:

Shell Construction:

Is the Shell Insulated?

Type of Insulation:

Insulation Thickness (in):

Thermal Conductivity of Insulation  
[(BTU)(in)(hr)(ft<sup>2</sup>)(deg F)]:

Shape of Storage Vessel:

Cylindrical

Shell Height (From Ground to Roof  
Bottom) (ft):

Length (ft):

Width (ft):

Diameter (ft):

20.00

Other Dimension

Description:

height

Value:

24.00

Units:

feet

Fill Method:

Top Pipe

Description (if other):

Maximum Design Fill Rate:

50.00

Units:

gal/min

Does the storage vessel have  
a roof or an open top?

Open Top

Roof Type:

Roof Height (From Roof  
Bottom

to Roof Top) (ft):

Roof Construction:

Primary Seal Type:

Secondary Seal Type:

Total Number of Seals:

Roof Support:

Does the storage vessel  
have a Vapor Return Loop?

Does the storage vessel

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E601 (Storage Vessel)

Print Date: 3/19/2025

Does the storage vessel  
have a Conservation Vent?

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

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

Comments:

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E701 (Storage Vessel)  
Print Date: 3/19/2025

What type of contents is this storage vessel equipped to contain by design?

Liquids Only

Storage Vessel Type:

Tank

Design Capacity:

10,000

Units:

gallons

Ground Location:

Below Ground

Is the Shell of the Equipment

No

Exposed to Sunlight?

Shell Color:

Description (if other):

Shell Condition:

Paint Condition:

Shell Construction:

Is the Shell Insulated?

Type of Insulation:

Insulation Thickness (in):

Thermal Conductivity of Insulation  
[(BTU)(in)(hr)(ft<sup>2</sup>)(deg F)]:

Shape of Storage Vessel:

Cylindrical

Shell Height (From Ground to Roof Bottom) (ft):

Length (ft):

30.00

Width (ft):

Diameter (ft):

8.00

Other Dimension

Description:

NA

Value:

Units:

Fill Method:

Submerged

Description (if other):

Maximum Design Fill Rate:

100.00

Units:

gal/min

Does the storage vessel have a roof or an open top?

Roof Type:

Roof Height (From Roof Bottom

to Roof Top) (ft):

Roof Construction:

Primary Seal Type:

Secondary Seal Type:

Total Number of Seals:

Roof Support:

Does the storage vessel have a Vapor Return Loop?

Does the storage vessel



70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E701 (Storage Vessel)

Print Date: 3/19/2025

Does the storage vessel  
have a Conservation Vent?

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

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

Comments:

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E801 (Fuel Combustion Equipment (Other))  
Print Date: 3/19/2025

Make:	King National
Manufacturer:	King National Air Systems of Owatonna, MN
Model:	
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	1.13
Type of Heat Exchange:	Direct
Equipment Type Description:	Natural Gas Heater

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

<input checked="" type="radio"/> Yes
<input type="radio"/> No

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

<input type="radio"/> Yes
<input checked="" type="radio"/> No

Comments: Heater - see compliance plan

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

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E901 (Manufacturing and Materials Handling Equipment)

Make:	Vermeer
Manufacturer:	Vermeer
Model:	HG6000
Type of Manufacturing and Materials Handling Equipment:	Vegetation Tub Grinder
Capacity:	6.50E+04
Units:	other units
Description (if other):	pounds brush per hour
Have you attached a diagram showing the location and/or the configuration of this equipment?	No
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	Yes
Comments:	permitted vegetative material processing grinder

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E902 (Manufacturing and Materials Handling Equipment)

Make:	<div>Vermeer</div>
Manufacturer:	<div>Vermeer</div>
Model:	<div>HG6000</div>
Type of Manufacturing and Materials Handling Equipment:	<div>conveyor for vegetative tub grinder</div>
Capacity:	<div>1.25E+04</div>
Units:	<div>other units</div>
Description (if other):	<div>pounds brush per hour</div>
Have you attached a diagram showing the location and/or the configuration of this equipment?	<div>Yes</div>
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	<div>No</div>
Comments:	<div>permitted vegetative material processing conveyor</div>

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E903 (Stationary Reciprocating Engine)  
Print Date: 3/19/2025

