Camden County
Municipal Utilities
Authority

Delaware # 1 Water Pollution Control Facility

Facility ID: 50163

Initial Title V Operating Permit Application

September 2020

CDM Smith

75 State Street, Suite 701
Boston, Massachusetts 02109
tel: 617 452-6000

September 17, 2020

Mr. Francis Steitz, Director
State of New Jersey
Department of Environmental Protection
Division of Air Quality
401 E. State Street, 2nd Floor
P.O. Box 420, Mail Code 401-02
Trenton, NJ 08625-0420

Applicant: Camden County Municipal Utilities Authority

Project: Delaware No.1 Water Pollution Control Facility
1645 Ferry Avenue, Camden County, New Jersey
Facility ID 50163

Subject: Initial Title V Operating Permit Application

Dear Mr. Steitz:

On behalf of Camden County Municipal Utilities Authority (CCMUA), CDM Smith is hereby submitting an initial Title V Operating permit application for the Delaware No. 1 Water Pollution Control Facility (Facility). In accordance with Section C of PCP 180001 (Approved on April 29, 2019), General condition No. 33, the facility is required to submit a Title V Operating Permit application, within one year, if the potential-to-emit for the entire facility exceeds any of the major source thresholds (including all emissions from the facility, both permitted and unpermitted).

The Facility will exceed VOC and NOx threshold of 25 tons per year, upon startup of the CHP facility, and therefore will become a Title V source within one year of the start-up. On September 18-19, 2019, the Facility conducted initial stack tests of the CHP engines while operating on natural gas. The Facility started steady operation of the CHP engines on natural gas on October 14, 2019. Hence, we are hereby submitting a Title V Air Initial Operating Permit Application for the entire Facility per PCP 180001 General condition No. 33. Below is a list of all current Preconstruction Permits (PCPs) and general permits for significant emission units that are included in the Initial Title V permit document.

Permit ID	Status	Status Date	EU ID	Emission Unit Description
GEN170001	Approved	8/3/2017	U3104	Used Oil Space Heater
PCP040002	Renewed	10/27/2015	U2301	PTF Odor PTF Building Odor Control
PCP040003	Renewed	3/14/2019	U20	Thickening and Dewatering Facilities
PCP040004	Renewed	3/15/2019	U21	Junction Chamber Emissions to Biofilter
PCP040007	Renewed	10/27/2015	U22	Scum Area Ventilation
PCP070004	Renewed	3/15/2019	U1	PTF Boiler Stack
PCP150001	Renewed	9/4/2016	U111	Sludge Drying System
PCP150001	Renewed	9/4/2016	U112	Thermal Oil Heaters
PCP150002	Renewed	9/4/2016	U1001	Sludge Handling Biofilter System
PCP150002	Renewed	9/4/2016	U1002	Two Natural Gas Boilers (Serving Biofilter Odor Control System)
PCP180001	Approved	4/29/2019	U2	Two CHPs and Four Digester Tanks
PCP180001	Approved	4/29/2019	U3	Dual Fuel Boiler
PCP180001	Approved	4/29/2019	U4	Emergency Generator Engine
PCP970001	Renewed	12/27/2017	U2302	Stage II Vapor Control Gasoline Dispensing
PCP970002	Renewed	12/27/2017	U23	Gasoline Tank

Further, enclosed is a complete air permit application package with the required supporting documents. The enclosed air permit application package includes the following items, as required:

- Attachment A: A PDF of the air permit application submitted via NJDEP online completed using the NJDEP RADIUS application,
- Attachment B: Title V Maximum Potential to Emit Calculations,
- Attachment C: Compliance Plan Red-Line Mark ups for each PCP Permits, and
- Attachment D: Recent Compliance Stack Test (Summary).

Pursuant to N.J.A.C. 7:27-22.31(k), we understand that a permit application fee should not be submitted at this time. Rather, the NJDEP will forward an invoice to CCMUA following the receipt of the application.

We believe that the enclosed information constitutes a complete permit application. If any questions arise or additional information is required during your review, please call John Hammell at 215-239-6522.

Sincerely,

John Hammell, PE. PMP
Project Manager
CDM Smith Inc.

cc: Scott Schreiber, CCMUA
Disha Shah, CDM Smith

Table of Contents

Executive Summary

1.1 Introduction and Purpose of Application

The Camden County Municipal Utilities Authority (CCMUA) operates Delaware No. 1 Water Pollution Control Facility (Facility), located at 1645 Ferry Avenue, Camden, New Jersey, is an advanced treatment plant that employs screening, grit removal, primary clarification, aeration and secondary treatment using the secondary clarification, and chlorine disinfection prior to final discharge of treated effluent. The wastewater treatment plant is designed to handle a peak hourly flow of 60 million gallons per day (MGD). Solids removed from the wastewater are processed through gravity belt thickeners, sludge storage, and dewatering. The dewatered sludge is further processed into sludge dryers to produce dried product sludge, which is hauled of off-site for disposal.

The Facility (Facility ID 50163) currently operates in accordance with a combination of N.J.A.C Subchapter 8 Preconstruction Permits and General Permits for significant equipment. With this Initial Title V Operating Permit application, the Facility is seeking a Title V Operating Permit for the Facility pursuant to N.J.A.C Subchapter 22.

1.2 Facility Equipment

1.2.1 Significant Equipment

For convenience, all the significant equipment shown in the NJDEP RADIUS file is listed in **Table 1**, below, with the relevant Subchapter 8 preconstruction permit (PCP) Number, or General Permit number, as applicable.

Table 1: CCMUA Delaware No. 1 WPCF Equipment Inventory

Sr. No.	Equipment ID	Facility's Designation	Equipment Description	Equipment Type	PCP Number
1.	E21	JuncChamber	Junction Chamber Headworks	Other Equipment	PCP040004
2.	E101	B-2	PTF Boiler (B-2) York-Shipley	Boiler	PCP070004
3.	E102	B-1	PTF Boiler (B-1) York-Shipley	Boiler	PCP070004
4.	E103	B-3	PTF Boiler (B-3) Cleaver Brooks	Boiler	See Note 1
5.	E1116	Dew Sldg Str	Dewatered Sludge Storage Facility - Ventilation	Other Equipment	PCP040001
6.	E2001	Truck Bay	Dewatered Sludge Truck Loading	Other Equipment	PCP040003
7.	E2002	Dewatering	Belt Filter Press1	Other Equipment	PCP040003
8.	E2003	Dewatering	Belt Filter Press2	Other Equipment	PCP040003

Sr. No.	Equipment ID	Facility's Designation	Equipment Description	Equipment Type	PCP Number
9.	E2004	Dewatering	Belt Filter Press3	Other Equipment	PCP040003
10.	E2005	Dewatering	Belt Filter Press4	Other Equipment	PCP040003
11.	E2006	Dewatering	Belt Filter Press5	Other Equipment	PCP040003
12.	E2007	Dewatering	Belt Filter Press6	Other Equipment	PCP040003
13.	E2008	Dewatering	Belt Filter Press7	Other Equipment	PCP040003
14.	E2201	Scum Area	Scum Area Ventilation Decanter 1	Other Equipment	PCP040007
15.	E2202	Scum Area	Scum Area Ventilation, Decanter 2	Other Equipment	PCP040007
16.	E2301	Gasoline Tnk	Gasoline Tank	Storage Vessel	PCP970001
17.	E2302	PTF Bldg	Bar Screen 1	Other Equipment	PCP040002
18.	E2303	PTF Bldg	Bar Screen 2	Other Equipment	PCP040002
19.	E2304	PTF Bldg	Bar Screen 3	Other Equipment	PCP040002
20.	E2305	PTF Bldg	Grit Dumpster	Other Equipment	PCP040002
21.	E3101	STG VP CN	Stage II VP CN	GP-Gasoline Dispensing	PCP970002
22.	E3104	Oil Heater	Used Oil Heater	Fuel Combustion Equipment (Other)	GEN170001
23.	E3111	TOH-1 NG	Thermal Oil Heater 1	Process Heater	PCP150001
24.	E3112	TOH-2 NG	Thermal Oil Heater 2	Process Heater	PCP150001
25.	E3201	ICV-110	Inlet Screw Conveyor 001	Other Equipment	PCP150001
26.	E3202	ICV-120	Inlet Screw Conveyor 002	Other Equipment	PCP150001
27.	E3203	WCS-210	Wet Cake Silo 001	Storage Vessel	PCP150001
28.	E3204	WCS-220	Wet Cake Silo 002	Storage Vessel	PCP150001
29.	E3205	WCS-230	Wet Cake Silo 003	Storage Vessel	PCP150001
30.	E3206	WCS-240	Wet Cake Silo 004	Storage Vessel	PCP150001
31.	E3207	DRY-310	Sludge Dryer 001	Other Equipment	PCP150001
32.	E3208	DRY-320	Sludge Dryer 002	Other Equipment	PCP150001

Sr. No.	Equipment ID	Facility's Designation	Equipment Description	Equipment Type	PCP Number
33.	E3209	DRY-330	Sludge Dryer 003	Other Equipment	PCP150001
34.	E3210	DCV-410	Discharge Screw Conveying System 001	Other Equipment	PCP150001
35.	E3211	SCV-420	Discharge Screw Conveying System 002	Other Equipment	PCP150001
36.	E3212	SCV-430	Discharge Screw Conveying System 003	Other Equipment	PCP150001
37.	E3213	DPT-510	Pneumatic Conveying System	Other Equipment	PCP150001
38.	E3214	DPT-520	Pneumatic Conveying System	Other Equipment	PCP150001
39.	E3215	DPT-530	Pneumatic Conveying System	Other Equipment	PCP150001
40.	E3216	PSS-612	Product Silo 001	Storage Vessel	PCP150001
41.	E3217	PSS-622	Product Silo 002	Storage Vessel	PCP150001
42.	E3218	TL-1	Truck Loading	Other Equipment	PCP150001
43.	E3301	Boiler 1	Biofilter Odor Control System hot water boiler 1	Process Heater	PCP150002
44.	E3302	Boiler 2	Biofilter Odor Control System hot water boiler 2	Process Heater	PCP150002
45.	E3303	Digest Tank1	690,000-Gallon Sludge Digester Tank #1 (was Sludge Storage Tank #1)	Storage Vessel	PCP180001
46.	E3304	Digest Tank2	690,000-Gallon Sludge Digester Tank #2 (was Sludge Storage Tank #2)	Storage Vessel	PCP180001
47.	E3305	Digest Tank3	690,000-Gallon Storage Tank #3 (was Sludge Storage Tank #3)	Storage Vessel	PCP180001
48.	E3306	Digest Tank4	690,000-Gallon Storage Tank #4 (was Sludge Storage Tank #4)	Storage Vessel	PCP180001
49.	E3307	BioGasPre	Digester Gas Pre-treatment System (siloxane and H2S removal)	Other Equipment	PCP180001
50.	E3308	PM Filter 1	Particulate Matter Filter 1	Other Equipment	PCP180001

Sr. No.	Equipment ID	Facility's Designation	Equipment Description	Equipment Type	PCP Number
51.	E3309	PM Filter 2	Particulate Matter Filter 2	Other Equipment	PCP180001
52.	E3801	WAS tank	690,000-gallon Waste Activated Sludge Storage Tank	Storage Vessel	PCP150002
53.	E3802	CHP unit 1	1.9 MWe Combined heat and power engine 1 firing natural gas and digester gas	Stationary Reciprocating Engine	PCP180001
54.	E3803	CHP unit 2	1.9 MWe Combined heat and power engine 2 firing natural gas and digester gas	Stationary Reciprocating Engine	PCP180001
55.	E3804	WasteHolding	20,000-gallon organic waste holding tank	Storage Vessel	PCP150002
56.	E3805	PS Tank	300,000-gallon primary sludge holding tank	Storage Vessel	PCP150002
57.	E3808	NG/DG Boiler	6.043 MMBTU/hr Dual Fuel Boiler	Boiler	PCP180001
58.	E3809	BlackStartEn	130 KW Black Start Engine firing natural gas (Lean burn engine)	Emergency Generator	PCP180001
59.	E3810	DieselTank	6,000-gallon Diesel Tank	Storage Vessel	Unknown[2]
60.	E3811	STG VP CN	Stage II Vapor Control - Diesel Dispensing System	Other Equipment	Unknown[2]

Note: [1] E-103(PTF Boiler No. 3) was originally permitted with the NJDEP in 1992 and remained permitted through June 18, 2009 . In June 2009, CCMUA initiated permit modification to NJDEP requesting decrease of fuel usage of the two York Shipley boilers (E-101 and E-102), and a final PCP 070004 was received from the Department. It was at this time that the PTF Boiler No. 3 was inadvertently omitted from the permit by NJDEP.

[2] E3810 and E38 are currently existing at the facility since December 1996. Based on available NJDEP data miner and facility permit records, a PCP record for this two equipment cannot be found. It is possible PCP 9700001 relates to this two equipment, but it is unclear. CDM Smith requests NJDEP to provide a guidance on whether a separate Subchapter 8 PCP is required for this two significant equipment. All the significant emission units that operate at the Facility is listed in **Table 2**.

Table 2 Significant Emission Units

Sr. No.	Emission Unit NJID	Emission Unit Description	PCP Number
1.	U3104	Used Oil Space Heater	GEN170001
2.	U2301	PTF Odor PTF Building Odor Control	PCP040002
3.	U20	Thickening and Dewatering Facilities	PCP040003
4.	U21	Junction Chamber Emissions to Biofilter	PCP040004

Sr. No.	Emission Unit NJID	Emission Unit Description	PCP Number
5.	U22	Scum Area Ventilation	PCP040007
6.	U1	PTF Boiler Stack	PCP070004
7.	U111	Sludge Drying System	PCP150001
8.	U112	Thermal Oil Heaters	PCP150001
9.	U1001	Sludge handling biofilter system	PCP150002
10.	U1002	Two Natural Gas Boilers (Serving Biofilter Odor Control System)	PCP150002
11.	U2	Two CHPs and Four Digester Tanks	PCP180001
12.	U3	Dual Fuel Boiler	PCP180001
13.	U4	Emergency Gen Engine	PCP180001
14.	U2302	Stage II Vapor Control Gasoline Dispensing	PCP970002
15.	U23	Gasoline Tank	PCP970001
16.	U24	Diesel Tank	Unknown
17.	U2303	Stage I Vapor Control Diesel Dispensing	Unknown

1.2.2 Insignificant Equipment

Table 3 below presents a list of all insignificant sources present at the facility for the purposes of this Title V permit application.

Table 3: List of Insignificant Equipment

Sr. No.	IS NJID	Source Description	Equipment Type	Location	Insignificant Regulatory Reference
1.	IS1	Sodium Hypochlorite Tanks (<9000)	Storage Vessel	Throughout	Stationary Storage tank less than <10,000 gallons
2.	IS2	Sodium Hydroxide Tanks (<5750)	Storage Vessel	Throughout	Stationary Storage tank less than <10,000 gallons
3.	IS3	Heating Fuel Tanks (<8000)	Storage Vessel	Throughout	Stationary Storage tank less than <2,000 gallons storing VOCs
4.	IS4	Waste Oil Tanks (<1000)	Storage Vessel	Throughout	Stationary Storage tank less than <2,000 gallons storing VOCs
5.	IS5	VX 456 Pressroom	Storage Vessel	Outside	Stationary Storage tank less than

Sr. No.	IS NJID	Source Description	Equipment Type	Location	Insignificant Regulatory Reference
		Odor Control			<10,000 gallons
6.	IS7	Diesel Tanks (<8000)	Storage Vessel	Throughout	Stationary Storage tank less than <2,000 gallons storing VOCs
7.	IS8	Hot Water Heaters (<360,000 BTU/hr)	Fuel Combustion Equipment (Other)	Service Building	Commercial fuel burning equipment with heat input rating of < 1 MMBtu/hr

1.2.3 Fugitive Emissions

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

Table 4: List of Non-Source Fugitive Equipment

Sr. No.	FG NJID	Source Description	Equipment Type	Location
1.	FG0	Uncovered liquid processes	Uncovered liquid processes from wastewater treatment plant	Throughout

1.3 Air Permit Application

The permit application forms shown in **Attachment A** are being submitted electronically through the NJDEP online. Facility-wide maximum potential emission rates shown in the **Attachment B** is for the Facility including all the significant equipment, after the Anaerobic Digesters and Combined Heat and Power Facility Project has become fully operational.

No changes have been made in the NJDEP RADIUS file for any of the existing Facility equipment, except as mentioned in Section 1.4.

Attachment B also includes emission calculations from all insignificant source operations and total emissions from Non-Source Fugitives at the facility.

In addition, this application includes the following supporting documentation.

- **Attachment C** – Compliance Plan red-line markup for each PCP permit,
- **Attachment D** – Recent compliance stack test report (summary).

1.4 Requested Changes for Initial Title V Air Operating Permit

The Facility requests that the conditions in its current PCP's be carried forward into the initial Title V Air Operating Permit, with only the exceptions discussed below. In addition, **Attachment C** provides a suggested red line markup for NJDEP's consideration.

1) E-101(PTF Boiler No. 2) and E-102(PTF Boiler No. 1) were originally permitted as dual fuel (Natural Gas and No.2 Fuel Oil) equipment. All components of the No.2 Fuel Oil storage and delivery system for the boilers have been physically demolished and no longer exist. Therefore, the boilers are currently capable of being fired only on a single fuel, natural gas, at this time. We request to change the boilers to be natural gas only equipment. This is shown in Attachment C – suggested red line Compliance Plan mark-ups.

2) E-103(PTF Boiler No. 3) was originally permitted with the NJDEP in 1992 and remained permitted through June 18, 2009. In June 2009, CCMUA initiated permit modification to NJDEP requesting decrease of fuel usage of the two York Shipley boilers (E-101 and E-102), and a final PCP 070004 was received from the Department. It was at this time that the PTF Boiler No. 3 was inadvertently omitted from the permit by NJDEP. We request that E-103, PTF Boiler No. 3, a Cleaver Brooks boiler (Natural Gas only) rated at maximum heat input capacity of 10.46 MMBtu/hr to be added in the Title V operating permit. This is also shown in Attachment C – suggested red line Compliance Plan mark-ups.

3) E3810 and E3811 are currently existing at the facility since December 1996. Based on available NJDEP data miner and facility permit records, a PCP record for this two equipment cannot be found. It is possible PCP 9700001 relates to this two equipment, but it is unclear. CDM Smith requests NJDEP to provide a guidance on whether a separate Subchapter 8 PCP is required for this two significant equipment.

4) For all Hazardous Air Pollutants (HAPs) with potential to emit (PTE) above Reporting Thresholds, we request that air permit limit from Subchapter 8 PCP's be updated to indicate the new N.J.A.C Subchapter 17 reference in the initial Title V Air Operating Permit.