Make:	Caterpillar
Manufacturer:	Caterpillar
Model:	C18 Tier 4
Maximum Rated Gross Heat Input (MMBtu/hr):	5.36
Class:	Other
Description:	Diesel
Duty:	Other
Description:	Prime mover engine for tub grinder
Minimum Load Range (%):	
Maximum Load Range (%):	
Stroke:	
Power Output (BHP):	755
Electric Output(KW):	563
Compression Ratio:	
Ignition Type:	Compression
Description:	
Engine Speed (RPM):	1800
Engine Exhaust Temperature (°F):	964
Air to Fuel Ratio at Peak Load:	
Ratio Basis:	
Lambda Factor (scfm/scfm):	
Brake Specific Fuel Consumption at Peak Load (Btu/BHP-hr):	
Output Type:	
Heat to Power Ratio:	
Is the Engine Using a Turbocharger?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is the Engine Using an Aftercooler?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is the Engine Using (check all that apply):	
A Prestratified Charge (PSC)	<input type="checkbox"/> A NOx Converter <input type="checkbox"/>
Air to Fuel Adjustment (AF)	<input type="checkbox"/> Ignition Timing Retard <input type="checkbox"/>
Low Emission Combustion	<input type="checkbox"/> Non-Selective Catalytic Retard (NSCR) <input type="checkbox"/>
Other	<input type="checkbox"/>
Description:	
Have you attached a diagram showing the location and/or the configuration of this equipment?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Comments:	1: Fuel type: Diesel 2: Output type: Mechanical

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

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E904 (Emergency Generator)  
Print Date: 3/19/2025

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:

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E906 (Fuel Combustion Equipment (Other))  
Print Date: 3/19/2025

Make:	ENERGYLOGIC
Manufacturer:	
Model:	EL-340H
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	0.34
Type of Heat Exchange:	Indirect
Equipment Type Description:	Model EL-340H Waste Oil Heater Heats 8000 Square Feet

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.

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E921 (Manufacturing and Materials Handling Equipment)

Make:	Morbark
Manufacturer:	Morbark
Model:	1200 XL
Type of Manufacturing and Materials Handling Equipment:	Vegetation Tub Grinder
Capacity:	6.50E+04
Units:	other units
Description (if other):	pounds brush per hour
Have you attached a diagram showing the location and/or the configuration of this equipment?	No
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	Yes
Comments:	



70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E922 (Manufacturing and Materials Handling Equipment)

Make:	Morbark
Manufacturer:	Morbark
Model:	1200 XL
Type of Manufacturing and Materials Handling Equipment:	Conveyor for vegetative tub grinder
Capacity:	6.50E+04
Units:	other units
Description (if other):	pounds brush per hour
Have you attached a diagram showing the location and/or the configuration of this equipment?	No
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	Yes
Comments:	

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E923 (Stationary Reciprocating Engine)  
Print Date: 3/19/2025

Make:	Caterpillar
Manufacturer:	Caterpillar
Model:	C18 Tier 4
Maximum Rated Gross Heat Input (MMBtu/hr):	5.26
Class:	
Description:	
Duty:	
Description:	
Minimum Load Range (%):	
Maximum Load Range (%):	
Stroke:	
Power Output (BHP):	755
Electric Output(KW):	563
Compression Ratio:	16
Ignition Type:	Compression
Description:	
Engine Speed (RPM):	1800
Engine Exhaust Temperature (°F):	
Air to Fuel Ratio at Peak Load:	
Ratio Basis:	
Lambda Factor (scfm/scfm):	
Brake Specific Fuel Consumption at Peak Load (Btu/BHP-hr):	
Output Type:	
Heat to Power Ratio:	
Is the Engine Using a Turbocharger?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is the Engine Using an Aftercooler?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is the Engine Using (check all that apply):	
A Prestratified Charge (PSC)	<input type="checkbox"/> A NOx Converter <input type="checkbox"/>
Air to Fuel Adjustment (AF)	<input type="checkbox"/> Ignition Timing Retard <input type="checkbox"/>
Low Emission Combustion	<input type="checkbox"/> Non-Selective Catalytic Retard (NSCR) <input type="checkbox"/>
Other	<input type="checkbox"/>
Description:	
Have you attached a diagram showing the location and/or the configuration of this equipment?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Comments:	Engine Model Year: 2016 Engine Family: GCPXL18.1HXF Displacement (liters): 18.1

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

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E924 (Manufacturing and Materials Handling Equipment)

Make:	<div>Trommel Screen</div>
Manufacturer:	<div>Vermeer</div>
Model:	<div>TR626</div>
Type of Manufacturing and Materials Handling Equipment:	<div>Screener Conveyor</div>
Capacity:	<div>2.00E+02</div>
Units:	<div>other units</div>
Description (if other):	<div>cy/hr</div>
Have you attached a diagram showing the location and/or the configuration of this equipment?	<div>No</div>
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	<div>Yes</div>
Comments:	

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E925 (Manufacturing and Materials Handling Equipment)

Make:	<div>Trommel Screen</div>
Manufacturer:	<div>Vermeer</div>
Model:	<div>TR626</div>
Type of Manufacturing and Materials Handling Equipment:	<div>Screener Conveyor</div>
Capacity:	<div>2.00E+02</div>
Units:	<div>other units</div>
Description (if other):	<div>cy/hr</div>
Have you attached a diagram showing the location and/or the configuration of this equipment?	<div>No</div>
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	<div>Yes</div>
Comments:	

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 E926 (Manufacturing and Materials Handling Equipment)

Make:	<div>Trommel Screen</div>
Manufacturer:	<div>Vermeer</div>
Model:	<div>TR626</div>
Type of Manufacturing and Materials Handling Equipment:	<div>Portable Trommel Screener</div>
Capacity:	<div>2.00E+02</div>
Units:	<div>other units</div>
Description (if other):	<div>cy/hr</div>
Have you attached a diagram showing the location and/or the configuration of this equipment?	<div>No</div>
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	<div>Yes</div>
Comments:	

BOP230003

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

CD NJID	Facility's Designation	Description	CD Type	Install Date	Grand-Fathered	Last Mod. (Since 1968)	CD Set ID
CD1		transfer station particulate control and odor control	Particulate Filter (Other)	6/1/1992	No		
CD2		transfer station odor control	Particulate Filter (Other)	6/1/1992	No		
CD3		transfer station odor control	Particulate Filter (Other)	6/1/1992	No		
CD4		recycling center particulate control 1	Particulate Filter (Baghouse)	10/1/1991	No		
CD5		recycling center particulate control 2	Particulate Filter (Baghouse)	10/1/1991	No		
CD100	Open Flare	Open Flare	Flare	3/1/2004	No		
CD101	EnclosedFlar	New Enclosed Flare	Flare	6/1/2017	No		
CD102	H2S GasTreat	H2S Gas Treatment Unit	Other		No		
CD103	Thermal Oxid	Thermal Oxidizer for RNG Plant	Oxidizer (Thermal)	2/1/2025	No		
CD104	Off-Spec FLR	Off-Specification Gas Utility Flare for RNG Plant	Flare	2/1/2025	No		

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD1 (Particulate Filter (Other))  
Print Date: 3/19/2025

Make:

Manufacturer:

Model:

Filter Description:

American Air Filter

Leverlock Serviside

AAF XL 90 Duracell Double Header Filters

Total Filter Area (ft²):

108.00

Maximum Design Temperature Capability (°F):

150.0

Maximum Design Air Flow Rate (acfm):

50,000.0

Maximum Air Flow Rate to Filter Area Ratio:

463.000

Minimum Operating Pressure Drop (in. H2O):

1.00

Maximum Operating Pressure Drop (in. H2O):

6.50

Maximum Inlet Temperature (°F):

120.0

Maximum Operating Exhaust Gas Flow  
Rate (acfm):

50,000.0

Method for Determining When Filter  
Replacement is Required:

Pressure Drop > 6.5

Maximum Number of Sources Using  
this Apparatus as a Control Device  
(Include Permitted and  
Non-Permitted Sources):

1

Alternative Method to Demonstrate  
Control Apparatus is Operating  
Properly:

No

Have you attached a Particle Size  
Distribution Analysis?

☐ Yes ☒ No

Have you attached data from recent  
performance testing?

☐ Yes ☒ No

Have you attached any  
manufacturer's data or specifications  
in support of the feasibility and/or  
effectiveness of this control  
apparatus?