5) In PCP 0400003, for Emission Unit U20, we request NJDEP to delete OS1 through OS6 as these are duplicate operating scenarios to streamline the Title V permit. The current PCP permit includes OS1 through OS3 which are duplicate to OS11 through OS13 for E2001 Truck Bay Ventilation and includes OS4 through OS6 which are duplicate to other Operating Scenarios for E2002 through E2008 - seven dewatering belt filters.

6) The Facility requests that the NJDEP update all preconstruction permits' compliance plan to reflect the new applicable requirements pursuant to Subchapter 22. In general, all references to N.J.A..C 7:27-8.13(a) would be replaced by N.J.A.C. 7:27-22.16.

1.5 Compliance Stack Tests

A most recent compliance stack test for U2, U3 and U4 Combined Heat and Power Engines (PCP 180001) was conducted for OS103 and OS104 while operating on natural gas on September 18-19, 2019. A copy of the summary of the stack test report is included in **Attachment D.**

Attachment A

PDF of the Electronic RADIUS Permit Application

Camden County MUA Delaware # 1 WPCF (50163)

Date: 9/15/2020

New Jersey Department of Environmental Protection
Reason for Application

Permit Being Modified

Permit Class: **Number:** 0

Description of Modifications:

The Camden County Municipal Utilities Authority (CCMUA) operates Delaware No. 1 Water Pollution Control Facility (Facility), located at 1645 Ferry Avenue, Camden, New Jersey, is an advanced treatment plant that employs screening, grit removal, primary clarification, aeration and secondary treatment using the secondary clarification, and chlorine disinfection prior to final discharge of treated effluent. The wastewater treatment plant is designed to handle a peak hourly flow of 60 million gallons per day (MGD). Solids removed from the wastewater are processed through gravity belt thickeners, sludge storage and dewatering. The dewatered sludge is further processed into sludge dryers to produce dried product sludge, which is hauled of off-site for disposal.

The Facility (Facility ID 50163) currently operates in accordance with a combination of N.J.A.C Subchapter 8 preconstruction permits and general permits for significant equipment. With this Initial Title V Operating Permit application, the Facility is seeking a Title V Operating Permit for the Facility pursuant to N.J.A.C Subchapter 22.

Camden County Municipal Utilities Authority (CCMUA) is herewith submitting an initial Title V Operating permit application for the Delaware No. 1 Water Pollution Control Facility (Facility). In accordance with Section C of PCP 180001 (Approved on April 29, 2019), General condition No. 33, the facility is required to submit a Title V Operating Permit application, within one year, if the potential-to-emit for the entire facility exceeds any of the major source thresholds.

The Facility will exceed NOx threshold of 25 tons per year, upon startup of the CHP facility (PCP 180001), and therefore will become a Title V source within one year of the start-up. On September 18-19, 2019, the Facility conducted a stack test on the CHP engines while operating on natural gas, which is inferred as Start-up. Hence, we are herewith submitting a Title V Air Operating Permit Application for the entire Facility per NJDEP's request.

New Jersey Department of Environmental Protection
Facility Profile (General)

Facility Name (AIMS): Camden County MUA Delaware # 1 WPCF **Facility ID (AIMS):** 50163

Street Address: 200 JACKSON ST
CAMDEN, NJ 08101

Mailing Address: 1645 FERRY AVE
CAMDEN, NJ 08104

State Plane Coordinates:

X-Coordinate:	489,153
Y-Coordinate:	4,419,151
Units:	Other
Datum:	NAD83
Source Org.:	DEP-GIS
Source Type:	Hard Copy Map

County: Camden

Location Description: Delaware # 1 WPCF

Industry:

Primary SIC:	
Secondary SIC:	
NAICS:	221320

New Jersey Department of Environmental Protection
Facility Profile (General)

Contact Type: Air Permit Information Contact

Organization: Camden County Municipal Utilities Authority
Org. Type: Municipal
Name: Scott Schreiber
NJ EIN: 00222003702
Title: Executive Director
Phone: (856) 583-1261 x
Fax: ( ) - x
Other: ( ) - x
Type:
Email: sschreiber@ccmua.org
Mailing Address: 1645 Ferry Ave
Camden, NJ 08104

Contact Type: BOP - Operating Permits

Organization: Camden County Municipal Utilities Authority
Org. Type: Municipal
Name: Scott Schreiber
NJ EIN: 00222003702
Title: Executive Director
Phone: (856) 583-1261 x
Fax: ( ) - x
Other: ( ) - x
Type:
Email: sschreiber@ccmua.org
Mailing Address: 1645 Ferry Ave
Camden, NJ 08104

Contact Type: Consultant

Organization: CDM Smith
Org. Type: Corporation
Name: Amit K. Sen
NJ EIN:
Title: Porject Manager
Phone: (215) 636-0600 x
Fax: (215) 636-9811 x
Other: ( ) - x
Type:
Email: senak@cdmsmith.com
Mailing Address: 2 Penn Center, 1500 JFK Boulevard
Suite 1208
Philadelphia, PA 19102

New Jersey Department of Environmental Protection
Facility Profile (General)

Contact Type: Emission Statements

Organization: Camden County Municipal Utilities Authority
Org. Type: Municipal
Name: Scott Schreiber
NJ EIN: 00222003702
Title: Executive Director
Phone: (856) 583-1261 x
Fax: ( ) - x
Other: ( ) - x
Type:
Email: sschreiber@ccmua.org
Mailing Address: 1645 Ferry Ave
Camden, NJ 08104

Contact Type: Fees/Billing Contact

Organization: Camden County Municipal Utilities Authority
Org. Type: Municipal
Name: Scott Schreiber
NJ EIN: 00222003702
Title: Executive Director
Phone: (856) 583-1261 x
Fax: ( ) - x
Other: ( ) - x
Type:
Email: sschreiber@ccmua.org
Mailing Address: 1645 Ferry Ave
Camden, NJ 08104

Contact Type: General Contact

Organization: Camden County Municipal Utilities Authority
Org. Type: Municipal
Name: Robert G. Cornforth
NJ EIN: 00222003702
Title: Director of Operations and Maintenance
Phone: (856) 563-2300 x
Fax: (856) 635-0605 x
Other: ( ) - x
Type:
Email: bobc@ccmua.org
Mailing Address: 1645 Ferry Ave
Camden, NJ 08104

New Jersey Department of Environmental Protection
Facility Profile (General)

Contact Type: On-Site Manager

Organization: Camden County Municipal Utilities Authority
Org. Type: Municipal
Name: Robert G. Cornforth
NJ EIN: 00222003702
Title: Director of Operations and Maintenance
Phone: (856) 563-2300 x
Fax: (856) 635-0605 x
Other: ( ) - x
Type:
Email: bobc@ccmua.org
Mailing Address: 1645 Ferry Ave
Camden, NJ 08104

Contact Type: Regulation Officer

Organization: Camden County Municipal Utilities Authority
Org. Type: Municipal
Name: Robert G. Cornforth
NJ EIN: 00222003702
Title: Director of Operations and Maintenance
Phone: (856) 563-2300 x
Fax: (856) 635-0605 x
Other: ( ) - x
Type:
Email: bobc@ccmua.org
Mailing Address: 1645 Ferry Ave
Camden, NJ 08104

Contact Type: Responsible Official

Organization: Camden County Municipal Utilities Authority
Org. Type: Municipal
Name: Scott Schreiber
NJ EIN: 00222003702
Title: Executive Director
Phone: (856) 583-1261 x
Fax: ( ) - x
Other: ( ) - x
Type:
Email: sschreiber@ccmua.org
Mailing Address: 1645 Ferry Ave
Camden, NJ 08104

Camden County MUA Delaware # 1 WPCF (50163) Date: 9/15/2020

New Jersey Department of Environmental Protection
Facility Profile (Permitting)

1. Is this facility classified as a small business by the USEPA?	No
2. Is this facility subject to N.J.A.C. 7:27-22?	Yes
3. Are you voluntarily subjecting this facility to the requirements of Subchapter 22?	No
4. Has a copy of this application been sent to the USEPA?	No
5. If not, has the EPA waived the requirement?	No
6. Are you claiming any portion of this application to be confidential?	No
7. Is the facility an existing major facility?	Yes
8. Have you submitted a netting analysis?	No
9. Are emissions of any pollutant above the SOTA threshold?	No
10. Have you submitted a SOTA analysis?	No
11. If you answered "Yes" to Question 9 and "No" to Question 10, explain why a SOTA analysis was not required	
12. Have you provided, or are you planning to provide air contaminant modeling?	No

Camden County MUA Delaware # 1 WPCF (50163) Date: 09/15/2020

New Jersey Department of Environmental Protection
Non-Source Fugitive Emissions

FG NJID	Description of Activity Causing Emission	Location Description	Reasonable Estimate of Emissions (tpy)								
			VOC (Total)	NOx	CO	SO	TSP (Total)	PM-10	Pb	HAPS (Total)	Other (Total)
FG1	Wastewater Sources	Throughout	11.520	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
Total			6.094	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000

Camden County MUA Delaware # 1 WPCF (50163)

Date:9/15/2020

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	Sodium Hypochlorite Tanks (<9000)	Storage Vessel	Throughout	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS2	Sodium Hydroxide Tanks (<5750)	Storage Vessel	Throughout	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS3	Heating Fuel Tanks (<8000)	Storage Vessel	Throughout	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS4	Waste Oil Tanks (<1000)	Storage Vessel	Throughout	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS5	VX 456 Pressroom Odor Control	Storage Vessel	Outside	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS7	Diesel Tanks (<8000)	Storage Vessel	Throughout	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.00000000	0.000
IS8	Hot Water Heaters (<360,000 BTU/hr)	Fuel Combustion Equipment (Other)	Service Building	0.017	0.300	0.252	0.002	0.023	0.023	0.000	0.00000000	0.000
Total				0.027	0.300	0.252	0.002	0.023	0.023	0.000	0.00000000	0.000

New Jersey Department of Environmental Protection
Equipment Inventory

Equip. NJID	Facility's Designation	Equipment Description	Equipment Type	Certificate Number	Install Date	Grand-Fathered	Last Mod. (Since 1968)	Equip. Set ID
E21	JuncChamber	Junction Chamber Headworks	Other Equipment	PCP040004	8/1/1979	No		
E101	B-2	PTF Boiler (B-2) York-Shipley 8.37 MMBTU	Boiler	PCP070004		No		
E102	B-1	PTF Boiler (B-1) York-Shipley 8.37 MMBTU	Boiler	PCP070004		No		
E103	B-3	PTF Boiler (B-3) Cleaver Brooks 10.46 MMBTU	Boiler			No		
E1116	Dew Sldg Str	Dewatered Sludge Storage Facility - Ventilation	Other Equipment	PCP040001	4/1/1995	No	8/31/2000	
E2001	Truck Bay	Dewatered Sludge Truck Loading	Other Equipment	PCP040003	12/1/1987	No		
E2002	Dewatering	Belt Filter Press1	Other Equipment	PCP040003	12/1/1987	No		
E2003	Dewatering	Belt Filter Press2	Other Equipment	PCP040003	12/1/1987	No		
E2004	Dewatering	Belt Filter Press3	Other Equipment	PCP040003	12/1/1987	No		
E2005	Dewatering	Belt Filter Press4	Other Equipment	PCP040003	12/1/1987	No		
E2006	Dewatering	Belt Filter Press5	Other Equipment	PCP040003	12/1/1987	No		
E2007	Dewatering	Belt Filter Press6	Other Equipment	PCP040003	12/1/1987	No		
E2008	Dewatering	Belt Filter Press7	Other Equipment	PCP040003	12/1/1987	No		
E2201	Scum Area	Scum Area Ventilation Decanter 1	Other Equipment	PCP040007	8/1/1979	No	12/1/1987	
E2202	Scum Area	Scum Area Ventilation, Decanter 2	Other Equipment	PCP040007	8/1/1979	No		
E2301	Gasoline Tnk	Gasoline Tank	Storage Vessel	PCP970002	12/1/1996	No		
E2302	PTF Bldg	Bar Screen 1	Other Equipment	PCP040002		No		

New Jersey Department of Environmental Protection
Equipment Inventory

Equip. NJID	Facility's Designation	Equipment Description	Equipment Type	Certificate Number	Install Date	Grand-Fathered	Last Mod. (Since 1968)	Equip. Set ID
E2303	PTF Bldg	Bar Screen 2	Other Equipment	PCP040002		No		
E2304	PTF Bldg	Bar Screen 3	Other Equipment	PCP040002		No		
E2305	PTF Bldg	Grit Dumpster	Other Equipment	PCP040002		No		
E3101	STG VP CN	Stage II VP CN	GP-Gasoline Dispensing	PCP970002		No		
E3104	Oil Heater	Used Oil Heater	Fuel Combustion Equipment (Other)	GEN170001		No		
E3111	TOH-810	Thermal Oil Heater 1	Process Heater	PCP150001	1/1/2011	No		
E3112	TOH-812	Thermal Oil Heater 2	Process Heater	PCP150001	1/1/2011	No		
E3201	ICV-110	Inlet Screw Conveyor 001	Other Equipment	PCP150001	1/1/2011			
E3202	ICV-120	Inlet Screw Conveyor 002	Other Equipment	PCP150001	1/1/2011			
E3203	WCS-210	Wet Cake Silo 001	Storage Vessel	PCP150001	1/1/2011			
E3204	WCS-220	Wet Cake Silo 002	Storage Vessel	PCP150001	1/1/2011			
E3205	WCS-230	Wet Cake Silo 003	Storage Vessel	PCP150001	1/1/2011			
E3206	WCS-240	Wet Cake Silo 004	Storage Vessel	PCP150001	1/1/2011			
E3207	DRY-310	Sludge Dryer 001	Other Equipment	PCP150001	1/1/2011	No		
E3208	DRY-320	Sludge Dryer 002	Other Equipment	PCP150001	2/1/2011	No		
E3209	DRY-330	Sludge Dryer 003	Other Equipment	PCP150001	1/1/2011	No		
E3210	DCV-410	Discharge Screw Conveying System 001	Other Equipment	PCP150001	1/1/2011			
E3211	DCV-420	Discharge Screw Conveying System 002	Other Equipment	PCP150001	1/1/2011			

New Jersey Department of Environmental Protection
Equipment Inventory

Equip. NJID	Facility's Designation	Equipment Description	Equipment Type	Certificate Number	Install Date	Grand-Fathered	Last Mod. (Since 1968)	Equip. Set ID
E3212	DCV-430	Discharge Screw Conveying System 003	Other Equipment	PCP150001	1/1/2011			
E3213	DPT-510	Pneumatic Conveying System 001	Other Equipment	PCP150001	1/1/2011			
E3214	DPT-520	Pneumatic Conveying System 002	Other Equipment	PCP150001	1/1/2011			
E3215	DPT-530	Pneumatic Conveying System 003	Other Equipment	PCP150001	1/1/2011			
E3216	PSS-612	Product Silo 001	Storage Vessel	PCP150001	1/1/2011			
E3217	PSS-622	Product Silo 002	Storage Vessel	PCP150001	1/1/2011			
E3218	TL-1	Truck Loading	Other Equipment	PCP150001	1/1/2011			
E3301	Boiler 1	Biofilter Odor Control System hot water boiler 1	Process Heater	PCP150001	6/1/2010			
E3302	Boiler 2	Biofilter Odor Control System hot water boiler	Process Heater	PCP150001	6/1/2010			
E3303	Digest Tank1	690,000-Gallon Sludge Digester Tank #1 (was Sludge Storage Tank #1)	Storage Vessel	PCP180001	12/1/1987	No	9/9/2011	
E3304	Digest Tank2	690,000-Gallon Sludge Digester Tank #2 (was Sludge Storage Tank #2)	Storage Vessel	PCP180001	12/1/1987	No	9/9/2011	
E3305	Digest Tank3	690,000-Gallon Storage Tank #3 (was Sludge Storage Tank #3)	Storage Vessel	PCP180001	12/1/1987	No	9/9/2011	
E3306	Digest Tank4	690,000-Gallon Storage Tank #4 (was Sludge Storage Tank #4)	Storage Vessel	PCP180001	12/1/1987	No	9/9/2011	

New Jersey Department of Environmental Protection
Equipment Inventory

Equip. NJID	Facility's Designation	Equipment Description	Equipment Type	Certificate Number	Install Date	Grand-Fathered	Last Mod. (Since 1968)	Equip. Set ID
E3307	BioGasPre	Digester Gas Pre-treatment System (siloxane and H2S removal)	Other Equipment	PCP180001	9/1/2018	No		
E3308	PM Filter 1	Particulate Matter Filter 1	Other Equipment	PCP180001	9/1/2018	No		
E3309	PM Filter 2	Particulate Matter Filter 2	Other Equipment	PCP180001	9/1/2018	No		
E3801	WAS tank	690,000-gallon Waste Activated Sludge Storage Tank	Storage Vessel	PCP150002	1/31/2017	No		
E3802	CHP unit 1	1.9 MWe Combined heat and power engine 1 firing natural gas and digester gas	Stationary Reciprocating Engine	PCP180001	9/1/2018	No		
E3803	CHP unit 2	1.9 MWe Combined heat and power engine 2 firing natural gas and digester gas	Stationary Reciprocating Engine	PCP180001	9/1/2018	No		
E3804	WasteHolding	20,000-gallon organic waste holding tank	Storage Vessel	PCP150002	1/31/2017	No		
E3805	PS Tank	300,000-gallon primary sludge holding tank	Storage Vessel	PCP150002	1/31/2017	No		
E3808	NG/DG Boiler	6.043 MMBTU/hr Dual Fuel Boiler	Boiler	PCP180001	12/1/2018	No		
E3809	BlackStartEn	230 KW Black Start Engine firing natural gas (Lean burn engine)	Emergency Generator	PCP180001	9/1/2018	No		
E3810	Diesel Tank	6,000 gallon Diesel Tank	Storage Vessel		12/1/1996	No		
E3811	STG VP CN	VP Control - Diesel Dispensing System	Other Equipment		12/1/1996	No		