☐ Yes ☒ No

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

☐ Yes ☒ No

Comments:

Renovated dust collector

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD1 (Particulate Filter (Other))  
Print Date: 3/19/2025



70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD2 (Particulate Filter (Other))  
Print Date: 3/19/2025

Make:

Manufacturer:

Model:

Filter Description:

American Air Filter

Leverlock Serviside

AAF XL 90 Duracell Double Header Filters

Total Filter Area (ft²):

108.00

Maximum Design Temperature Capability (°F):

150.0

Maximum Design Air Flow Rate (acfm):

50,000.0

Maximum Air Flow Rate to Filter Area Ratio:

463.000

Minimum Operating Pressure Drop (in. H2O):

1.00

Maximum Operating Pressure Drop (in. H2O):

6.50

Maximum Inlet Temperature (°F):

120.0

Maximum Operating Exhaust Gas Flow  
Rate (acfm):

50,000.0

Method for Determining When Filter  
Replacement is Required:

Pressure Drop > 6.5

Maximum Number of Sources Using  
this Apparatus as a Control Device  
(Include Permitted and  
Non-Permitted Sources):

1

Alternative Method to Demonstrate  
Control Apparatus is Operating  
Properly:

No

Have you attached a Particle Size  
Distribution Analysis?

☐ Yes ☒ No

Have you attached data from recent  
performance testing?

☐ Yes ☒ No

Have you attached any  
manufacturer's data or specifications  
in support of the feasibility and/or  
effectiveness of this control  
apparatus?

☐ Yes ☒ No

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

☐ Yes ☒ No

Comments:

Renovated dust collector

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD2 (Particulate Filter (Other))  
Print Date: 3/19/2025

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD3 (Particulate Filter (Other))  
Print Date: 3/19/2025

Make:

Manufacturer:

Model:

Filter Description:

American Air Filter

Leverlock Serviside

AAF XL 90 Duracell Double Header Filters

Total Filter Area (ft²):

108.00

Maximum Design Temperature Capability (°F):

150.0

Maximum Design Air Flow Rate (acfm):

50,000.0

Maximum Air Flow Rate to Filter Area Ratio:

463.000

Minimum Operating Pressure Drop (in. H2O):

1.00

Maximum Operating Pressure Drop (in. H2O):

6.50

Maximum Inlet Temperature (°F):

120.0

Maximum Operating Exhaust Gas Flow  
Rate (acfm):

50,000.0

Method for Determining When Filter  
Replacement is Required:

Pressure Drop > 6.5

Maximum Number of Sources Using  
this Apparatus as a Control Device  
(Include Permitted and  
Non-Permitted Sources):

1

Alternative Method to Demonstrate  
Control Apparatus is Operating  
Properly:

No

Have you attached a Particle Size  
Distribution Analysis?

☐ Yes ☒ No

Have you attached data from recent  
performance testing?

☐ Yes ☒ No

Have you attached any  
manufacturer's data or specifications  
in support of the feasibility and/or  
effectiveness of this control  
apparatus?

☐ Yes ☒ No

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

☐ Yes ☒ No

Comments:

Renovated dust collector

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD3 (Particulate Filter (Other))  
Print Date: 3/19/2025

## 70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD4 (Particulate Filter (Baghouse))

Print Date: 3/19/2025

Make:	
Manufacturer:	Flex Kleen or equiv.
Model:	
Number of Bags:	324
Size of Bags (ft²):	
Total Bag Area (ft²):	4,957.0
Bag Fabric:	Polyester felt
Fabric Weight (oz/ft²):	16.00
Fabric Weave:	felt
Fabric Finish:	felt
Maximum Design Temperature Capability (°F):	275.0
Maximum Design Air Flow Rate (acfm):	47,000.0
Draft Type:	
Maximum Air Flow Rate to Cloth Area Ratio:	10.01
Minimum Operating Pressure Drop (in. H2O):	1.00
Maximum Operating Pressure Drop (in. H2O):	6.00
Method of Monitoring Pressure Drop:	
Maximum Inlet Temperature (°F):	
Minimum Inlet Temperature (°F):	
Dew Point of Gas Stream Maximum Inlet Temperature (°F):	
Maximum Operating Exhaust Gas Flow Rate (acfm):	47,000.0
Maximum Inlet Gas Stream Moisture Content (%):	
Method for Determining When Bag Replacement is Required:	6 inches W.C.
Method for Determining When Cleaning is Required:	regularly scheduled inspection
Method of Bag Cleaning:	Pulse Jet
Description:	
Is Bag Cleaning Conducted On-Line?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	1
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	N/A
Have you attached a Particle Size Distribution Analysis?	<input type="radio"/> Yes <input checked="" type="radio"/> No

**70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD4 (Particulate Filter (Baghouse))**  
**Print Date: 3/19/2025**

Have you attached data from recent performance testing?

☐ Yes ☒ No

Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?

☐ Yes ☒ No

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

☒ Yes ☐ No

Comments:

## 70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD5 (Particulate Filter (Baghouse))

Print Date: 3/19/2025

Make:	
Manufacturer:	Flex Kleen or equiv.
Model:	
Number of Bags:	324
Size of Bags (ft²):	
Total Bag Area (ft²):	4,957.0
Bag Fabric:	Polyester felt
Fabric Weight (oz/ft²):	16.00
Fabric Weave:	felt
Fabric Finish:	felt
Maximum Design Temperature Capability (°F):	275.0
Maximum Design Air Flow Rate (acfm):	47,000.0
Draft Type:	
Maximum Air Flow Rate to Cloth Area Ratio:	10.01
Minimum Operating Pressure Drop (in. H2O):	1.00
Maximum Operating Pressure Drop (in. H2O):	6.00
Method of Monitoring Pressure Drop:	
Maximum Inlet Temperature (°F):	
Minimum Inlet Temperature (°F):	
Dew Point of Gas Stream Maximum Inlet Temperature (°F):	
Maximum Operating Exhaust Gas Flow Rate (acfm):	47,000.0
Maximum Inlet Gas Stream Moisture Content (%):	
Method for Determining When Bag Replacement is Required:	6 inches W.C.
Method for Determining When Cleaning is Required:	regularly scheduled inspection
Method of Bag Cleaning:	Pulse Jet
Description:	
Is Bag Cleaning Conducted On-Line?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	1
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	N/A
Have you attached a Particle Size Distribution Analysis?	<input type="radio"/> Yes <input checked="" type="radio"/> No

**70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD5 (Particulate Filter (Baghouse))**  
**Print Date: 3/19/2025**

Have you attached data from recent performance testing?

☐ Yes ☒ No

Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?

☐ Yes ☒ No

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

☒ Yes ☐ No

Comments:



70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD100 (Flare)  
Print Date: 3/19/2025

Make:	LFG Specialties
Manufacturer:	LFG Specialties
Model:	CF825T6
Type:	OP
Minimum Residence Time (sec):	
Maximum Rated Gross Heat Input (MMBtu/hr):	56.25
Auxilliary Fuel:	Propane
Description:	
Method of Pilot Flame Monitoring:	Thermocouple
Monitoring Location:	Local
Automatic Gas Shutoff After Loss of Flame?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Automatic Reignition After Loss of Flame?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Minimum Gas Flow Rate (acfm):	1,875.0
Minimum Operating Temperature (°F):	
Minimum Heat Content at Burner Tip (Btu/ft³):	500.00
Flare Operation Type:	Continuous
Does Flare have smokeless design?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is Flare equipped with flame retainer?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is Flare equipped with flame arrestor?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is Flare equipped with LEL monitor?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Flare Stack Diameter (inches):	8.00
Lower Heat Content of source gas (BTU/scf):	200
Lower Heat Content of Supplemental Fuel (BTU/scf):	
Destruction and Removal Efficiency (%):	
How was Efficiency determined?	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	1
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	<input type="radio"/> Yes <input type="radio"/> No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD100 (Flare)  
Print Date: 3/19/2025

☒ Yes ☐ No

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

☒ Yes ☐ No

Comments:

\* Minimum Operating Temp. (deg F) = 1,600  
\* Destruction and Removal Efficiency (%) = 98  
\* Capture Efficiency (%) = 85

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD101 (Flare)  
Print Date: 3/19/2025

Make:	Parnel
Manufacturer:	Parnel Biogas
Model:	12x40 combuster
Type:	EN
Minimum Residence Time (sec):	0.80
Maximum Rated Gross Heat Input (MMBtu/hr):	122.40
Auxilliary Fuel:	Propane
Description:	
Method of Pilot Flame Monitoring:	Thermocouple
Monitoring Location:	Local
Automatic Gas Shutoff After Loss of Flame?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Automatic Reignition After Loss of Flame?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Minimum Gas Flow Rate (acfm):	4,000.0
Minimum Operating Temperature (°F):	1,600.0
Minimum Heat Content at Burner Tip (Btu/ft³):	500.00
Flare Operation Type:	Continuous
Does Flare have smokeless design?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is Flare equipped with flame retainer?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is Flare equipped with flame arrestor?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is Flare equipped with LEL monitor?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Flare Stack Diameter (inches):	144.00
Lower Heat Content of source gas (BTU/scf):	300
Lower Heat Content of Supplemental Fuel (BTU/scf):	
Destruction and Removal Efficiency (%):	98.90
How was Efficiency determined?	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	1
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	<input type="radio"/> Yes <input type="radio"/> No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD101 (Flare)