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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
CD20	ERA	ERA Scrubbers	Scrubber (Other)	4/1/1995	No		
CD21	Biofilter	Headworks Junction Chamber Biofilter	Biofilter	1/24/2002	No		
CD22	Scum Odor	Scum Bldg Odor Control	Adsorber	1/24/2002	No		
CD23	PTF Odor	PTF Odor Control Scrubbers	Scrubber (Multi-Stage)	1/24/2002	No		
CD201	ERA	ERA Scrubber	Scrubber (Other)	4/1/1995	No		
CD1001	Biofilter 1	Biofilter- Odor Control System	Biofilter	6/1/2010	No		
CD1002	Biofilter 2	Biofilter- Odor Control System	Biofilter	6/1/2010	No		
CD3201	CON-712	Spray tower 001	Scrubber (Other)	2/1/2011	No		
CD3202	CON-722	Spray tower 002	Scrubber (Other)	2/1/2011	No		
CD3203	CON-732	Spray tower 003	Scrubber (Other)	2/1/2011	No		
CD3204	VEN-714	Venturi Scrubber 001	Scrubber (Venturi)	2/1/2011	No		
CD3205	VEN-724	Venturi Scrubber 002	Scrubber (Venturi)	2/1/2011	No		
CD3206	VEN-734	Venturi Scrubber 003	Scrubber (Venturi)	2/1/2011	No		
CD3207	ESP-740	Wet ESP 001	Electrostatic Precipitator	2/1/2011	No		
CD3208	BIO-001	Biofilter	Biofilter	2/1/2011	No		
CD3209	SR-610	Silo Receiver 001	Particulate Filter (Cartridge)	1/1/2011	No		
CD3210	SR-620	Silo Receiver 002	Particulate Filter (Cartridge)	1/1/2011	No		
CD3211	DC-630	Dust Collector 001	Particulate Filter (Cartridge)	1/1/2011	No		
CD3212	CA-001	Carbon Adsorber 001	Adsorber	2/1/2011	No		
CD3300	BTF-001	Bio Trickling Filter 001	Biofilter	4/1/2014	No		

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
CD3301	CA-002	Stand by Carbon Adsorber 002	Adsorber	4/1/2014	No		
CD3302	CA-003	Stand by Carbon Adsorber 003	Adsorber	4/1/2014	No		
CD3801	BiogasFlare1	Biogas emergency flare	Flare	12/1/2019	No		
CD3802	SCR engine 1	Selective Catalytic Reduction for Combined Heat and Power engine 1	Selective Catalytic Reduction	9/1/2018	No		
CD3803	SCR engine 2	Selective Catalytic Reduction for Combined Heat and Power engine 2	Selective Catalytic Reduction	9/1/2018	No		
CD3804	OC engine 1	Oxidation Catalyst for Combined Heat and Power engine 1	Oxidizer (Catalytic)	9/1/2018	No		
CD3805	OC engine 2	Oxidation Catalyst for Combined Heat and Power engine 2	Oxidizer (Catalytic)	9/1/2018	No		

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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	PTF Boilers	PTF Boilers Stack	Round	36	44	120	350.0	350.0	350.0	12,750.0	12,750.0	12,750.0	Up	
PT15	Used Oil	Used Oil Heater Stack	Round	8	27	307	300.0	250.0	350.0	300.0	200.0	400.0	Up	
PT21	Junction Cha	Junction Chamber Stack	Round	1	6	15	70.0	70.0	70.0	700.0	700.0	700.0	Up	
PT22	Diesel Tnk	Diesel Tank	Round	2	10	200	70.0	70.0	70.0	2.0	2.0	2.0	Down	
PT23	Gasoline Tnk	Gasoline Tank	Round	2	10	200	70.0	70.0	70.0	2.0	2.0	2.0	Down	
PT1001	Biofilter 1	Biofilter odor control system exhaust stack 1	Round	74	72	100	70.0	45.0	95.0	50,000.0	38,000.0	60,000.0	Up	
PT1002	Biofilter 2	Biofilter odor control system exhaust stack 2	Round	74	72	100	70.0	45.0	95.0	50,000.0	38,000.0	60,000.0	Up	
PT1003	Boiler 1	Boiler exhaust stack 1	Round	18	39	200	290.0	240.0	320.0	760.0	280.0	1,243.0	Up	
PT1004	Boiler 2	Boiler exhaust stack 2	Round	18	39	200	290.0	240.0	320.0	760.0	280.0	1,243.0	Up	
PT2001	ERA 1	ERA Stack #1	Round	48	70	238	70.0	45.0	95.0	24,000.0	23,000.0	26,000.0	Up	
PT2002	ERA 2	ERA Stack #2	Round	48	70	207	70.0	45.0	95.0	24,000.0	23,000.0	26,000.0	Up	
PT2201	Scum Stack	Scum Area Stack	Round	36	45	400	70.0	45.0	95.0	7,700.0	6,700.0	8,200.0	Up	
PT2301	PTF Scrubber	PTF Odor Control Stack	Round	60	80	115	70.0	45.0	95.0	48,000.0	40,000.0	55,000.0	Up	
PT3111	TOH stack 1	Thermal Oil Heater stack 001	Round	24	45	154	531.0	431.0	557.0	3,160.0	1,667.0	4,651.0	Up	
PT3112	TOH stack 2	Thermal Oil Heater Stack 002	Round	24	45	166	531.0	431.0	557.0	3,160.0	1,667.0	4,651.0	Up	
PT3201	CA Stack 1	Carbon Adsorption stack 001	Rectangle	77	58	75	70.0	40.0	105.0	90,850.0	45,425.0	91,000.0	Up	
PT3801	Biogasflare1	Biogas Flare exhaust stack	Round	78	35	20	1,500.0	1,400.0	1,600.0	26,100.0	5,200.0	47,000.0	Up	
PT3802	CHPeng1stack	Combined Heat and Power engine 1 exhaust stack	Round	20	60	15	565.0	400.0	730.0	10,217.5	8,300.0	12,135.0	Up	
PT3803	CHPeng2stack	Combined Heat and Power engine 2 exhaust stack	Round	20	60	25	565.0	400.0	730.0	10,217.5	8,300.0	12,135.0	Up	

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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.		
PT3804	NG/DG Boiler	Dual Fuel Boiler Stack	Round	16	24	20	257.0	205.0	309.0	900.0	411.0	1,855.0	Up	
PT3805	NG Engine	Black Start Engine exhaust stack	Round	4	10	20	838.0	335.0	1,350.0	1,062.0	1,012.0	1,442.0	Up	

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

U 1 PTF Boilers PTF Boilers

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	B-1-NG	PTF BOILER (B-1) COMBUSTION - NATURAL GAS	Normal - Steady State	E102		PT1	1-02-006-03	0.0	8,760.0		3,523.0	3,523.0	302.0	302.0
OS2	B-2-NG	PTF BOILER (B-2) COMBUSTION - NATURAL GAS	Normal - Steady State	E101		PT1	1-02-006-03	0.0	8,760.0		3,523.0	3,523.0	302.0	302.0
OS5	B-3-NG	PTF BOILER (B-3) COMBUSTION - NATURAL GAS	Normal - Steady State	E103		PT1	1-02-006-02	0.0	8,760.0		3,523.0	3,523.0	302.0	302.0

U 2 CHPs, Dgst Two combined heat and power units, and three sludge digester tanks and one acidification tank controlled by waste gas flare

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS101	CHP 1 DG	CHP unit 1 burning digester gas	Normal - Steady State	E3802	CD3802 (P) CD3804 (P)	PT3802	2-02-007-02	0.0	8,300.0		8,300.0	12,135.0	400.0	730.0
OS102	CHP 2 DG	CHP unit 2 burning digester gas	Normal - Steady State	E3803	CD3803 (P) CD3805 (P)	PT3803	2-02-007-02	0.0	8,300.0		8,300.0	12,135.0	400.0	730.0
OS103	CHP 1 NG	CHP unit 1 burning natural gas	Normal - Steady State	E3802	CD3802 (P) CD3804 (P)	PT3802	2-02-002-04	0.0	8,300.0		8,300.0	12,135.0	400.0	730.0
OS104	CHP 2 NG	CHP unit 2 burning natural gas	Normal - Steady State	E3803	CD3803 (P) CD3805 (P)	PT3803	2-02-002-04	0.0	8,300.0		8,300.0	12,135.0	400.0	730.0

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

U 2 CHPs, Dgst Two combined heat and power units, and three sludge digester tanks and one acidification tank controlled by waste gas flare

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS105	DG1 TNK FLR1	Sludge digester tank 1 controlled by waste gas flare	Normal - Steady State	E3303	CD3801 (P)	PT3801		0.0	8,560.0		5,200.0	47,000.0	1,400.0	1,600.0
OS106	DG2 TNK FLR1	Sludge digester tank 2 controlled by waste gas flare	Normal - Steady State	E3304	CD3801 (P)	PT3801		0.0	8,560.0		5,200.0	47,000.0	1,400.0	1,600.0
OS107	DG3 TNK FLR1	Sludge digester tank 3 controlled by waste gas flare	Normal - Steady State	E3305	CD3801 (P)	PT3801		0.0	8,560.0		5,200.0	47,000.0	1,400.0	1,600.0
OS108	DG4 TNK FLR1	Sludge digester tank 4 controlled by waste gas flare	Normal - Steady State	E3306	CD3801 (P)	PT3801		0.0	8,560.0		5,200.0	47,000.0	1,400.0	1,600.0
OS109	DG1 TNK FLR2	Sludge digester tank 1 bypass controlled by waste gas flare	Normal - Steady State	E3303	CD3801 (P)	PT3801		0.0	200.0		5,200.0	47,000.0	1,400.0	1,600.0
OS110	DG2 TNK FLR2	Sludge digester tank 2 bypass controlled by waste gas flare	Normal - Steady State	E3304	CD3801 (P)	PT3801		0.0	200.0		5,200.0	47,000.0	1,400.0	1,600.0
OS111	DG3 TNK FLR2	Sludge digester tank 3 bypass controlled by waste gas flare	Normal - Steady State	E3305	CD3801 (P)	PT3801		0.0	200.0		5,200.0	47,000.0	1,400.0	1,600.0
OS112	DG4 TNK FLR2	Sludge digester tank 4 bypass controlled by waste gas flare	Normal - Steady State	E3306	CD3801 (P)	PT3801		0.0	200.0		5,200.0	47,000.0	1,400.0	1,600.0

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

U 3 Dual Boiler Dual Fuel Boiler

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS201	Boiler -Dual	dual fuel boiler firing natural gas and/or digester gas	Normal - Steady State	E3808		PT3804	1-02-006-02	0.0	4,320.0		411.0	1,855.0	205.0	309.0

U 4 BS Engine Black Start Engine (230kw)

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS301	NG Enigne	Black start engine opering on natural gas	Standby	E3809		PT3805	2-02-002-02	0.0	100.0		335.0	1,350.0	1,012.0	1,442.0

U 20 Thkng/Dwtr Thickening and Dewatering Facilities

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS11	TruckBayVent	Truck Bay Ventilation	Normal - Steady State	E2001	CD20 (P) CD201 (P)	PT2001 PT2002	5-01-007-99	7,760.0	8,760.0		8,200.0	9,800.0	-10.0	110.0

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

U 20 Thkng/Dwtr Thickening and Dewatering Facilities

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS12	TruckMain1	Truck Bay Ventilation with Stack #2 out of service	Maintenance	E2001	CD20 (P)	PT2001	5-01-007-99	0.0	500.0		8,200.0	9,800.0	-10.0	110.0
OS13	TruckMain2	Truck Bay Ventilation with Stack #1 out of service	Maintenance	E2001	CD201 (P)	PT2002	5-01-007-99	0.0	500.0		8,200.0	9,800.0	-10.0	110.0
OS21	DwtringVent	Dewatering Ventilation	Normal - Steady State	E2002	CD20 (P) CD201 (P)	PT2001 PT2002	5-01-007-91	7,760.0	8,760.0		23,000.0	26,000.0	45.0	95.0
OS22	DwtringMain1	Dewatering Ventilation with Stack #2 out of service	Maintenance	E2002	CD20 (P)	PT2001	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS23	DwtringMain2	Dewatering Ventilation with Stack #1 out of service	Maintenance	E2002	CD201 (P)	PT2002	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS31	DwtringVent	Dewatering Ventilation	Normal - Steady State	E2003	CD20 (P) CD201 (P)	PT2001 PT2002	5-01-007-91	7,760.0	8,760.0		23,000.0	26,000.0	45.0	95.0
OS32	DwtringMain1	Dewatering Ventilation with Stack #2 out of service	Maintenance	E2003	CD20 (P)	PT2001	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS33	DwtringMain2	Dewatering Ventilation with Stack #1 out of service	Maintenance	E2003	CD201 (P)	PT2002	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS41	DwtringVent	Dewatering Ventilation	Normal - Steady State	E2004	CD20 (P) CD201 (P)	PT2001 PT2002	5-01-007-91	7,760.0	8,760.0		23,000.0	26,000.0	45.0	95.0
OS42	DwtringMain1	Dewatering Ventilation with Stack #2 out of service	Maintenance	E2004	CD20 (P)	PT2001	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS43	DwtringMain2	Dewatering Ventilation with Stack #1 out of service	Maintenance	E2004	CD201 (P)	PT2002	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS51	DwtringVent	Dewatering Ventilation	Normal - Steady State	E2005	CD20 (P) CD201 (P)	PT2001 PT2002	5-01-007-91	7,760.0	8,760.0		23,000.0	26,000.0	45.0	95.0
OS52	DwtringMain1	Dewatering Ventilation with Stack #2 out of service	Maintenance	E2005	CD20 (P)	PT2001	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS53	DwtringMain2	Dewatering Ventilation with Stack #1 out of service	Maintenance	E2005	CD201 (P)	PT2002	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS61	DwtringVent	Dewatering Ventilation	Normal - Steady State	E2006	CD20 (P) CD201 (P)	PT2001 PT2002	5-01-007-91	7,760.0	8,760.0		23,000.0	26,000.0	45.0	95.0

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Emission Unit/Batch Process Inventory

U 20 Thkng/Dwtr Thickening and Dewatering Facilities

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS62	DwtringMain1	Dewatering Ventilation with Stack #2 out of service	Maintenance	E2006	CD20 (P)	PT2001	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS63	DwtringMain2	Dewatering Ventilation with Stack #1 out of service	Maintenance	E2006	CD201 (P)	PT2002	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS71	DwtringVent	Dewatering Ventilation	Normal - Steady State	E2007	CD20 (P) CD201 (P)	PT2001 PT2002	5-01-007-91	7,760.0	8,760.0		23,000.0	26,000.0	45.0	95.0
OS72	DwtringMain1	Dewatering Ventilation with Stack #2 out of service	Maintenance	E2007	CD20 (P)	PT2001	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS73	DwtringMain2	Dewatering Ventilation with Stack #1 out of service	Maintenance	E2007	CD201 (P)	PT2002	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS81	DwtringVent	Dewatering Ventilation	Normal - Steady State	E2008	CD20 (P) CD201 (P)	PT2001 PT2002	5-01-007-91	7,760.0	8,760.0		23,000.0	26,000.0	45.0	95.0
OS82	DwtringMain1	Dewatering Ventilation with Stack #2 out of service	Maintenance	E2008	CD20 (P)	PT2001	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0
OS83	DwtringMain2	Dewatering Ventilation with Stack #1 out of service	Maintenance	E2008	CD201 (P)	PT2002	5-01-007-91	0.0	500.0		23,000.0	26,000.0	45.0	95.0

U 21 Junc Chamber Junction Chamber Emissions to Biofilter

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Junc Chamber	Junction Chamber with Biofiliter	Normal - Steady State	E21	CD21 (P)	PT21	5-01-007-99	7,760.0	8,760.0		350.0	400.0	10.0	110.0

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U 21 Junc Chamber Junction Chamber Emissions to Biofilter

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS2	JuncChmbMnt	Junction Chamber Biofilter during Maintainence	Maintenance	E21	CD21 (P)	PT21	5-01-007-99	0.0	1,000.0		350.0	375.0	10.0	110.0

U 22 Scum Area Scum Area Ventilation

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Scum Area	Scum Area Ventilation	Normal - Steady State	E2201	CD22 (P)	PT2201	5-01-007-99	4,380.0	8,760.0		6,700.0	8,200.0	45.0	95.0
OS2	Scum Area	Scum Area Ventilation	Normal - Steady State	E2202	CD22 (P)	PT2201	5-01-007-99	4,380.0	8,760.0		6,700.0	8,200.0	45.0	95.0

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

U 23 Gasoline Tnk Gasoline Tank

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Gasoline Tnk	Gasoline Tank	Normal - Steady State	E2301		PT23	4-07-146-98	0.0	8,760.0		2.0	2.0	70.0	70.0

U 24 Diesel Tank Diesel Tank

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Diesel Tank	6,000 gallon Diesel Tank	Normal - Steady State	E3810		PT22	4-03-010-19	0.0	8,760.0		2.0	2.0	70.0	70.0

U 111 SD Facility Sludge Drying System

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	ICV-110	Inlet Screw Conveyor 001	Normal - Steady State	E3201	CD3212 (P)	PT3201	5-01-007-99	0.0	8,760.0		0.0	100.0	40.0	100.0
OS2	ICV-120	Inlet Screw Conveyor 002	Normal - Steady State	E3202	CD3212 (P)	PT3201	5-01-007-99	0.0	8,760.0		0.0	100.0	40.0	100.0

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U 111 SD Facility Sludge Drying System

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS3	WCS-210	Wet Cake Silo 001	Normal - Steady State	E3203	CD3212 (P)	PT3201	5-01-007-99	0.0	8,760.0		0.0	50.0	40.0	100.0
OS4	WCS-220	Wet Cake Silo 002	Normal - Steady State	E3204	CD3212 (P)	PT3201	5-01-007-99	0.0	8,760.0		0.0	50.0	40.0	100.0
OS5	WCS-230	Wet Cake Silo 003	Normal - Steady State	E3205	CD3212 (P)	PT3201	5-01-007-99	0.0	8,760.0		0.0	50.0	40.0	100.0
OS6	WCS-240	Wet Cake Silo 004	Normal - Steady State	E3206	CD3212 (P)	PT3201	5-01-007-99	0.0	8,760.0		0.0	50.0	40.0	100.0
OS7	DRY-310	Sludge Dryer 001 - normal operation using CD3301 or normal operation using CD3302.	Normal - Steady State	E3207	CD3201 (P) CD3204 (P) CD3207 (S) CD3208 (S) CD3212 (T) CD3300 (S) CD3301 (S)	PT3201	5-01-007-99	0.0	8,000.0		0.0	3,500.0	160.0	220.0
OS8	DRY-320	Sludge Dryer 002 - normal operation using CD3301 or normal operation using CD3302	Normal - Steady State	E3208	CD3202 (P) CD3205 (P) CD3207 (S) CD3208 (S) CD3212 (T) CD3300 (S) CD3301 (S)	PT3201	5-01-007-99	0.0	8,000.0		0.0	3,500.0	160.0	220.0

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U 111 SD Facility Sludge Drying System

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS9	DRY-330	Sludge Dryer 003 - normal operation using CD3301 or normal operation using CD3302	Normal - Steady State	E3209	CD3203 (P) CD3206 (P) CD3207 (S) CD3208 (S) CD3212 (T) CD3300 (S) CD3301 (S)	PT3201	5-01-007-99	0.0	8,000.0		0.0	3,500.0	160.0	220.0
OS10	DCV-410	Discharge Screw Conveying System 001	Normal - Steady State	E3210	CD3201 (P) CD3204 (P) CD3207 (S) CD3208 (S) CD3212 (T)	PT3201	5-01-007-99	0.0	8,760.0		0.0	0.0	40.0	140.0
OS11	DCV-420	Discharge Screw Conveying System 002	Normal - Steady State	E3211	CD3202 (P) CD3205 (P) CD3207 (S) CD3208 (S) CD3212 (T)	PT3201	5-01-007-99	0.0	8,760.0		0.0	0.0	40.0	140.0
OS12	DCV-430	Discharge Screw Conveying System 003	Normal - Steady State	E3212	CD3203 (P) CD3206 (P) CD3207 (S) CD3208 (S) CD3212 (T)	PT3201	5-01-007-99	0.0	8,760.0		0.0	0.0	40.0	140.0
OS13	DPT-510	Pneumatic Conveying System 001	Normal - Steady State	E3213	CD3209 (P) CD3210 (P) CD3212 (S)	PT3201	5-01-007-99	0.0	8,760.0		0.0	2,000.0	80.0	140.0

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U 111 SD Facility Sludge Drying System

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS14	DPT-520	Pneumatic Conveying System 002	Normal - Steady State	E3214	CD3209 (P) CD3210 (P) CD3212 (S)	PT3201	5-01-007-99	0.0	8,760.0		0.0	2,000.0	80.0	140.0
OS15	DPT-530	Pneumatic Conveying System 003	Normal - Steady State	E3215	CD3209 (P) CD3210 (P) CD3212 (S)	PT3201	5-01-007-99	0.0	8,760.0		0.0	2,000.0	80.0	140.0
OS16	PSS-612	Product Silo 001	Normal - Steady State	E3216	CD3209 (P) CD3212 (S)	PT3201	5-01-007-99	0.0	8,760.0		0.0	3,000.0	80.0	140.0
OS17	PSS-622	Product Silo 002	Normal - Steady State	E3217	CD3210 (P) CD3212 (S)	PT3201	5-01-007-99	0.0	8,760.0		0.0	3,000.0	80.0	140.0
OS18	TL-1	Truck Loading	Normal - Steady State	E3218	CD3211 (P) CD3212 (S)	PT3201	5-01-007-99	0.0	8,760.0		0.0	100.0	40.0	100.0
OS19	DRY-310	Sludge Dryer 001 - bypass operation using CD3301 or CD3302	Normal - Steady State	E3207	CD3201 (P) CD3204 (P) CD3212 (T) CD3301 (S)	PT3201	5-01-007-99	0.0	8,000.0		0.0	3,500.0	160.0	220.0
OS20	DRY-320	Sludge Dryer 002 - bypass operation using CD3301 or CD3302	Normal - Steady State	E3208	CD3202 (P) CD3205 (P) CD3212 (T) CD3301 (S)	PT3201	5-01-007-99	0.0	8,000.0		0.0	3,500.0	160.0	220.0

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U 111 SD Facility Sludge Drying System

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS21	DRY-330	Sludge Dryer 003 - bypass operation using CD3301 or CD3302	Normal - Steady State	E3209	CD3203 (P) CD3206 (P) CD3212 (T) CD3301 (S)	PT3201	5-01-007-99	0.0	8,000.0		0.0	3,500.0	160.0	220.0

U 112 Oil Heaters Thermal Oil Heaters

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	TOH-1 NG	Thermal Oil Heater 1 burning Natural Gas	Normal - Steady State	E3111		PT3111	1-03-006-02	0.0	8,760.0		0.0	4,651.0	431.0	557.0
OS2	TOH-2 NG	Thermal Oil Heater 2 burning Natural Gas	Normal - Steady State	E3112		PT3112	1-03-006-02	0.0	8,760.0		0.0	4,651.0	431.0	557.0
OS3	TOH-1 FO	Thermal Oil Heater 1 burning Fuel Oil	Normal - Steady State	E3111		PT3111	1-03-004-02	0.0	200.0		0.0	4,700.0	431.0	557.0
OS4	TOH-2 FO	Thermal Oil Heater 2 burning Fuel Oil	Normal - Steady State	E3112		PT3112	1-03-004-02	0.0	200.0		0.0	4,700.0	431.0	557.0

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U 1001 2 Biofilters Sludge handling biofilter system

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Dew Sldg Str	Dewatered Sludge Storage Building ventilation	Normal - Steady State	E1116	CD1001 (P) CD1002 (P)	PT1001 PT1002	5-01-007-99	0.0	8,760.0		0.0	88,000.0	45.0	95.0
OS8	PS Tank	300,000-gallon primary sludge holding tank	Normal - Steady State	E3805	CD1001 (P) CD1002 (P)	PT1001 PT1002	5-01-007-99	0.0	8,760.0		0.0	8,000.0		
OS9	WAS Tank	690,000-gallon Waste Activated Sludge Storage Tank	Normal - Steady State	E3801	CD1001 (P) CD1002 (P)	PT1001 PT1002	5-01-007-99	0.0	8,760.0		0.0	3,500.0		
OS10	Organic Tank	20,000-gallon organic waste holding tank	Normal - Steady State	E3804	CD1001 (P) CD1002 (P)	PT1001 PT1002	5-01-007-99	0.0	8,760.0		0.0	250.0		

U 1002 Bio Boilers Biofilter Odor Control System Boilers

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Boiler 1	Biofilter Odor Control System Boiler 1	Normal - Steady State	E3301		PT1003	1-03-006-03	0.0	3,000.0		0.0	1,243.0	240.0	320.0
OS2	Boiler 2	Biofilter Odor Control System Boiler 2	Standby	E3302		PT1004	1-03-006-03	0.0	3,000.0		0.0	1,243.0	240.0	320.0

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U 2301 PTF Odor PTF Bldg odor control

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS11	PTF-2 Stage	PTF Odor Control - Operatin with 2 stages	Normal - Steady State	E2305	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS12	PTF-Stage 1	PTF Odor Control - Operating Single Stage using Stage/Tower #1	Normal - Steady State	E2305	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS13	PTF-Stage2	PTF Odor Control - Operating Single Stage using Stage/Tower #2	Normal - Steady State	E2305	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS21	PTF-2 Stage	PTF Odor Control - Operatin with 2 stages	Normal - Steady State	E2302	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS22	PTF-Stage 1	PTF Odor Control - Operating Single Stage using Stage/Tower #1	Normal - Steady State	E2302	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS23	PTF-Stage2	PTF Odor Control - Operating Single Stage using Stage/Tower #2	Normal - Steady State	E2302	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS31	PTF-2 Stage	PTF Odor Control - Operatin with 2 stages	Normal - Steady State	E2303	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS32	PTF-Stage 1	PTF Odor Control - Operating Single Stage using Stage/Tower #1	Normal - Steady State	E2303	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS33	PTF-Stage2	PTF Odor Control - Operating Single Stage using Stage/Tower #2	Normal - Steady State	E2303	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS41	PTF-2 Stage	PTF Odor Control - Operatin with 2 stages	Normal - Steady State	E2304	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS42	PTF-Stage 1	PTF Odor Control - Operating Single Stage using Stage/Tower #1	Normal - Steady State	E2304	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0
OS43	PTF-Stage2	PTF Odor Control - Operating Single Stage using Stage/Tower #2	Normal - Steady State	E2304	CD23 (P)	PT2301	5-01-007-07	0.0	8,760.0		40,000.0	55,000.0	45.0	95.0

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U 2302 Stage II Stage II Vapor Control Gasoline Dispensing

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Stage II	Stage II Vapor Control for Gasoline Dispensing	Normal - Steady State	E3101		PT23	5-01-007-07	0.0	8,760.0		2.0	2.0	70.0	70.0

U 2303 DieselDispen Stage I Vapor Control Diesel Dispensing

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	DieselDispen	Diesel Dispensing	Normal - Steady State	E3811		PT22	5-01-007-07	0.0	8,760.0		2.0	2.0	70.0	70.0

U 3104 Oil Heater Used Oil Heater

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours Min.	Annual Oper. Hours Max.	VOC Range	Flow (acfm) Min.	Flow (acfm) Max.	Temp. (deg F) Min.	Temp. (deg F) Max.
OS1	Oil Heater	Used Oil Heater	Normal - Steady State	E3104		PT15	1-05-001-14	0.0	8,760.0		200.0	400.0	250.0	350.0

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Potential to Emit

Subject Item: **FC**

Operating Scenario:

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Butadiene (1,3-)			0.02600000	0.02600000	tons/yr	No
Acetaldehyde			0.68000000	0.68000000	tons/yr	No
Acrolein			0.05000000	0.05000000	tons/yr	No
Ammonia			1.02000000	1.02000000	tons/yr	No
CO			52.70000000	52.70000000	tons/yr	No
Formaldehyde			2.07000000	2.07000000	tons/yr	No
HAPs (Total)			2.88000000	2.88000000	tons/yr	No
Hydrogen sulfide			3.70000000	3.70000000	tons/yr	No
Methane			28.87000000	28.87000000	tons/yr	No
NOx (Total)			28.20000000	28.20000000	tons/yr	No
Pb			0.00000000	0.00000000	tons/yr	No
PM-10 (Total)			5.10000000	5.10000000	tons/yr	No
SO2			4.70000000	4.70000000	tons/yr	No
TSP			5.10000000	5.10000000	tons/yr	No
VOC (Total)	11.52000000		32.60000000	44.12000000	tons/yr	No

Subject Item: **U1 PTF Boilers**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO				6.74000000	tons/yr	No
HAPs (Total)				D	tons/yr	No
NOx (Total)				8.02000000	tons/yr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U1 PTF Boilers**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Pb				D	tons/yr	No
PM-10 (Total)				0.56000000	tons/yr	No
SO2				0.24000000	tons/yr	No
TSP				0.56000000	tons/yr	No
VOC (Total)				0.50000000	tons/yr	No

Subject Item: **U1 PTF Boilers**

Operating Scenario: **OS1**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO				0.69000000	lb/hr	No
HAPs (Total)				D	lb/hr	No
NOx (Total)				0.82000000	lb/hr	No
Pb				D	lb/hr	No
PM-10 (Total)				0.06000000	lb/hr	No
SO2				D	lb/hr	No
TSP				0.06000000	lb/hr	No
VOC (Total)				0.05000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U1 PTF Boilers**

Operating Scenario: **OS2**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO				0.69000000	lb/hr	No
HAPs (Total)				D	lb/hr	No
NOx (Total)				0.82000000	lb/hr	No
Pb				D	lb/hr	No
PM-10 (Total)				0.06000000	lb/hr	No
SO2				D	lb/hr	No
TSP				0.06000000	lb/hr	No
VOC (Total)				0.05000000	lb/hr	No

Subject Item: **U1 PTF Boilers**

Operating Scenario: **OS3**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO				0.82000000	lb/hr	No
HAPs (Total)				D	lb/hr	No
NOx (Total)				1.43000000	lb/hr	No
Pb				D	lb/hr	No
PM-10 (Total)				0.12000000	lb/hr	No
SO2				1.88000000	lb/hr	No
TSP				0.12000000	lb/hr	No
VOC (Total)				0.12000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U1 PTF Boilers**

Operating Scenario: **OS4**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO				0.82000000	lb/hr	No
HAPs (Total)				D	lb/hr	No
NOx (Total)				1.43000000	lb/hr	No
Pb				D	lb/hr	No
PM-10 (Total)				0.12000000	lb/hr	No
SO2				1.88000000	lb/hr	No
TSP				0.12000000	lb/hr	No
VOC (Total)				0.12000000	lb/hr	No

Subject Item: **U1 PTF Boilers**

Operating Scenario: **OS5**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO				0.86000000	lb/hr	No
HAPs (Total)				D	lb/hr	No
NOx (Total)				1.03000000	lb/hr	No
Pb				0.00000513	lb/hr	No
PM-10 (Total)				0.08000000	lb/hr	No
SO2				0.01000000	lb/hr	No
TSP				0.08000000	lb/hr	No
VOC (Total)				0.06000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Butadiene (1,3-)	0.00000000		0.02600000	0.02600000	tons/yr	No
Acrolein	0.00000000		0.05000000	0.05000000	tons/yr	No
Ammonia	0.00000000		1.02000000	1.02000000	tons/yr	No
CO	0.00000000		33.11000000	33.11000000	tons/yr	No
Formaldehyde	0.00000000		2.07000000	2.07000000	tons/yr	No
HAPs (Total)	0.00000000		2.14000000	2.14000000	tons/yr	No
Methane	0.00000000		28.97000000	28.97000000	tons/yr	No
NOx (Total)	0.00000000		9.93000000	9.93000000	tons/yr	No
Pb	0.00000000		D	D	tons/yr	No
PM-10 (Total)	0.00000000		10.49000000	1.40000000	tons/yr	No
SO2	0.00000000		3.62000000	3.62000000	tons/yr	No
TSP	0.00000000		10.49000000	1.40000000	tons/yr	No
VOC (Total)	0.00000000		13.97000000	13.97000000	tons/yr	No

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS101**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Butadiene (1,3-)	0.00000000	0.00390000	0.00390000	0.00390000	lb/hr	No
Acrolein	0.00000000	0.00580000	0.00580000	0.00580000	lb/hr	No
Ammonia	0.00000000	0.12000000	0.12000000	0.12000000	lb/hr	No
CO	0.00000000	17.52000000	2.92000000	2.92000000	lb/hr	No
Formaldehyde	0.00000000	2.34000000	0.23000000	0.23000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS101**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	0.10500000	0.10500000	0.10500000	lb/hr	No
NOx (Total)	0.00000000	7.01000000	0.88000000	0.88000000	lb/hr	No
Pb	D	D	D	0.00000000	lb/hr	No
PM-10 (Total)	0.00000000	0.58000000	0.06000000	0.06000000	lb/hr	No
SO2	0.00000000	0.10100000	0.11000000	0.11000000	lb/hr	No
TSP	0.00000000	0.58000000	0.06000000	0.06000000	lb/hr	No
VOC (Total)	0.00000000	1.17000000	0.88000000	0.88000000	lb/hr	No

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS102**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Butadiene (1,3-)	0.00000000	0.00390000	0.00390000	0.00390000	lb/hr	No
Acrolein	0.00000000	0.00580000	0.00580000	0.00580000	lb/hr	No
Ammonia	0.00000000	0.12000000	0.12000000	0.12000000	lb/hr	No
CO	0.00000000	17.52000000	2.92000000	2.92000000	lb/hr	No
Formaldehyde	0.00000000	2.34000000	0.23000000	0.23000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	0.10500000	0.10500000	0.10500000	lb/hr	No
NOx (Total)	0.00000000	7.01000000	0.88000000	0.88000000	lb/hr	No
Pb	D	D	D	0.00000000	lb/hr	No
PM-10 (Total)	0.00000000	0.58000000	0.06000000	0.06000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS102**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
SO2	0.00000000	0.10100000	0.11000000	0.11000000	lb/hr	No
TSP	0.00000000	0.58000000	0.06000000	0.06000000	lb/hr	No
VOC (Total)	0.00000000	1.17000000	0.88000000	0.88000000	lb/hr	No

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS103**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Butadiene (1,3-)	0.00000000	0.00390000	0.00390000	0.00390000	lb/hr	No
Acrolein	0.00000000	0.00580000	0.00580000	0.00580000	lb/hr	No
Ammonia	0.00000000	0.12000000	0.12000000	0.12000000	lb/hr	No
CO	0.00000000	17.52000000	2.92000000	2.92000000	lb/hr	No
Formaldehyde	0.00000000	2.34000000	0.23000000	0.23000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	0.10500000	0.10500000	0.10500000	lb/hr	No
NOx (Total)	0.00000000	7.01000000	0.88000000	0.88000000	lb/hr	No
Pb	D	D	D	0.00000000	lb/hr	No
PM-10 (Total)	0.00000000	0.58000000	0.06000000	0.06000000	lb/hr	No
SO2	0.00000000	0.01700000	0.01700000	0.01700000	lb/hr	No
TSP	0.00000000	0.58000000	0.06000000	0.06000000	lb/hr	No
VOC (Total)	0.00000000	1.17000000	0.88000000	0.88000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS104**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Butadiene (1,3-)	0.00000000	0.00390000	0.00390000	0.00390000	lb/hr	No
Acrolein	0.00000000	0.00580000	0.00580000	0.00580000	lb/hr	No
Ammonia	0.00000000	0.12000000	0.12000000	0.12000000	lb/hr	No
CO	0.00000000	17.52000000	2.92000000	2.92000000	lb/hr	No
Formaldehyde	0.00000000	2.34000000	0.23000000	0.23000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	0.10500000	0.10500000	0.10500000	lb/hr	No
NOx (Total)	0.00000000	7.01000000	0.88000000	0.88000000	lb/hr	No
Pb	D	D	D	0.00000000	lb/hr	No
PM-10 (Total)	0.00000000	0.58000000	0.06000000	0.06000000	lb/hr	No
SO2	0.00000000	0.01700000	0.01700000	0.01700000	lb/hr	No
TSP	0.00000000	0.58000000	0.06000000	0.06000000	lb/hr	No
VOC (Total)	0.00000000	1.17000000	0.88000000	0.88000000	lb/hr	No

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS105**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000	6.57000000	6.57000000	6.57000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	13.71000000	13.71000000	13.71000000	lb/hr	No
NOx (Total)	0.00000000	1.97000000	1.97000000	1.97000000	lb/hr	No
Pb	D	D	D	D	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS105**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
PM-10 (Total)	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
SO2	0.00000000	0.36000000	0.36000000	0.36000000	lb/hr	No
TSP	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
VOC (Total)	0.00000000	3.94000000	3.94000000	3.94000000	lb/hr	No

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS106**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000	6.57000000	6.57000000	6.57000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	13.71000000	13.71000000	13.71000000	lb/hr	No
NOx (Total)	0.00000000	1.97000000	1.97000000	1.97000000	lb/hr	No
Pb	D	D	D	D	lb/hr	No
PM-10 (Total)	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
SO2	0.00000000	0.36000000	0.36000000	0.36000000	lb/hr	No
TSP	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
VOC (Total)	0.00000000	3.94000000	3.94000000	3.94000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS107**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000	6.57000000	6.57000000	6.57000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	13.71000000	13.71000000	13.71000000	lb/hr	No
NOx (Total)	0.00000000	1.97000000	1.97000000	1.97000000	lb/hr	No
Pb	D	D	D	D	lb/hr	No
PM-10 (Total)	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
SO2	0.00000000	0.36000000	0.36000000	0.36000000	lb/hr	No
TSP	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
VOC (Total)	0.00000000	3.94000000	3.94000000	3.94000000	lb/hr	No