Print Date: 3/19/2025

☒ Yes ☐ No

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

☒ Yes ☐ No

Comments:

## 70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD102 (Other)

Print Date: 3/19/2025

Make:	<input type="text" value="MV Technologies"/>
Manufacturer:	<input type="text" value="MV Technologies"/>
Model:	<input type="text" value="H2SPLUS SYSTEM"/>
Maximum Air Flow Rate to Control Device (acfm):	<input type="text" value="3500"/>
Maximum Temperature of Vapor Stream to Control Device (°F):	<input type="text" value="125"/>
Minimum Temperature of Vapor Stream to Control Device (°F):	<input type="text" value="32"/>
Minimum Moisture Content of Vapor Stream to Control Device (%):	<input type="text"/>
Minimum Pressure Drop Across Control Device (in. H2O):	<input type="text"/>
Maximum Pressure Drop Across Control Device (in. H2O):	<input type="text"/>
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	<input type="text"/>
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	<input type="text"/>
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 checked="" type="radio"/> Yes <input 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:	<input type="text" value="H2SPlus System uses Bio Active Media (B.A.M.) which is commercial available iron sponge enhanced with biological agents to produce a more reactive and effective media. The iron hydroxide in the B.A.M., neutralizes the H2S by converting it into iron sulfide compounds through chemical reaction, and the bacteria serve to 'refresh' the available reactant."/>

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD103 (Oxidizer (Thermal))  
Print Date: 3/19/2025

Make:	
Manufacturer:	John Zink
Model:	ZBRID
Minimum Chamber Temperature (°F):	1400
Minimum Residence Time (sec):	0.7
Fuel Type:	Other
Description:	Waste Gas
Maximum Rated Gross Heat Input (MMBtu/hr):	14.6
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	1
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	

Have you attached data from recent performance testing?

☐ Yes ☒ No

Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?

☒ Yes ☐ No

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

☐ Yes ☒ No

Comments:

70506 ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL BOP230003 CD104 (Flare)  
Print Date: 3/19/2025

Make:	
Manufacturer:	Perennial
Model:	
Type:	OP
Minimum Residence Time (sec):	
Maximum Rated Gross Heat Input (MMBtu/hr):	78.50
Auxilliary Fuel:	
Description:	
Method of Pilot Flame Monitoring:	Continuous
Monitoring Location:	Local
Automatic Gas Shutoff After Loss of Flame?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Automatic Reignition After Loss of Flame?	<input checked="" type="radio"/> Yes <input type="radio"/> No
Minimum Gas Flow Rate (acfm):	
Minimum Operating Temperature (°F):	
Minimum Heat Content at Burner Tip (Btu/ft³):	200.00
Flare Operation Type:	Continuous
Does Flare have smokeless design?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is Flare equipped with flame retainer?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is Flare equipped with flame arrestor?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is Flare equipped with LEL monitor?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Flare Stack Diameter (inches):	12.00
Lower Heat Content of source gas (BTU/scf):	200
Lower Heat Content of Supplemental Fuel (BTU/scf):	
Destruction and Removal Efficiency (%):	
How was Efficiency determined?	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	1
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	
Have you attached data from recent performance testing?	<input type="radio"/> Yes <input type="radio"/> No
Have you attached any manufacturer's data or specifications in support of the feasibility and/or effectiveness of this control apparatus?	

☒ Yes ☐ No

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

☐ Yes ☒ No

Comments:



## ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)

Date: 3/19/2025

BOP230003

**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		transfer station stack #1	Round	36	10	250		40.0	95.0		0.0	50,000.0	Up	
PT2		transfer station stack #2	Round	36	10	250		40.0	95.0		0.0	50,000.0	Up	
PT3		transfer station stack #3	Round	36	10	250		40.0	95.0		0.0	50,000.0	Up	
PT5		recycling center receiving area	Square	2	20	220		35.0	95.0		0.0	47,000.0	Horizontal	
PT6		leachate storage tank #1	Round	240	24	800	68.0			1.0			Up	
PT7		leachate storage tank #2	Round	240	24	800	68.0			1.0			Up	
PT8		gasoline tank	Round	1	14	250		20.0	95.0	13.4			Up	
PT9		tub grinder	Surface	72	13	800		35.0	95.0	0.0			Up	
PT10		brush conveyor	Surface	20	10	800		35.0	95.0	0.0			Up	
PT11		diesel engine	Round	7	13	800		0.0	964.0		0.0	3,290.0	Up	
PT12		SWM heater stack	Round	6	29		125.0			16,875.0				
PT14	EDG-Geo Bldg	Geo Bldg Emergency Generator	Round	4	9	280	1,050.0	1,050.0	1,050.0	1,190.0	1,190.0	1,190.0	Up	
PT15	CNG Emer Gen	CNG Station Emergency Generator	Round	4	9	280	882.0	882.0	882.0	1,930.0	1,930.0	1,930.0	Up	
PT17	MAIN CTR EG	Maintenance Center Emergency Generator	Round	4	9	575	1,281.0	1,281.0	1,281.0	1,371.0	1,371.0	1,371.0	Up	
PT21	New Grinder	Tub Grinder	Surface	108	13	800		35.0	95.0				Up	
PT22	New Grinder	Brush Conveyor	Surface	36	10	800		35.0	95.0				Up	
PT23	New Grinder	Grinder Engine	Round	7	13	800		0.0	964.0		0.0	3,290.0	Up	
PT100	Open Flare	flare stack	Round	8	28	250	1,600.0	1,400.0	1,800.0	1,875.0	1,875.0	1,875.0	Up	

## ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)

Date: 3/19/2025

BOP230003

**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.		
PT101	Flare	New Enclosed Flare	Round	144	40	850	1,600.0	1,400.0	1,800.0	264,000.0	214,000.0	314,000.0	Up	
PT102	Heater	Waste Oil Heater	Round	8	13	400		0.0	250.0		0.0	2,800.0	Up	
PT103	Screen Conv1	Screen Conveyor 1	Surface	30	10	800	65.0	35.0	95.0	0.0	0.0	0.0	Up	
PT104	Screen Conv2	Screen Conveyor 2	Surface	36	4	800	65.0	35.0	95.0	0.0	0.0	0.0	Up	
PT105	Screen TR626	Screener	Surface	72	17	800	65.0	35.0	95.0	0.0	0.0	0.0	Up	
PT106	Thermal Oxid	Thermal Oxidizer	Round	36	40	250	1,600.0	1,400.0	2,000.0				Up	
PT107	Off-Spec FLR	Off-Specification Gas Utility Flare	Round	12	40	250	1,500.0	1,400.0	2,000.0				Up	

## ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)

Date: 3/19/2025

BOP230003

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

## U 1 Solid Waste Transfer/Storage

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		SW transfer	Normal - Steady State	E101	CD1 (P) CD2 (P) CD3 (P)	PT1 PT2 PT3	5-01-002-01	2,000.0	8,760.0		50,000.0	50,000.0	30.0	95.0

## U 2 Recycling Center

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.
OS2		Storage for recycling of waste	Normal - Steady State	E201	CD4 (P) CD5 (P)	PT5	5-01-002-01	4,160.0	4,160.0		70,000.0	94,000.0	30.0	85.0

## ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)

Date: 3/19/2025

BOP230003

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

**U 3      Leachate Storage and Equalization**

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		Leachate storage and equalization, Tank 1	Normal - Steady State	E501		PT6	5-01-820-01	8,760.0	8,760.0		0.0	16.7	40.0	75.0
OS2		Leachate storage and equalization, Tank 2	Normal - Steady State	E601		PT7	5-01-820-01	8,760.0	8,760.0		0.0	16.7	40.0	75.0

**U 4      Gasoline dispensing with Stage II vapor recovery**

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		Gasoline dispensing with Stage II vapor recovery	Normal - Steady State	E701		PT8	A25-01-000-120	8,760.0	8,760.0		0.0	10.0	32.0	80.0

## ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)

Date: 3/19/2025

BOP230003

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

**U 5      Vegetative Tub Grinding**

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		Horizontal Grinder grinds vegetative material	Normal - Steady State	E901		PT9	5-02-800-01	0.0	2,080.0		0.0	3,290.0	35.0	95.0
OS2		Brush conveyor/ moves processed wood dust	Normal - Steady State	E902		PT10	5-02-800-01	0.0	2,080.0		0.0	3,290.0	35.0	95.0
OS3		Horizontal grinder/diesel engine	Normal - Steady State	E903		PT11	2-70-003-20	0.0	2,080.0		0.0	3,290.0	35.0	95.0
OS4	Morbark	Tub grinder/ grinds vegetative material	Normal - Steady State	E921		PT21	5-03-800-01	0.0	750.0				35.0	95.0
OS5	Morbark	Brush conveyor/ moves processed wood dust	Normal - Steady State	E922		PT22	5-03-800-01	0.0	750.0				35.0	95.0
OS6	Morbark	Tub grinder/diesel engine	Normal - Steady State	E923		PT23	2-03-001-07	0.0	750.0		0.0	3,290.0	0.0	964.0