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS108**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000	6.57000000	6.57000000	6.57000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	13.71000000	13.71000000	13.71000000	lb/hr	No
NOx (Total)	0.00000000	1.97000000	1.97000000	1.97000000	lb/hr	No
Pb	D	D	D	D	lb/hr	No
PM-10 (Total)	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
SO2	0.00000000	0.36000000	0.36000000	0.36000000	lb/hr	No
TSP	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
VOC (Total)	0.00000000	3.94000000	3.94000000	3.94000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS109**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000	6.57000000	6.57000000	6.57000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	13.71000000	13.71000000	13.71000000	lb/hr	No
NOx (Total)	0.00000000	1.97000000	1.97000000	1.97000000	lb/hr	No
Pb	D	D	D	D	lb/hr	No
PM-10 (Total)	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
SO2	0.00000000	26.93000000	26.93000000	26.93000000	lb/hr	No
TSP	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
VOC (Total)	0.00000000	3.94000000	3.94000000	3.94000000	lb/hr	No

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS110**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000	6.57000000	6.57000000	6.57000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	13.71000000	13.71000000	13.71000000	lb/hr	No
NOx (Total)	0.00000000	1.97000000	1.97000000	1.97000000	lb/hr	No
Pb	D	D	D	D	lb/hr	No
PM-10 (Total)	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
SO2	0.00000000	26.93000000	26.93000000	26.93000000	lb/hr	No
TSP	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
VOC (Total)	0.00000000	3.94000000	3.94000000	3.94000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS111**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000	6.57000000	6.57000000	6.57000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	13.71000000	13.71000000	13.71000000	lb/hr	No
NOx (Total)	0.00000000	1.97000000	1.97000000	1.97000000	lb/hr	No
Pb	D	D	D	D	lb/hr	No
PM-10 (Total)	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
SO2	0.00000000	26.93000000	26.93000000	26.93000000	lb/hr	No
TSP	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
VOC (Total)	0.00000000	3.94000000	3.94000000	3.94000000	lb/hr	No

Subject Item: **U2 CHPs, Dgst**

Operating Scenario: **OS112**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000	6.57000000	6.57000000	6.57000000	lb/hr	No
HAPs (Total)	D	D	D	D	lb/hr	No
Methane	0.00000000	13.71000000	13.71000000	13.71000000	lb/hr	No
NOx (Total)	0.00000000	1.97000000	1.97000000	1.97000000	lb/hr	No
Pb	D	D	D	D	lb/hr	No
PM-10 (Total)	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
SO2	0.00000000	26.93000000	26.93000000	26.93000000	lb/hr	No
TSP	0.00000000	4.92000000	4.92000000	4.92000000	lb/hr	No
VOC (Total)	0.00000000	3.94000000	3.94000000	3.94000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U3 Dual Boiler**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000		0.52000000	0.52000000	tons/yr	No
HAPs (Total)	0.00000000		D	D	tons/yr	No
NOx (Total)	0.00000000		1.04000000	1.04000000	tons/yr	No
Pb	0.00000000		D	D	tons/yr	No
PM-10 (Total)	0.00000000		0.26000000	0.26000000	tons/yr	No
SO2	0.00000000		D	D	tons/yr	No
TSP	0.00000000		0.26000000	0.26000000	tons/yr	No
VOC (Total)	0.00000000		D	D	tons/yr	No

Subject Item: **U3 Dual Boiler**

Operating Scenario: **OS201**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000		0.24000000	0.24000000	lb/hr	No
HAPs (Total)	0.00000000		D	D	lb/hr	No
NOx (Total)	0.00000000		0.48000000	0.48000000	lb/hr	No
Pb	0.00000000		D	D	lb/hr	No
PM-10 (Total)	0.00000000		0.05000000	0.05000000	lb/hr	No
SO2	0.00000000		D	D	lb/hr	No
TSP	0.00000000		0.05000000	0.05000000	lb/hr	No
VOC (Total)	0.00000000		D	D	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U4 BS Engine**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000		0.13700000	0.13700000	tons/yr	No
HAPs (Total)	0.00000000		D	D	tons/yr	No
NOx (Total)	0.00000000		0.06800000	0.06800000	tons/yr	No
Pb	0.00000000		D	D	tons/yr	No
PM-10 (Total)	0.00000000		D	D	tons/yr	No
SO2	0.00000000		D	D	tons/yr	No
TSP	0.00000000		D	D	tons/yr	No
VOC (Total)	0.00000000		0.03300000	0.03300000	tons/yr	No

Subject Item: **U4 BS Engine**

Operating Scenario: **OS301**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO	0.00000000		3.27000000	3.27000000	lb/hr	No
HAPs (Total)	0.00000000		D	D	lb/hr	No
NOx (Total)	0.00000000		1.63000000	1.63000000	lb/hr	No
Pb	0.00000000		D	D	lb/hr	No
PM-10 (Total)	0.00000000		D	D	lb/hr	No
SO2	0.00000000		D	D	lb/hr	No
TSP	0.00000000		D	D	lb/hr	No
VOC (Total)	0.00000000		0.79000000	0.79000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U20 Thkng/Dwtr**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		D	D	D	tons/yr	No
HAPs (Total)		D	D	D	tons/yr	No
Hydrogen sulfide		0.22000000	0.22000000	0.22000000	tons/yr	No
NOx (Total)		D	D	D	tons/yr	No
Pb		D	D	D	tons/yr	No
PM-10 (Total)		D	D	D	tons/yr	No
SO2		D	D	D	tons/yr	No
TSP		D	D	D	tons/yr	No
VOC (Total)		D	D	D	tons/yr	No

Subject Item: **U21 Junc Chamber**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		D	D	D	tons/yr	No
HAPs (Total)		D	D	D	tons/yr	No
Hydrogen sulfide		0.00660487	0.00660487	0.00660487	tons/yr	No
NOx (Total)		D	D	D	tons/yr	No
Pb		D	D	D	tons/yr	No
PM-10 (Total)		D	D	D	tons/yr	No
SO2		D	D	D	tons/yr	No
TSP		D	D	D	tons/yr	No
VOC (Total)		D	D	D	tons/yr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U21 Junc Chamber**

Operating Scenario: **OS1**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO					lb/hr	No
HAPs (Total)					lb/hr	No
NOx (Total)					lb/hr	No
Pb					lb/hr	No
PM-10 (Total)					lb/hr	No
SO2					lb/hr	No
TSP					lb/hr	No
VOC (Total)					lb/hr	No

Subject Item: **U22 Scum Area**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		D	D	D	tons/yr	No
HAPs (Total)		D	D	D	tons/yr	No
Hydrogen sulfide	0.00000000	0.07500000	0.07500000	0.07500000	tons/yr	No
NOx (Total)		D	D	D	tons/yr	No
Pb		D	D	D	tons/yr	No
PM-10 (Total)		D	D	D	tons/yr	No
SO2		D	D	D	tons/yr	No
TSP		D	D	D	tons/yr	No
VOC (Total)		D	D	D	tons/yr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U23 Gasoline Tnk**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		D	D	0.00000000	tons/yr	No
HAPs (Total)		D	D	0.00000000	tons/yr	No
NOx (Total)		D	D	0.00000000	tons/yr	No
Pb		D	D	0.00000000	tons/yr	No
PM-10 (Total)		D	D	0.00000000	tons/yr	No
SO2		D	D	0.00000000	tons/yr	No
TSP		D	D	0.00000000	tons/yr	No
VOC (Total)		1.00000000	1.00000000	1.00000000	tons/yr	No

Subject Item: **U24 Diesel Tank**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO			D	D	tons/yr	No
HAPs (Total)			D	D	tons/yr	No
NOx (Total)			D	D	tons/yr	No
Pb			D	D	tons/yr	No
PM-10 (Total)			D	D	tons/yr	No
SO2			D	D	tons/yr	No
TSP			D	D	tons/yr	No
VOC (Total)			D	D	tons/yr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U111 SD Facility**

Operating Scenario: **OS7**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Hydrogen sulfide		2.01800000	0.00040000	0.00040000	lb/hr	No
PM-10 (Total)		4.72000000	D	D	lb/hr	No
TSP		4.72000000	D	D	lb/hr	No
VOC (Total)		26.32000000	0.56800000	0.56800000	lb/hr	No

Subject Item: **U111 SD Facility**

Operating Scenario: **OS8**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO					lb/hr	No
HAPs (Total)					lb/hr	No
Hydrogen sulfide		2.01800000	0.00040000	0.00040000	lb/hr	No
NOx (Total)					lb/hr	No
Pb					lb/hr	No
PM-10 (Total)		4.72000000	D	D	lb/hr	No
SO2					lb/hr	No
TSP		4.72000000	D	D	lb/hr	No
VOC (Total)		26.32000000	0.56800000	0.56800000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U111 SD Facility**

Operating Scenario: **OS9**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO					lb/hr	No
HAPs (Total)					lb/hr	No
Hydrogen sulfide		2.01800000	0.00040000	0.00040000	lb/hr	No
NOx (Total)					lb/hr	No
Pb					lb/hr	No
PM-10 (Total)		4.72000000	D	D	lb/hr	No
SO2					lb/hr	No
TSP		4.72000000	D	D	lb/hr	No
VOC (Total)		26.32000000	0.56800000	0.56800000	lb/hr	No

Subject Item: **U111 SD Facility**

Operating Scenario: **OS19**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO					lb/hr	No
HAPs (Total)					lb/hr	No
Hydrogen sulfide		2.01800000	0.02000000	0.02000000	lb/hr	No
NOx (Total)					lb/hr	No
Pb					lb/hr	No
PM-10 (Total)		4.72000000	0.09400000	0.09400000	lb/hr	No
SO2					lb/hr	No
TSP		4.72000000	0.09400000	0.09400000	lb/hr	No
VOC (Total)		26.32000000	0.56800000	0.56800000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U111 SD Facility**

Operating Scenario: **OS20**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO					lb/hr	No
HAPs (Total)					lb/hr	No
Hydrogen sulfide		2.01800000	0.02000000	0.02000000	lb/hr	No
NOx (Total)					lb/hr	No
Pb					lb/hr	No
PM-10 (Total)		4.72000000	0.09400000	0.09400000	lb/hr	No
SO2					lb/hr	No
TSP		4.72000000	0.09400000	0.09400000	lb/hr	No
VOC (Total)		26.32000000	0.56800000	0.56800000	lb/hr	No

Subject Item: **U111 SD Facility**

Operating Scenario: **OS21**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO					lb/hr	No
HAPs (Total)					lb/hr	No
Hydrogen sulfide		2.01800000	0.02000000	0.02000000	lb/hr	No
NOx (Total)					lb/hr	No
Pb					lb/hr	No
PM-10 (Total)		4.72000000	0.09400000	0.09400000	lb/hr	No
SO2					lb/hr	No
TSP		4.72000000	0.09400000	0.09400000	lb/hr	No
VOC (Total)		26.32000000	0.56800000	0.56800000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U112 Oil Heaters**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		9.68000000	9.68000000	9.68000000	tons/yr	No
NOx (Total)		8.04000000	8.04000000	8.04000000	tons/yr	No
PM-10 (Total)		0.90000000	0.90000000	0.90000000	tons/yr	No
SO2		0.36000000	0.36000000	0.36000000	tons/yr	No
TSP		0.90000000	0.90000000	0.90000000	tons/yr	No
VOC (Total)		0.56000000	0.56000000	0.56000000	tons/yr	No

Subject Item: **U112 Oil Heaters**

Operating Scenario: **OS1**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		1.08000000	1.08000000	1.08000000	lb/hr	No
NOx (Total)		0.89000000	0.89000000	0.89000000	lb/hr	No
PM-10 (Total)		0.10000000	0.10000000	0.10000000	lb/hr	No
SO2		0.02000000	0.02000000	0.02000000	lb/hr	No
TSP		0.10000000	0.10000000	0.10000000	lb/hr	No
VOC (Total)		0.06000000	0.06000000	0.06000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U112 Oil Heaters**

Operating Scenario: **OS2**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		1.08000000	1.08000000	1.08000000	lb/hr	No
HAPs (Total)					lb/hr	No
NOx (Total)		0.89000000	0.89000000	0.89000000	lb/hr	No
Pb					lb/hr	No
PM-10 (Total)		0.10000000	0.10000000	0.10000000	lb/hr	No
SO2		0.02000000	0.02000000	0.02000000	lb/hr	No
TSP		0.10000000	0.10000000	0.10000000	lb/hr	No
VOC (Total)		0.06000000	0.06000000	0.06000000	lb/hr	No

Subject Item: **U112 Oil Heaters**

Operating Scenario: **OS3**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		1.09000000	1.09000000	1.09000000	lb/hr	No
HAPs (Total)					lb/hr	No
NOx (Total)		1.35000000	1.35000000	1.35000000	lb/hr	No
Pb		0.00020000	0.00020000	0.00020000	lb/hr	No
PM-10 (Total)		0.27000000	0.27000000	0.27000000	lb/hr	No
SO2		0.75000000	0.75000000	0.75000000	lb/hr	No
TSP		0.27000000	0.27000000	0.27000000	lb/hr	No
VOC (Total)		0.06000000	0.06000000	0.06000000	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U112 Oil Heaters**

Operating Scenario: **OS4**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		1.09000000	1.09000000	1.09000000	lb/hr	No
HAPs (Total)					lb/hr	No
NOx (Total)		1.35000000	1.35000000	1.35000000	lb/hr	No
Pb		0.00020000	0.00020000	0.00020000	lb/hr	No
PM-10 (Total)		0.27000000	0.27000000	0.27000000	lb/hr	No
SO2		0.75000000	0.75000000	0.75000000	lb/hr	No
TSP		0.27000000	0.27000000	0.27000000	lb/hr	No
VOC (Total)		0.06000000	0.06000000	0.06000000	lb/hr	No

Subject Item: **U1001 2 Biofilters**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		D	D	0.00000000	tons/yr	No
HAPs (Total)		D	D	0.00000000	tons/yr	No
Hydrogen sulfide		0.28000000	0.28000000	0.28000000	tons/yr	No
NOx (Total)		D	D	0.00000000	tons/yr	No
Pb		D	D	0.00000000	tons/yr	No
PM-10 (Total)		D	D	0.00000000	tons/yr	No
SO2		D	D	0.00000000	tons/yr	No
TSP		D	D	0.00000000	tons/yr	No
VOC (Total)		4.22000000	4.22000000	4.22000000	tons/yr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U1001 2 Biofilters**

Operating Scenario: **OS8**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Carbon disulfide		0.01400000	0.01400000	0.01400000	lb/hr	No
CO		0.29000000	0.29000000	0.29000000	lb/hr	No
HAPs (Total)		0.19330000	0.01800000	0.01800000	lb/hr	No
Hydrogen sulfide		3.65200000	0.00800000	0.00800000	lb/hr	No
NOx (Total)		0.14000000	0.14000000	0.14000000	lb/hr	No
Pb		D	D	D	lb/hr	No
PM-10 (Total)		D	D	D	lb/hr	No
SO2		D	D	D	lb/hr	No
Toluene		0.36800000	D	D	lb/hr	No
TSP		D	D	D	lb/hr	No
VOC (Total)		0.24000000	0.06500000	0.06500000	lb/hr	No

Subject Item: **U1001 2 Biofilters**

Operating Scenario: **OS9**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
Carbon disulfide		0.01400000	0.01400000	0.01400000	lb/hr	No
CO		0.29000000	0.29000000	0.29000000	lb/hr	No
HAPs (Total)		0.19330000	0.01800000	0.01800000	lb/hr	No
Hydrogen sulfide		3.65200000	0.00800000	0.00800000	lb/hr	No
NOx (Total)		0.14000000	0.14000000	0.14000000	lb/hr	No
Pb		D	D	D	lb/hr	No
PM-10 (Total)		D	D	D	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U1001 2 Biofilters**

Operating Scenario: **OS9**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
SO2		D	D	D	lb/hr	No
Toluene		0.36800000	D	D	lb/hr	No
TSP		D	D	D	lb/hr	No
VOC (Total)		0.24000000	0.06500000	0.06500000	lb/hr	No

Subject Item: **U1002 Bio Boilers**

Operating Scenario: **OS1**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.29000000	0.29000000	0.29000000	lb/hr	No
HAPs (Total)		D	D	D	lb/hr	No
NOx (Total)		0.14000000	0.14000000	0.14000000	lb/hr	No
Pb		D	D	D	lb/hr	No
PM-10 (Total)		D	D	D	lb/hr	No
SO2		D	D	D	lb/hr	No
TSP		D	D	D	lb/hr	No
VOC (Total)		D	D	D	lb/hr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U1002 Bio Boilers**

Operating Scenario: **OS2**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.29000000	0.29000000	0.29000000	lb/hr	No
HAPs (Total)		D	D	D	lb/hr	No
NOx (Total)		0.14000000	0.14000000	0.14000000	lb/hr	No
Pb		D	D	D	lb/hr	No
PM-10 (Total)		D	D	D	lb/hr	No
SO2		D	D	D	lb/hr	No
TSP		D	D	D	lb/hr	No
VOC (Total)		D	D	D	lb/hr	No

Subject Item: **U2301 PTF Odor**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		D	D	D	tons/yr	No
HAPs (Total)		0.11805000	0.11805000	0.11805000	tons/yr	No
Hydrogen sulfide		2.83000000	2.83000000	2.83000000	tons/yr	No
NOx (Total)		D	D	D	tons/yr	No
Pb		D	D	D	tons/yr	No
PM-10 (Total)		D	D	D	tons/yr	No
SO2		D	D	D	tons/yr	No
TSP		D	D	D	tons/yr	No
VOC (Total)		4.90000000	4.90000000	4.90000000	tons/yr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U2302 Stage II**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		D	D	0.00000000	tons/yr	No
HAPs (Total)		D	D	0.00000000	tons/yr	No
NOx (Total)		D	D	0.00000000	tons/yr	No
Pb		D	D	0.00000000	tons/yr	No
PM-10 (Total)		D	D	0.00000000	tons/yr	No
SO2		D	D	0.00000000	tons/yr	No
TSP		D	D	0.00000000	tons/yr	No
VOC (Total)		0.54000000	0.54000000	0.54000000	tons/yr	No

Subject Item: **U2303 DieselDispen**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO			D	D	tons/yr	No
HAPs (Total)			D	D	tons/yr	No
NOx (Total)			D	D	tons/yr	No
Pb			D	D	tons/yr	No
PM-10 (Total)			D	D	tons/yr	No
SO2			D	D	tons/yr	No
TSP			D	D	tons/yr	No
VOC (Total)			0.45900000	0.45900000	tons/yr	No

New Jersey Department of Environmental Protection
Potential to Emit

Subject Item: **U3104 Oil Heater**

Operating Scenario: **OS0 Summary**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.02000000	0.02000000	0.02000000	tons/yr	No
HAPs (Total)		D	D	0.00000000	tons/yr	No
NOx (Total)		0.11000000	0.11000000	0.11000000	tons/yr	No
Pb		D	D	0.00000000	tons/yr	No
PM-10 (Total)		D	D	0.00000000	tons/yr	No
SO2		0.50000000	0.50000000	0.50000000	tons/yr	No
TSP		D	D	0.00000000	tons/yr	No
VOC (Total)		0.01000000	0.01000000	0.01000000	tons/yr	No

Subject Item: **U3104 Oil Heater**

Operating Scenario: **OS1**

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		D	D	D	lb/hr	No
HAPs (Total)		D	D	D	lb/hr	No
NOx (Total)		0.02500000	0.02500000	0.02500000	lb/hr	No
Pb		D	D	D	lb/hr	No
PM-10 (Total)		D	D	D	lb/hr	No
SO2		0.11000000	0.11000000	0.11000000	lb/hr	No
TSP		D	D	D	lb/hr	No
VOC (Total)		D	D	D	lb/hr	No

000000 E21 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Influent Sewer Junction Chamber
Capacity:	
Units:	
Description:	

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: This is the influent junction chamber where the plant's 3 main sewer interceptors combine prior to treatment.

000000 E101 (Boiler)
Print Date: 9/15/2020

Make:	York Shipley
Manufacturer:	
Model:	
Maximum Rated Gross Heat Input (MMBtu/hr - HHV):	8.37
Boiler Type:	Fire Tube
Utility Type:	
Output Type:	Steam Only
Steam Output (lb/hr):	
Fuel Firing Method:	
Description (if other):	
Draft Type:	
Heat Exchange Type:	Direct

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

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

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

No

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

No

Comments:

000000 E102 (Boiler)
Print Date: 9/15/2020

Make:	York Shipley
Manufacturer:	
Model:	
Maximum Rated Gross Heat Input (MMBtu/hr - HHV):	8.37
Boiler Type:	Fire Tube
Utility Type:	
Output Type:	Steam Only
Steam Output (lb/hr):	
Fuel Firing Method:	
Description (if other):	
Draft Type:	
Heat Exchange Type:	Direct

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

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

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

No

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

No

Comments:

000000 E103 (Boiler)
Print Date: 9/15/2020

Make:	York Shipley
Manufacturer:	
Model:	
Maximum Rated Gross Heat Input (MMBtu/hr - HHV):	8.37
Boiler Type:	Fire Tube
Utility Type:	
Output Type:	Steam Only
Steam Output (lb/hr):	
Fuel Firing Method:	
Description (if other):	
Draft Type:	
Heat Exchange Type:	Direct

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

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

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

No

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

No

Comments:

000000 E1116 (Other Equipment)
Print Date: 9/15/2020

Make:	N/A
Manufacturer:	N/A
Model:	N/A
Equipment Type:	Temporary storage of trucks containing dewatered sludge
Capacity:	
Units:	
Description:	

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: This is a temporary storage facility for trucks loaded with dewatered sludge during off-hours. At times, during normal business hours, it is possible that there will be no odor sources within this building.

000000 E2001 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Truck Loading Area
Capacity:	
Units:	
Description:	

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:

000000 E2002 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Belt FIlter Presses
Capacity:	
Units:	
Description:	

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: Belt filter press room will continue to be ventilated to odor control.

000000 E2003 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Belt FIlter Presses
Capacity:	
Units:	
Description:	

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: Belt filter press room will continue to be ventilated to odor control.

000000 E2004 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Belt FIlter Presses
Capacity:	
Units:	
Description:	

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: Belt filter press room will continue to be ventilated to odor control.

000000 E2005 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Belt FIlter Presses
Capacity:	
Units:	
Description:	

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: Belt filter press room will continue to be ventilated to odor control.

000000 E2006 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Belt FIlter Presses
Capacity:	
Units:	
Description:	

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: Belt filter press room will continue to be ventilated to odor control.

000000 E2007 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Belt FIlter Presses
Capacity:	
Units:	
Description:	

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: Belt filter press room will continue to be ventilated to odor control.

000000 E2008 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	Belt FIlter Presses
Capacity:	
Units:	
Description:	

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: Belt filter press room will continue to be ventilated to odor control.

000000 E2201 (Other Equipment)
Print Date: 9/15/2020

Make:	N/A
Manufacturer:	N/A
Model:	N/A
Equipment Type:	Scum Decanter No.1
Capacity:	
Units:	
Description:	

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:

000000 E2202 (Other Equipment)
Print Date: 9/15/2020

Make:	N/A
Manufacturer:	N/A
Model:	N/A
Equipment Type:	Scum Decanter No. 2
Capacity:	
Units:	
Description:	

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:

000000 E2301 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Liquids Only
Storage Vessel Type:	Tank
Design Capacity:	6,000
Units:	gallons
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	No
Shell Color:	
Description (if other):	
Shell Condition:	
Paint Condition:	
Shell Construction:	
Is the Shell Insulated?	
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	
Length (ft):	16.00
Width (ft):	
Diameter (ft):	8.00
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Submerged
Description (if other):	
Maximum Design Fill Rate:	
Units:	gal/min
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Horizontal fixed roof tank
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?	Yes

000000 E2301 (Storage Vessel)
Print Date: 9/15/2020

Does the storage vessel have a Conservation Vent?	Yes
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?	No
Comments:	

000000 E2302 (Other Equipment)
Print Date: 9/15/2020

Make:	N/A
Manufacturer:	N/A
Model:	N/A
Equipment Type:	Bar Screen No. 1
Capacity:	
Units:	
Description:	

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:

000000 E2303 (Other Equipment)
Print Date: 9/15/2020

Make:	N/A
Manufacturer:	N/A
Model:	N/A
Equipment Type:	Bar Screen No. 2
Capacity:	
Units:	
Description:	

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:

000000 E2304 (Other Equipment)
Print Date: 9/15/2020

Make:	N/A
Manufacturer:	N/A
Model:	N/A
Equipment Type:	Bar Screen No. 3
Capacity:	
Units:	
Description:	

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:

000000 E2305 (Other Equipment)
Print Date: 9/15/2020

Make:	N/A
Manufacturer:	N/A
Model:	N/A
Equipment Type:	Grit Dumpster
Capacity:	
Units:	
Description:	

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:

000000 E3104 (Fuel Combustion Equipment (Other))
Print Date: 9/15/2020

Make:	Black Gold
Manufacturer:	
Model:	400
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	0.34
Type of Heat Exchange:	Indirect
Equipment Type Description:	Waste Oil Furnace

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.

000000 E3111 (Process Heater)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type Description:	Natural gas fired thermal oil heaters with fuel oil as back up.
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	15.50
Draft Type:	Forced
Firing Method:	Indirect

Is the Process Heater using (check all that apply):

Low NOx Burner	☑
Type of Low NOx Burner:	John Zink, Gordon Platt Burner
Flue Gas Recirculation (FGR):	☑

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.

000000 E3112 (Process Heater)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type Description:	Natural gas fired thermal oil heaters with fuel oil as back up.
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	15.50
Draft Type:	Forced
Firing Method:	Indirect

Is the Process Heater using (check all that apply):

Low NOx Burner	☑
Type of Low NOx Burner:	John Zink, Gordon Platt Burner
Flue Gas Recirculation (FGR):	☑

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.

000000 E3201 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	
Capacity:	180.00
Units:	lb/hr
Description:	

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:

000000 E3202 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	
Capacity:	180.00
Units:	lb/hr
Description:	

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:

000000 E3203 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Silo
Design Capacity:	2,700
Units:	ft^3
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	
Shell Color:	
Description (if other):	
Shell Condition:	
Paint Condition:	
Shell Construction:	Welded
Is the Shell Insulated?	
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	19.00
Length (ft):	
Width (ft):	
Diameter (ft):	13.50
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Top Pipe
Description (if other):	
Maximum Design Fill Rate:	6.00
Units:	ft^3/min
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Vertical fixed roof tank
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?	

000000 E3203 (Storage Vessel)
Print Date: 9/15/2020

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:

000000 E3204 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Silo
Design Capacity:	2,700
Units:	ft^3
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	
Shell Color:	
Description (if other):	
Shell Condition:	
Paint Condition:	
Shell Construction:	Welded
Is the Shell Insulated?	
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	19.00
Length (ft):	
Width (ft):	
Diameter (ft):	13.50
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Top Pipe
Description (if other):	
Maximum Design Fill Rate:	6.00
Units:	ft^3/min
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Vertical fixed roof tank
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?	

000000 E3204 (Storage Vessel)
Print Date: 9/15/2020

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:

000000 E3205 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Silo
Design Capacity:	2,700
Units:	ft^3
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	
Shell Color:	
Description (if other):	
Shell Condition:	
Paint Condition:	
Shell Construction:	Welded
Is the Shell Insulated?	
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	19.00
Length (ft):	
Width (ft):	
Diameter (ft):	13.50
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Top Pipe
Description (if other):	
Maximum Design Fill Rate:	6.00
Units:	ft^3/min
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Vertical fixed roof tank
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?	

000000 E3205 (Storage Vessel)
Print Date: 9/15/2020

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:

000000 E3206 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Silo
Design Capacity:	2,700
Units:	ft^3
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	
Shell Color:	
Description (if other):	
Shell Condition:	
Paint Condition:	
Shell Construction:	Welded
Is the Shell Insulated?	
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	19.00
Length (ft):	
Width (ft):	
Diameter (ft):	13.50
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Top Pipe
Description (if other):	
Maximum Design Fill Rate:	6.00
Units:	ft^3/min
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Vertical fixed roof tank
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?	

000000 E3206 (Storage Vessel)
Print Date: 9/15/2020

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:

000000 E3207 (Other Equipment)
Print Date: 9/15/2020

Make:	Komline-Sanderson
Manufacturer:	Komline-Sanderson
Model:	15W-3000
Equipment Type:	Indirectly heated biosolids dryer
Capacity:	16.70
Units:	dry tons/day
Description:	

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:

000000 E3208 (Other Equipment)
Print Date: 9/15/2020

Make:	Komline-Sanderson
Manufacturer:	Komline-Sanderson
Model:	15W-3000
Equipment Type:	Indirectly heated biosolids dryer
Capacity:	16.70
Units:	dry tons/day
Description:	

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:

000000 E3209 (Other Equipment)
Print Date: 9/15/2020

Make:	Komline-Sanderson
Manufacturer:	Komline-Sanderson
Model:	15W-3000
Equipment Type:	Indirectly heated biosolids dryer
Capacity:	16.70
Units:	dry tons/day
Description:	

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:

000000 E3210 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	
Capacity:	1,500.00
Units:	lb/hr
Description:	

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:

000000 E3211 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	
Capacity:	1,500.00
Units:	lb/hr
Description:	

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:

000000 E3212 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	
Capacity:	1,500.00
Units:	lb/hr
Description:	

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:

000000 E3213 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	
Capacity:	1,500.00
Units:	lb/hr
Description:	

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:

000000 E3214 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	
Capacity:	1,500.00
Units:	lb/hr
Description:	

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:

000000 E3215 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	
Capacity:	1,500.00
Units:	lb/hr
Description:	

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:

000000 E3216 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Solids Only
Storage Vessel Type:	Silo
Design Capacity:	5,300
Units:	ft^3
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	
Shell Color:	
Description (if other):	
Shell Condition:	
Paint Condition:	
Shell Construction:	Welded
Is the Shell Insulated?	
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	43.50
Length (ft):	
Width (ft):	
Diameter (ft):	13.50
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Top Pipe
Description (if other):	
Maximum Design Fill Rate:	
Units:	gr/dscf @ 7% O2
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Vertical fixed roof tank
Roof Height (From Roof Bottom to Roof Top) (ft):	1.25
Roof Construction:	
Primary Seal Type:	
Secondary Seal Type:	
Total Number of Seals:	
Roof Support:	
Does the storage vessel have a Vapor Return Loop?	

000000 E3216 (Storage Vessel)
Print Date: 9/15/2020

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:

000000 E3217 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Solids Only
Storage Vessel Type:	Silo
Design Capacity:	5,300
Units:	ft^3
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	
Shell Color:	
Description (if other):	
Shell Condition:	
Paint Condition:	
Shell Construction:	Welded
Is the Shell Insulated?	
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	43.50
Length (ft):	
Width (ft):	
Diameter (ft):	13.50
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Top Pipe
Description (if other):	
Maximum Design Fill Rate:	
Units:	gr/dscf @ 7% O2
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Vertical fixed roof tank
Roof Height (From Roof Bottom to Roof Top) (ft):	1.25
Roof Construction:	
Primary Seal Type:	
Secondary Seal Type:	
Total Number of Seals:	
Roof Support:	
Does the storage vessel have a Vapor Return Loop?	

000000 E3217 (Storage Vessel)
Print Date: 9/15/2020

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:

000000 E3301 (Process Heater)
Print Date: 9/15/2020

Make:	FLX
Manufacturer:	Cleaver Brooks
Model:	FLX-700-400-160HW
Equipment Type Description:	Flexible tube water boilers
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	4.00
Draft Type:	Forced
Firing Method:	Indirect

Is the Process Heater using (check all that apply):

Low NOx Burner	☑
Type of Low NOx Burner:	Gas recirculation
Flue Gas Recirculation (FGR):	☑

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.

000000 E3302 (Process Heater)
Print Date: 9/15/2020

Make:	FLX
Manufacturer:	Cleaver Brooks
Model:	FLX-700-400-160HW
Equipment Type Description:	Flexible tube water boilers
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	4.00
Draft Type:	Forced
Firing Method:	Indirect

Is the Process Heater using (check all that apply):

Low NOx Burner	☑
Type of Low NOx Burner:	Gas Recirculation
Flue Gas Recirculation (FGR):	☑

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.

000000 E3303 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Tank
Design Capacity:	690,000
Units:	gallons
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	Yes
Shell Color:	Other
Description (if other):	stainless steel dome roof, concrete wall
Shell Condition:	
Paint Condition:	Good
Shell Construction:	Bolted/Riveted
Is the Shell Insulated?	Yes
Type of Insulation:	spray on foam
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	20.00
Length (ft):	
Width (ft):	
Diameter (ft):	72.00
Other Dimension	
Description:	Height (From Ground to Dome Top)
Value:	32.15
Units:	foot
Fill Method:	Bottom Pipe
Description (if other):	
Maximum Design Fill Rate:	
Units:	
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Domed vertical fixed roof tank
Roof Height (From Roof Bottom to Roof Top) (ft):	12.00
Roof Construction:	
Primary Seal Type:	
Secondary Seal Type:	
Total Number of Seals:	
Roof Support:	
Does the storage vessel have a Vapor Return Loop?	No

000000 E3303 (Storage Vessel)
Print Date: 9/15/2020

Does the storage vessel have a Conservation Vent?	No
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?	No
Comments:	It is repurposed to be a digester tank. It does not "breath to the atmosphere".

000000 E3304 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Tank
Design Capacity:	690,000
Units:	gallons
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	Yes
Shell Color:	Other
Description (if other):	stainless steel dome roof, concrete wall
Shell Condition:	
Paint Condition:	Good
Shell Construction:	Bolted/Riveted
Is the Shell Insulated?	Yes
Type of Insulation:	spray on foam
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	20.00
Length (ft):	
Width (ft):	
Diameter (ft):	72.00
Other Dimension	
Description:	Height (From Ground to Dome Top)
Value:	32.15
Units:	foot
Fill Method:	Bottom Pipe
Description (if other):	
Maximum Design Fill Rate:	
Units:	
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Domed vertical fixed roof tank
Roof Height (From Roof Bottom to Roof Top) (ft):	12.00
Roof Construction:	
Primary Seal Type:	
Secondary Seal Type:	
Total Number of Seals:	
Roof Support:	
Does the storage vessel have a Vapor Return Loop?	No

000000 E3304 (Storage Vessel)
Print Date: 9/15/2020

Does the storage vessel have a Conservation Vent?	No
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?	No
Comments:	It is repurposed to be a digester tank. It does not "breath to the atmosphere".

000000 E3305 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Tank
Design Capacity:	690,000
Units:	gallons
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	Yes
Shell Color:	Other
Description (if other):	stainless steel dome roof, concrete wall
Shell Condition:	
Paint Condition:	Good
Shell Construction:	Bolted/Riveted
Is the Shell Insulated?	Yes
Type of Insulation:	spray on foam
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	20.00
Length (ft):	
Width (ft):	
Diameter (ft):	72.00
Other Dimension	
Description:	Height (From Ground to Dome Top)
Value:	32.15
Units:	foot
Fill Method:	Bottom Pipe
Description (if other):	
Maximum Design Fill Rate:	
Units:	
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Domed vertical fixed roof tank
Roof Height (From Roof Bottom to Roof Top) (ft):	12.00
Roof Construction:	
Primary Seal Type:	
Secondary Seal Type:	
Total Number of Seals:	
Roof Support:	
Does the storage vessel have a Vapor Return Loop?	No

000000 E3305 (Storage Vessel)
Print Date: 9/15/2020

Does the storage vessel have a Conservation Vent?	No
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?	No
Comments:	It is repurposed to be a digester tank. It does not "breath to the atmosphere".

000000 E3306 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Tank
Design Capacity:	690,000
Units:	gallons
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	Yes
Shell Color:	Other
Description (if other):	stainless steel dome roof, concrete wall
Shell Condition:	
Paint Condition:	Good
Shell Construction:	Bolted/Riveted
Is the Shell Insulated?	Yes
Type of Insulation:	spray on foam
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	20.00
Length (ft):	
Width (ft):	
Diameter (ft):	72.00
Other Dimension	
Description:	Height (From Ground to Dome Top)
Value:	32.15
Units:	foot
Fill Method:	Bottom Pipe
Description (if other):	
Maximum Design Fill Rate:	
Units:	
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Domed vertical fixed roof tank
Roof Height (From Roof Bottom to Roof Top) (ft):	12.00
Roof Construction:	
Primary Seal Type:	
Secondary Seal Type:	
Total Number of Seals:	
Roof Support:	
Does the storage vessel have a Vapor Return Loop?	No

000000 E3306 (Storage Vessel)
Print Date: 9/15/2020

Does the storage vessel have a Conservation Vent?	No
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?	No
Comments:	It is repurposed to be a digester tank. It does not "breath to the atmosphere".

000000 E3307 (Other Equipment)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Equipment Type:	NA
Capacity:	900.00
Units:	SCFM
Description:	

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:

Consists of :
Iron Sponge Desulphurization Vessels and
Carbon Filtersfor digester gas pre-treatment prior to combustion in the CHP Engines or Enclosed Flare

000000 E3308 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	Dungs (OR EQUAL)
Model:	GF 40150 (OR EQUAL)
Equipment Type:	Particulate matter filter
Capacity:	2.70
Units:	other units
Description:	ft2

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:

Filter designed for installation in interior gas lines and compressed air lines to protect downstream fittings. Filter element made of random laid nonwoven polypropylene fabric and metal support frame with pore width of 50 µm or less. Dust, chips and rust as well as other physical gas-accompanying materials and fouling are retained by the random laid nonwoven fabric. If the dust storage capacity is exceeded or if there is an excessive pressure difference, the filter loses its protective function.