**U 7      Heater, 1.2 MM Btu/hr**

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	SWM Heater	Maintenance Building Heating	Normal - Steady State	E801		PT12	1-05-002-06	500.0	8,760.0		0.0	16,875.0	100.0	150.0

ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)  
BOP230003

Date: 3/19/2025

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

U 14 EDG-Geo Bldg GEO Building 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	EDG-Geo Bldg	GEO Building Emergency Generator	Maintenance	E14		PT14	1-05-002-06	0.0	500.0	A	1,190.0	1,190.0	1,050.0	1,050.0

U 15 CNG Emer Gen CNG Station 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	CNG Emer Gen	CNG Station Emergency Generator	Normal - Steady State	E904		PT15	2-02-001-02	0.0	100.0		0.0	1,930.0	882.0	882.0

ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)  
BOP230003

Date: 3/19/2025

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

U 17 MC Emer Gen Maintenance Center 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	MC Emer Gen	Maintenance Center Emergency Generator	Maintenance	E15		PT17	2-01-002-02	0.0	100.0		1,371.0	1,371.0	1,281.0	1,281.0

U 99 Gas Collecti Gas Collection System subject to 40 CFR 62 Subpart OOO and MACT AAAA

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	Gas Collecti	Gas Collection System	Normal - Steady State	E99			5-01-004-06	0.0	8,760.0				60.0	60.0

U 100 Gas System Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

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	Encl Flare	MSW Landfill & Gas Collection and Enclosed Flare	Normal - Steady State	E100	CD101 (S) CD102 (P)	PT101	5-01-004-06		8,760.0	A	4,000.0	4,000.0	1,600.0	1,625.0

## ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)

Date: 3/19/2025

BOP230003

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

U 100 Gas System Gas Control System subject to 40 CFR 62 Subpart OOO and MACT AAAA

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.
OS2	Open Flare	MSW Landfill & Gas Collection and Open Flare - maintenance of Enclosed Flare and low landfill gas flow	Maintenance	E100	CD100 (S) CD102 (P)	PT100	5-01-004-06	0.0	500.0	A	1,875.0	1,875.0	1,600.0	1,600.0
OS3	RNG TOx	MSW Landfill & Gas Collection and RNG Plant. Waste Gas Stream Controlled by Thermal Oxidizer CD103	Normal - Steady State	E100	CD103 (P)	PT106	5-01-004-06	0.0	8,760.0	A	0.0	2,708.0	1,400.0	2,000.0
OS4	RNG Flare	MSW Landfill & Gas Collection and RNG Plant. Off-Spec gas and natural gas unable to be injected into pipeline controlled by utility flare CD104	Maintenance	E100	CD104 (P)	PT107	5-01-004-06	0.0	1,500.0	A	0.0	2,708.0	1,400.0	2,000.0

U 101 Heater Waste Oil Heater

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	Heater	Waste Oil Heater	Normal - Steady State	E906		PT102		0.0	8,760.0		0.0	2,800.0	100.0	250.0



ATLANTIC COUNTY UTILITIES AUTHORITY LANDFILL (70506)  
BOP230003

Date: 3/19/2025

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

U 102   Screen TR626   Vermeer TR626 Portable Trommel Screener

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	Screen Conv1	Screen Conveyor 1	Normal - Steady State	E924		PT103	3-05-999-99	0.0	750.0		0.0	0.0	35.0	95.0
OS2	Screen Conv2	Screen Conveyor 2	Normal - Steady State	E925		PT104	3-05-999-99	0.0	750.0		0.0	0.0	35.0	95.0
OS3	Screen TR626	Screener	Normal - Steady State	E926		PT105	3-05-999-99	0.0	750.0		0.0	0.0	35.0	95.0

Date: 3/19/2025

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

**Group NJID:** GR1 Fed Regs

**Members:**

Type	ID	OS	Step
U	U 100	OS0 Summary	
U	U 99	OS0 Summary	

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

☒ Other

**Other (explain):** Applicable Federal Requirements

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

**Operating Circumstances:**