000000 E3309 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	Dungs (OR EQUAL)
Model:	GF 40150 (OR EQUAL)
Equipment Type:	Particulate matter filter
Capacity:	2.70
Units:	other units
Description:	ft2

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:

Filter designed for installation in interior gas lines and compressed air lines to protect downstream fittings. Filter element made of random laid nonwoven polypropylene fabric and metal support frame with pore width of 50 µm or less. Dust, chips and rust as well as other physical gas-accompanying materials and fouling are retained by the random laid nonwoven fabric. If the dust storage capacity is exceeded or if there is an excessive pressure difference, the filter loses its protective function.

000000 E3801 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Solids Only
Storage Vessel Type:	Tank
Design Capacity:	690,000
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:	Bolted/Riveted
Is the Shell Insulated?	
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	24.00
Length (ft):	
Width (ft):	
Diameter (ft):	65.00
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Other
Description (if other):	Top pipe with turndown to mid tank level
Maximum Design Fill Rate:	800.00
Units:	gal/min
Does the storage vessel have a roof or an open top?	Roof
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?	

000000 E3801 (Storage Vessel)
Print Date: 9/15/2020

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:

Roof type - Geodesic Dome
Roof height (from roof bottom to roof top) - 3 ft
Roof construction - Aluminum

000000 E3802 (Stationary Reciprocating Engine)
Print Date: 9/15/2020

Make:	GE Jenbacher
Manufacturer:	AB Energy
Model:	J612 GS - F25
Maximum Rated Gross Heat Input (MMBtu/hr):	14.85
Class:	Lean Burn
Description:	
Duty:	Other
Description:	Combined heat and power unit
Minimum Load Range (%):	
Maximum Load Range (%):	
Stroke:	4-stroke
Power Output (BHP):	2649.00
Electric Output(KW):	1900.00
Compression Ratio:	12.5
Ignition Type:	Spark
Description:	
Engine Speed (RPM):	1500.0
Engine Exhaust Temperature (°F):	450.0
Air to Fuel Ratio at Peak Load:	
Ratio Basis:	
Lambda Factor (scfm/scfm):	
Brake Specific Fuel Consumption at Peak Load (Btu/BHP-hr):	5482.0
Output Type:	Cogeneration
Heat to Power Ratio:	1
Is the Engine Using a Turbocharger?	(●) Yes ( ) No
Is the Engine Using an Aftercooler?	( ) Yes (●) No

Is the Engine Using (check all that apply):

A Prestratified Charge (PSC)	☐	A NOx Converter	☑
Air to Fuel Adjustment (AF)	☑	Ignition Timing Retard	☐
Low Emission Combustion	☑	Non-Selective Catalytic Retard (NSCR)	☐
Other	☑		

Description:	Selective Catalytic Reduction (SCR)

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:

a. Engine Class (Lean Burn, Rich Burn or Other):Lean burn
b. Engine Model Year:J612 GS - F25
c. Date of Manufacture:2018
d. EPA Certification:Not Available.
Engines are not EPA certificated from GEJ.
However, on both engines you will find an additional type plate for USA EPA -stationary application.
The EPA certificate is only needed for non-stationary application.
e. Engine Family:Internal combustion

000000 E3802 (Stationary Reciprocating Engine)
Print Date: 9/15/2020

f. Engine Volume (liter/cyl):N.12 cylinders 74,85 liter/cyl
g. Engine Serial No.:1353135

Brake Specific Fuel Consumption is provided for 1040 btu/scf. The engine data sheet lists 5605 btu/bhp-hr for 530 btu/ht and 5512 btu/bhp-hr for 916 btu/scf.

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

000000 E3803 (Stationary Reciprocating Engine)
Print Date: 9/15/2020

Make:	GE Jenbacher
Manufacturer:	AB Energy
Model:	J612 GS - F25
Maximum Rated Gross Heat Input (MMBtu/hr):	14.85
Class:	Lean Burn
Description:	
Duty:	Other
Description:	Combined heat and power unit
Minimum Load Range (%):	
Maximum Load Range (%):	
Stroke:	4-stroke
Power Output (BHP):	2649.00
Electric Output(KW):	1900.00
Compression Ratio:	12.5
Ignition Type:	Spark
Description:	
Engine Speed (RPM):	1500.0
Engine Exhaust Temperature (°F):	450.0
Air to Fuel Ratio at Peak Load:	
Ratio Basis:	
Lambda Factor (scfm/scfm):	
Brake Specific Fuel Consumption at Peak Load (Btu/BHP-hr):	5482.0
Output Type:	Cogeneration
Heat to Power Ratio:	1
Is the Engine Using a Turbocharger?	(●) Yes ( ) No
Is the Engine Using an Aftercooler?	( ) Yes (●) No

Is the Engine Using (check all that apply):

A Prestratified Charge (PSC)	☐	A NOx Converter	☑
Air to Fuel Adjustment (AF)	☑	Ignition Timing Retard	☐
Low Emission Combustion	☑	Non-Selective Catalytic Retard (NSCR)	☐
Other	☑		

Description:	Selective Catalytic Reduction (SCR)

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:

a. Engine Class (Lean Burn, Rich Burn or Other):Lean burn
b. Engine Model Year:J612 GS - F25
c. Date of Manufacture:2018
d. EPA Certification:Not Available.
Engines are not EPA certificated from GEJ.
However, on both engines you will find an additional type plate for USA EPA -stationary application.
The EPA certificate is only needed for non-stationary application.
e. Engine Family:Internal combustion

000000 E3803 (Stationary Reciprocating Engine)
Print Date: 9/15/2020

f. Engine Volume (liter/cyl):N.12 cylinders 74,85 liter/cyl
g. Engine Serial No.:1353133

Brake Specific Fuel Consumption is provided for 1040 btu/scf. The engine data sheet lists 5605 btu/bhp-hr for 530 btu/ht and 5512 btu/bhp-hr for 916 btu/scf.

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

000000 E3804 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Tank
Design Capacity:	20,000
Units:	gallons
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	Yes
Shell Color:	Other
Description (if other):	Blue
Shell Condition:	
Paint Condition:	
Shell Construction:	Bolted/Riveted
Is the Shell Insulated?	Yes
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	20.00
Length (ft):	
Width (ft):	
Diameter (ft):	15.00
Other Dimension	
Description:	Liquid Height
Value:	15.00
Units:	ft
Fill Method:	Submerged
Description (if other):	
Maximum Design Fill Rate:	500.00
Units:	gal/min
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Domed external floating roof
Roof Height (From Roof Bottom to Roof Top) (ft):	3.00
Roof Construction:	
Primary Seal Type:	
Secondary Seal Type:	
Total Number of Seals:	
Roof Support:	
Does the storage vessel have a Vapor Return Loop?	Yes

000000 E3804 (Storage Vessel)
Print Date: 9/15/2020

Does the storage vessel have a Conservation Vent?	
Have you attached a diagram showing the location and/or the configuration of this equipment?	Yes
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	No
Comments:	Roof type - Geodesic Dome Roof height (from roof bottom to roof top) - 3 ft Roof construction - Aluminum

000000 E3805 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Both Solids and Liquids
Storage Vessel Type:	Tank
Design Capacity:	300,000
Units:	gallons
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	Yes
Shell Color:	Other
Description (if other):	Blue
Shell Condition:	Light Rust
Paint Condition:	Good
Shell Construction:	Bolted/Riveted
Is the Shell Insulated?	No
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Cylindrical
Shell Height (From Ground to Roof Bottom) (ft):	30.00
Length (ft):	
Width (ft):	
Diameter (ft):	45.00
Other Dimension	
Description:	liquid height
Value:	25.00
Units:	ft
Fill Method:	Other
Description (if other):	Top pipe with turndown to mid tank level, siphon l
Maximum Design Fill Rate:	500.00
Units:	gal/min
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Domed external floating roof
Roof Height (From Roof Bottom to Roof Top) (ft):	3.00
Roof Construction:	
Primary Seal Type:	
Secondary Seal Type:	
Total Number of Seals:	
Roof Support:	
Does the storage vessel have a Vapor Return Loop?	Yes
Does the storage vessel	

000000 E3805 (Storage Vessel)
Print Date: 9/15/2020

Does the storage vessel have a Conservation Vent?	
Have you attached a diagram showing the location and/or the configuration of this equipment?	Yes
Have you attached any manuf.'s data or specifications to aid the Dept. in its review of this application?	No
Comments:	Roof type - Geodesic Dome Roof height (from roof bottom to roof top) - 3 ft Roof construction - Aluminum

000000 E3808 (Boiler)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	Cleaver Brooks
Model:	CBLE
Maximum Rated Gross Heat Input (MMBtu/hr - HHV):	6.04
Boiler Type:	Water Tube
Utility Type:	Non-Utility
Output Type:	Water Only
Steam Output (lb/hr):	
Fuel Firing Method:	
Description (if other):	
Draft Type:	
Heat Exchange Type:	Indirect

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

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

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

Yes

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

No

Comments:

000000 E3809 (Emergency Generator)
Print Date: 9/15/2020

Make:	Generac
Manufacturer:	Generac
Model:	SG-230
Maximum rated Gross Heat Input (MMBtu/hr-HHV):	2.89
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:	Lean burn engine;368 HP mechanical output Information in this table is based on fuel: natural gas Engine Model Year: 2018 Date of Manufacture: 2018 EPA Certification: JGNXB14.22C1- 043 Engine Family: JGNXB14.22C1 Engine Volume (liter/cyl): 6 cylinders; 14.17 L/cyl Engine Serial No.: not available

000000 E3810 (Storage Vessel)
Print Date: 9/15/2020

What type of contents is this storage vessel equipped to contain by design?	Liquids Only
Storage Vessel Type:	Tank
Design Capacity:	6,000
Units:	gallons
Ground Location:	Above Ground
Is the Shell of the Equipment Exposed to Sunlight?	Yes
Shell Color:	White
Description (if other):	
Shell Condition:	Light Rust
Paint Condition:	Good
Shell Construction:	Welded
Is the Shell Insulated?	No
Type of Insulation:	
Insulation Thickess (in):	
Thermal Conductivity of Insulation [(BTU)(in)(hr)(ft2)(deg F)]:	
Shape of Storage Vessel:	Rectangular
Shell Height (From Ground to Roof Bottom) (ft):	8.33
Length (ft):	17.67
Width (ft):	8.00
Diameter (ft):	8.00
Other Dimension	
Description:	
Value:	
Units:	
Fill Method:	Pipe
Description (if other):	
Maximum Design Fill Rate:	
Units:	gal/min
Does the storage vessel have a roof or an open top?	Roof
Roof Type:	Horizontal fixed roof tank
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?	Yes

000000 E3810 (Storage Vessel)
Print Date: 9/15/2020

Does the storage vessel have a Conservation Vent?	Yes
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?	No
Comments:	

000000 E3811 (Other Equipment)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Equipment Type:	6000 Gallon Diesel Tank Dispenser
Capacity:	6,000.00
Units:	gallons
Description:	

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:

000000 CD20 (Scrubber (Other))
Print Date: 9/15/2020

Make:	Bionomics
Manufacturer:	Bionomics Industries
Model:	Mist Scrubber
Scrubber Type:	Other
Description:	Wet scrubber with two parallel trains
Is the Scrubber Used for Particulate Control?	(●) Yes ( ) No
Is the Scrubber Used for Gas Control?	(●) Yes ( ) No
Is the Scrubber Equipped with a Mist Eliminator?	(●) Yes ( ) No
Minimum Pump Discharge Pressure (in. H20):	
Maximum Pump Discharge Pressure (in. H20):	
Method of Monitoring Pump Discharge Pressure:	N/A (no recirculation)
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	N/A (no recirculation)
Minimum Scrubber Medium Inlet Pressure (in. H20):	2.00
Minimum Operating Liquid Flow Rate (gpm):	1.00
Maximum Operating Liquid Flow Rate (gpm):	3.00
Method of Monitoring Liquid Flow Rate:	Rotameter
Minimum Operating Gas Flow Rate (acfm):	23,000.00
Maximum Operating Gas Flow Rate (acfm):	26,000.00
Method of Monitoring Gas Flow Rate:	None.
Minimum Operating Pressure Drop (in. H20):	2.00
Maximum Operating Pressure Drop (in. H20):	4.00
Method of Monitoring Pressure Drop:	Pressure Indicator Gauge
Relative Direction of the Gas-Liquid Flow:	Counter-Current
Description:	
Number of Plates:	
Type of Plates:	
Spacing between Plates (in.):	
Maximum Inlet Gas Temperature (°F):	-10.0
Maximum Outlet Gas Temperature (°F):	110.0
Inlet Particle Grain Loading (gr/dscf):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	2
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	none.
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:	The above information applies to each of the two individual, parallel towers.

000000 CD21 (Biofilter)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Maximum Air Flow Rate to Biofilter (acfm):	400.0
Maximum Temperature of Vapor Stream to Biofilter (°F):	10.00
Minimum Temperature of Vapor Stream to Biofilter (°F):	110.00
Minimum Moisture Content of Vapor Stream to Biofilter (%):	50.0
Bed Composition:	17% Leaf Compost, 83% soft wood/wood chips
Type of Adsorbate:	leaf compost/woodchips
Bed Height:	3.00
Bed Length:	10.00
Bed Width:	16.00
Units:	Feet
Other Bed Dimension:	
Value:	
Units:	
Minimum Pressure Drop Across Biofilter (in. H20):	4.000
Maximum Pressure Drop Across Biofilter (in. H20):	8.000
Bed Activity (pH):	7.5
Method Used to Maintain Bed Moisture:	induct spray nozzle and surface irrigation.
Method Used to Maintain Bed Activity:	none
Method Used to Maintain Bed Temperature:	none
Method Used to Reactivate Biofilter Material:	Replacement

000000 CD21 (Biofilter)
Print Date: 9/15/2020

Method Used to Determine When Biofilter Should be Reactivated:	Pressure drop greater than 8 inches
Method used to Dispose of Biofilter Material?	Normal trash disposal
Is the Biofilter Covered?	○ Yes ● No
Is the Biofilter Heated?	○ Yes ● 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:	none
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:	System to have two fans (1 operational/1 standby) for continuous operation. The biofilter is sectioned into two cells to allow for operation during media changeout.

000000 CD22 (Adsorber)
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Adsorber Type:	FR
Description:	Dual Bed Carbon Adsorber
Maximum Gas Flow Rate to Adsorber (acfm):	8200.0
Maximum Temperature of Vapor Stream to Adsorber (°F):	95.00
Minimum Temperature of Vapor Stream to Adsorber (°F):	45.00
Minimum Moisture Content of Vapor Stream to Adsorber (%):	50.0
Type of Adsorbant:	carbon
Bed Height:	3.00
Bed Length:	
Bed Width:	
Units:	Feet
Other Bed Dimension:	Diameter
Value:	10.00
Units:	feet
Minimum Pressure Drop Across Adsorbant (in. H20):	6.000
Maximum Pressure Drop Across Adsorber (in. H20):	8.000
Total Weight of Adsorbant (lbs):	16300.0
Total Weight of Adsorbant When Saturated (lbs):	19000.0
Maximum Adsorbant Capacity (lbs Adsorbate/lbs Adsorbant):	0.16
Minimum Adsorbant Capacity (lbs Adsorbate/lbs Adsorbant):	
Set-up Type:	Parallel

Method of Determining Breakthrough (check all that apply):

Continuous Emissions Monitor (CEM):	☐
Replacement By Weight:	☐
Periodic Testing:	☑
Sampling Frequency:	Once every three months for the first year
Sampling Device:	grain grabber
Other:	☑
Description:	replacement by H2S breakthrough.
Minimum Concentration at Breakthrough (ppmvd):	
Handling Method of Saturated Adsorbant:	Regenerated on-site
Method of Regeneration:	water wash

000000 CD22 (Adsorber)
Print Date: 9/15/2020

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:	rapid differential pressure drop increase
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:	There are two fans for redundency. Septage discharge into the scum thickeners, and the scum thickning systems are both batch operations. Carbon tower maintanence will be limited to times between operations, whenever possible.

000000 CD23 (Scrubber (Multi-Stage))
Print Date: 9/15/2020

Make:	NA
Manufacturer:	NA
Model:	NA
Number of Stages:	2
Is the Scrubber Used for Particulate Control?	○ Yes ● No
Is the Scrubber Used for Gas Control?	● Yes ○ No
Is the Scrubber Equipped with a Mist Eliminator?	● Yes ○ No
Minimum Pump Discharge Pressure (in. H20):	840.00
Maximum Pump Discharge Pressure (in. H20):	999.99
Method of Monitoring Pump Discharge Pressure:	pressure indicator
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	
Minimum Scrubber Medium Inlet Pressure (in. H20):	2.00
Minimum Operating Liquid Flow Rate (gpm):	400.00
Maximum Operating Liquid Flow Rate (gpm):	1,000.00
Method of Monitoring Liquid Flow Rate:	calibration column
Minimum Operating Gas Flow Rate (acfm):	40,000.00
Maximum Operating Gas Flow Rate (acfm):	55,000.00
Method of Monitoring Gas Flow Rate:	
Minimum Operating Pressure Drop (in. H20):	10.00
Maximum Operating Pressure Drop (in. H20):	15.00
Method of Monitoring Pressure Drop:	differential pressure gauge on each tower
Relative Direction of the Gas-Liquid Flow:	Counter-Current
Description:	
Maximum Inlet Gas Temperature (°F):	45.0
Maximum Outlet Gas Temperature (°F):	95.0
Inlet Particle Grain Loading (gr/dscf):	
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:	none
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

000000 CD23 (Scrubber (Multi-Stage))
Print Date: 9/15/2020

Comments: two-stage operation to be reduced to one-stage

000000 CD201 (Scrubber (Other))
Print Date: 9/15/2020

Make:	Bionomics
Manufacturer:	Bionomics Industries
Model:	Mist Scrubber
Scrubber Type:	Other
Description:	Wet scrubber with two parallel trains
Is the Scrubber Used for Particulate Control?	(●) Yes ( ) No
Is the Scrubber Used for Gas Control?	(●) Yes ( ) No
Is the Scrubber Equipped with a Mist Eliminator?	(●) Yes ( ) No
Minimum Pump Discharge Pressure (in. H20):	
Maximum Pump Discharge Pressure (in. H20):	
Method of Monitoring Pump Discharge Pressure:	N/A (no recirculation)
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	N/A (no recirculation)
Minimum Scrubber Medium Inlet Pressure (in. H20):	2.00
Minimum Operating Liquid Flow Rate (gpm):	1.00
Maximum Operating Liquid Flow Rate (gpm):	3.00
Method of Monitoring Liquid Flow Rate:	Rotameter
Minimum Operating Gas Flow Rate (acfm):	23,000.00
Maximum Operating Gas Flow Rate (acfm):	26,000.00
Method of Monitoring Gas Flow Rate:	None.
Minimum Operating Pressure Drop (in. H20):	2.00
Maximum Operating Pressure Drop (in. H20):	4.00
Method of Monitoring Pressure Drop:	Pressure Indicator Gauge
Relative Direction of the Gas-Liquid Flow:	Counter-Current
Description:	
Number of Plates:	
Type of Plates:	
Spacing between Plates (in.):	
Maximum Inlet Gas Temperature (°F):	-10.0
Maximum Outlet Gas Temperature (°F):	110.0
Inlet Particle Grain Loading (gr/dscf):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	2
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	none.
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: The above information applies to each of the two individual, parallel towers.

000000 CD1001 (Biofilter)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Maximum Air Flow Rate to Biofilter (acfm):	120000.0
Maximum Temperature of Vapor Stream to Biofilter (°F):	110.00
Minimum Temperature of Vapor Stream to Biofilter (°F):	45.00
Minimum Moisture Content of Vapor Stream to Biofilter (%):	75.0
Bed Composition:	Organic/Inorganic
Type of Adsorbate:	Hydrogen Sulfide
Bed Height:	9.00
Bed Length:	57.58
Bed Width:	19.00
Units:	Feet
Other Bed Dimension:	Number of cells each with above bed dimensions
Value:	8.00
Units:	N/A
Minimum Pressure Drop Across Biofilter (in. H20):	1.000
Maximum Pressure Drop Across Biofilter (in. H20):	12.000
Bed Activity (pH):	2.0
Method Used to Maintain Bed Moisture:	Pre-humidification & In-bed irrigation
Method Used to Maintain Bed Activity:	Proper irrigation & automatic nutrient addition
Method Used to Maintain Bed Temperature:	Pre-stage heating coil
Method Used to Reactivate Biofilter Material:	Innoculation

000000 CD1001 (Biofilter)
Print Date: 9/15/2020

Method Used to Determine When Biofilter Should be Reactivated:	Performance Monitoring
Method used to Dispose of Biofilter Material?	Landfill
Is the Biofilter Covered?	(●) Yes ( ) No
Is the Biofilter Heated?	( ) Yes (●) No
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-permitted Sources):	5
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Routine maintenance & Visual inspection of instruments
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:	Bed dimensions are for one cell. Biofilter is made up of eight cells.

000000 CD1002 (Biofilter)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Maximum Air Flow Rate to Biofilter (acfm):	120000.0
Maximum Temperature of Vapor Stream to Biofilter (°F):	110.00
Minimum Temperature of Vapor Stream to Biofilter (°F):	45.00
Minimum Moisture Content of Vapor Stream to Biofilter (%):	75.0
Bed Composition:	Organic/Inorganic
Type of Adsorbate:	Hydrogen Sulfide
Bed Height:	9.00
Bed Length:	57.58
Bed Width:	19.00
Units:	Feet
Other Bed Dimension:	Number of cells each with above bed dimensions
Value:	8.00
Units:	N/A
Minimum Pressure Drop Across Biofilter (in. H20):	1.000
Maximum Pressure Drop Across Biofilter (in. H20):	12.000
Bed Activity (pH):	2.0
Method Used to Maintain Bed Moisture:	Pre-humidification & In-bed irrigation
Method Used to Maintain Bed Activity:	Proper irrigation & automatic nutrient addition
Method Used to Maintain Bed Temperature:	Pre-stage heating coil
Method Used to Reactivate Biofilter Material:	Innoculation

000000 CD1002 (Biofilter)
Print Date: 9/15/2020

Method Used to Determine When Biofilter Should be Reactivated:	Performance Monitoring
Method used to Dispose of Biofilter Material?	Landfill
Is the Biofilter Covered?	(●) Yes ( ) No
Is the Biofilter Heated?	( ) Yes (●) No
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-permitted Sources):	5
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Routine maintenance & Visual inspection of instruments
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:	Bed dimensions are for one cell. Biofilter is made up of eight cells.

000000 CD3201 (Scrubber (Other))
Print Date: 9/15/2020

Make:	Komline Sandersen
Manufacturer:	
Model:	
Scrubber Type:	Spray Tower
Description:	
Is the Scrubber Used for Particulate Control?	(●) Yes ( ) No
Is the Scrubber Used for Gas Control?	(●) Yes ( ) No
Is the Scrubber Equipped with a Mist Eliminator?	( ) Yes (●) No
Minimum Pump Discharge Pressure (in. H20):	415.20
Maximum Pump Discharge Pressure (in. H20):	
Method of Monitoring Pump Discharge Pressure:	Pressure Gage/Low Pressure Switch
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	
Minimum Scrubber Medium Inlet Pressure (in. H20):	415.20
Minimum Operating Liquid Flow Rate (gpm):	150.00
Maximum Operating Liquid Flow Rate (gpm):	300.00
Method of Monitoring Liquid Flow Rate:	Flow meter
Minimum Operating Gas Flow Rate (acfm):	
Maximum Operating Gas Flow Rate (acfm):	3,500.00
Method of Monitoring Gas Flow Rate:	None
Minimum Operating Pressure Drop (in. H20):	
Maximum Operating Pressure Drop (in. H20):	2.00
Method of Monitoring Pressure Drop:	None- Open Spray Tower
Relative Direction of the Gas-Liquid Flow:	Counter-Current
Description:	
Number of Plates:	
Type of Plates:	
Spacing between Plates (in.):	
Maximum Inlet Gas Temperature (°F):	220.0
Maximum Outlet Gas Temperature (°F):	160.0
Inlet Particle Grain Loading (gr/dscf):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Scrubber performance is monitored using pressure gages at dryer outlet and fan inlet and using exhaust temperature transmitter at fan inlet.
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

000000 CD3201 (Scrubber (Other))
Print Date: 9/15/2020

	○ Yes ● No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	○ Yes ● No
Comments:	Maximum pump discharge pressure - 1660.8 in H2O Minimum operating gas flow rate - 0 acfm minimum operating pressure drop - 0 in H2O

000000 CD3202 (Scrubber (Other))
Print Date: 9/15/2020

Make:	Komline Sandersen
Manufacturer:	
Model:	
Scrubber Type:	Spray Tower
Description:	
Is the Scrubber Used for Particulate Control?	(●) Yes ( ) No
Is the Scrubber Used for Gas Control?	(●) Yes ( ) No
Is the Scrubber Equipped with a Mist Eliminator?	( ) Yes (●) No
Minimum Pump Discharge Pressure (in. H20):	415.20
Maximum Pump Discharge Pressure (in. H20):	
Method of Monitoring Pump Discharge Pressure:	Pressure Gage/Low Pressure Switch
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	
Minimum Scrubber Medium Inlet Pressure (in. H20):	415.20
Minimum Operating Liquid Flow Rate (gpm):	150.00
Maximum Operating Liquid Flow Rate (gpm):	300.00
Method of Monitoring Liquid Flow Rate:	Flow meter
Minimum Operating Gas Flow Rate (acfm):	
Maximum Operating Gas Flow Rate (acfm):	3,500.00
Method of Monitoring Gas Flow Rate:	None
Minimum Operating Pressure Drop (in. H20):	
Maximum Operating Pressure Drop (in. H20):	2.00
Method of Monitoring Pressure Drop:	None- Open Spray Tower
Relative Direction of the Gas-Liquid Flow:	Counter-Current
Description:	
Number of Plates:	
Type of Plates:	
Spacing between Plates (in.):	
Maximum Inlet Gas Temperature (°F):	220.0
Maximum Outlet Gas Temperature (°F):	160.0
Inlet Particle Grain Loading (gr/dscf):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Scrubber performance is monitored using pressure gages at dryer outlet and fan inlet and using exhaust temperature transmitter at fan inlet.
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?	

000000 CD3202 (Scrubber (Other))
Print Date: 9/15/2020

	○ Yes ● No
Have you attached a diagram showing the location and/or configuration of this control apparatus?	○ Yes ● No
Comments:	Maximum pump discharge pressure - 1660.8 in H2O Minimum operating gas flow rate - 0 acfm minimum operating pressure drop - 0 in H2O

000000 CD3203 (Scrubber (Other))
Print Date: 9/15/2020

Make:	Komline Sandersen
Manufacturer:	
Model:	
Scrubber Type:	Spray Tower
Description:	
Is the Scrubber Used for Particulate Control?	(●) Yes ( ) No
Is the Scrubber Used for Gas Control?	(●) Yes ( ) No
Is the Scrubber Equipped with a Mist Eliminator?	( ) Yes (●) No
Minimum Pump Discharge Pressure (in. H20):	415.20
Maximum Pump Discharge Pressure (in. H20):	
Method of Monitoring Pump Discharge Pressure:	Pressure Gage/Low Pressure Switch
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	
Minimum Scrubber Medium Inlet Pressure (in. H20):	415.20
Minimum Operating Liquid Flow Rate (gpm):	150.00
Maximum Operating Liquid Flow Rate (gpm):	300.00
Method of Monitoring Liquid Flow Rate:	Flow meter
Minimum Operating Gas Flow Rate (acfm):	
Maximum Operating Gas Flow Rate (acfm):	3,500.00
Method of Monitoring Gas Flow Rate:	None
Minimum Operating Pressure Drop (in. H20):	
Maximum Operating Pressure Drop (in. H20):	2.00
Method of Monitoring Pressure Drop:	None- Open Spray Tower
Relative Direction of the Gas-Liquid Flow:	Counter-Current
Description:	
Number of Plates:	
Type of Plates:	
Spacing between Plates (in.):	
Maximum Inlet Gas Temperature (°F):	220.0
Maximum Outlet Gas Temperature (°F):	160.0
Inlet Particle Grain Loading (gr/dscf):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Scrubber performance is monitored using pressure gages at dryer outlet and fan inlet and using exhaust temperature transmitter at fan inlet.
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?	

000000 CD3203 (Scrubber (Other))
Print Date: 9/15/2020

Yes ○ No ●

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

Yes ○ No ●

Comments:

Maximum pump discharge pressure - 1660.8 in H2O
Minimum operating gas flow rate - 0 acfm
minimum operating pressure drop - 0 in H2O

000000 CD3204 (Scrubber (Venturi))
Print Date: 9/15/2020

Make:	
Manufacturer:	Komline Sandersen
Model:	
Is the Scrubber Used for Particulate Control?	(●) Yes ( ) No
Is the Scrubber Used for Gas Control?	(●) Yes ( ) No
Is the Scrubber Equipped with a Mist Eliminator?	(●) Yes ( ) No
Minimum Pump Discharge Pressure (in. H20):	
Maximum Pump Discharge Pressure (in. H20):	
Method of Monitoring Pump Discharge Pressure:	Pressure Gage/ Low Pressure Switch
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	
Minimum Scrubber Medium Inlet Pressure (in. H20):	415.20
Minimum Operating Liquid Flow Rate (gpm):	5.00
Maximum Operating Liquid Flow Rate (gpm):	10.00
Method of Monitoring Liquid Flow Rate:	Flow Meter
Minimum Operating Gas Flow Rate (acfm):	
Maximum Operating Gas Flow Rate (acfm):	1,000.00
Method of Monitoring Gas Flow Rate:	None
Minimum Operating Pressure Drop (in. H20):	4.00
Maximum Operating Pressure Drop (in. H20):	7.00
Method of Monitoring Pressure Drop:	Differential pressure transmitter
Relative Direction of the Gas-Liquid Flow:	Co-Current
Description:	
Throat Length (in):	12.00
Throat Diameter (in):	4.00
Maximum Inlet Gas Temperature (°F):	160.0
Maximum Outlet Gas Temperature (°F):	110.0
Inlet Particle Grain Loading (gr/dscf):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Pressure Gage at dryer outlet and fan inlet monitor the entire scrubbing system.
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

000000 CD3204 (Scrubber (Venturi))
Print Date: 9/15/2020

Comments:	Minimum operating gas flow rate = 0 acfm

000000 CD3205 (Scrubber (Venturi))
Print Date: 9/15/2020

Make:	
Manufacturer:	Komline Sandersen
Model:	
Is the Scrubber Used for Particulate Control?	(●) Yes ( ) No
Is the Scrubber Used for Gas Control?	(●) Yes ( ) No
Is the Scrubber Equipped with a Mist Eliminator?	(●) Yes ( ) No
Minimum Pump Discharge Pressure (in. H20):	
Maximum Pump Discharge Pressure (in. H20):	
Method of Monitoring Pump Discharge Pressure:	Pressure Gage/ Low Pressure Switch
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	
Minimum Scrubber Medium Inlet Pressure (in. H20):	415.20
Minimum Operating Liquid Flow Rate (gpm):	5.00
Maximum Operating Liquid Flow Rate (gpm):	10.00
Method of Monitoring Liquid Flow Rate:	Flow Meter
Minimum Operating Gas Flow Rate (acfm):	
Maximum Operating Gas Flow Rate (acfm):	1,000.00
Method of Monitoring Gas Flow Rate:	None
Minimum Operating Pressure Drop (in. H20):	4.00
Maximum Operating Pressure Drop (in. H20):	7.00
Method of Monitoring Pressure Drop:	Differential pressure transmitter
Relative Direction of the Gas-Liquid Flow:	Co-Current
Description:	
Throat Length (in):	12.00
Throat Diameter (in):	4.00
Maximum Inlet Gas Temperature (°F):	160.0
Maximum Outlet Gas Temperature (°F):	110.0
Inlet Particle Grain Loading (gr/dscf):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Pressure Gage at dryer outlet and fan inlet monitor the entire scrubbing system.
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

000000 CD3205 (Scrubber (Venturi))
Print Date: 9/15/2020

Comments:	Minimum operating gas flow rate = 0 acfm

000000 CD3206 (Scrubber (Venturi))
Print Date: 9/15/2020

Make:	
Manufacturer:	Komline Sandersen
Model:	
Is the Scrubber Used for Particulate Control?	(●) Yes ( ) No
Is the Scrubber Used for Gas Control?	(●) Yes ( ) No
Is the Scrubber Equipped with a Mist Eliminator?	(●) Yes ( ) No
Minimum Pump Discharge Pressure (in. H20):	
Maximum Pump Discharge Pressure (in. H20):	
Method of Monitoring Pump Discharge Pressure:	Pressure Gage/ Low Pressure Switch
Minimum Pump Current (amps):	
Maximum Pump Current (amps):	
Method of Monitoring Pump Current:	
Minimum Scrubber Medium Inlet Pressure (in. H20):	415.20
Minimum Operating Liquid Flow Rate (gpm):	5.00
Maximum Operating Liquid Flow Rate (gpm):	10.00
Method of Monitoring Liquid Flow Rate:	Flow Meter
Minimum Operating Gas Flow Rate (acfm):	
Maximum Operating Gas Flow Rate (acfm):	1,000.00
Method of Monitoring Gas Flow Rate:	None
Minimum Operating Pressure Drop (in. H20):	4.00
Maximum Operating Pressure Drop (in. H20):	7.00
Method of Monitoring Pressure Drop:	Differential pressure transmitter
Relative Direction of the Gas-Liquid Flow:	Co-Current
Description:	
Throat Length (in):	12.00
Throat Diameter (in):	4.00
Maximum Inlet Gas Temperature (°F):	160.0
Maximum Outlet Gas Temperature (°F):	110.0
Inlet Particle Grain Loading (gr/dscf):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Pressure Gage at dryer outlet and fan inlet monitor the entire scrubbing system.
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

000000 CD3206 (Scrubber (Venturi))
Print Date: 9/15/2020

Comments:	Minimum operating gas flow rate = 0 acfm

000000 CD3207 (Electrostatic Precipitator)
Print Date: 9/15/2020

Make:	
Manufacturer:	Geoenergy
Model:	E-Tube WESP 1005-13
Unit Type:	TB
Description:	
Number of Stages:	1
Method of Operation:	Wet
Method of Cleaning:	Other
Description:	Flush
Capacity (acfm):	2,600.0
Maximum Gas Velocity (ft/sec):	7
Type of Rectifier:	Tube
Maximum Inlet Gas Stream Moisture (%):	99.99
Maximum Inlet Gas Stream Temperature (°F):	110.0
Number of Plates:	13
Number of Fields:	1
Aspect Ratio:	6.00
Plate Surface Area (ft²):	170.0
Spacing Between Plates (in):	3.25
Cross Sectional Area of Precipitator (ft²):	7.0
Treatment Time (sec.):	
Maximum Corona Power (Volt):	28.00
Minimum Apparent Migration Velocity (ft/min):	24.60
Maximum Particle Resistivity (ohm-cm):	
Average Particle Size (Micrometers):	
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Secondary Voltage Readings
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:	Treatment time = 0.082 sec Maximum Corona Power = 28 kVa

000000 CD3207 (Electrostatic Precipitator)
Print Date: 9/15/2020

Average Particle Size = Less than 10 micrometers

000000 CD3208 (Biofilter)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Maximum Air Flow Rate to Biofilter (acfm):	3000.0
Maximum Temperature of Vapor Stream to Biofilter (°F):	110.00
Minimum Temperature of Vapor Stream to Biofilter (°F):	55.00
Minimum Moisture Content of Vapor Stream to Biofilter (%):	98.0
Bed Composition:	Biosorbens
Type of Adsorbate:	
Bed Height:	8.00
Bed Length:	27.80
Bed Width:	11.00
Units:	Feet
Other Bed Dimension:	
Value:	
Units:	
Minimum Pressure Drop Across Biofilter (in. H20):	0.900
Maximum Pressure Drop Across Biofilter (in. H20):	8.000
Bed Activity (pH):	8.5
Method Used to Maintain Bed Moisture:	Humidification/Irrigation
Method Used to Maintain Bed Activity:	Not required
Method Used to Maintain Bed Temperature:	Process Air Temperature
Method Used to Reactivate Biofilter Material:	Reactivation not required

000000 CD3208 (Biofilter)
Print Date: 9/15/2020

Method Used to Determine When Biofilter Should be Reactivated:	Reactivation not required
Method used to Dispose of Biofilter Material?	Municipal landfill
Is the Biofilter Covered?	(●) Yes ( ) No
Is the Biofilter Heated?	( ) Yes (●) No
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	Media Analysis
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:

000000 CD3209 (Particulate Filter (Cartridge))
Print Date: 9/15/2020

Make:	Modu-Kleen
Manufacturer:	
Model:	Series 343 Model 600A
Number of Cartridges:	6
Size of Cartridges (ft²):	100.00
Total Cartridge Area (ft²):	600.00
Maximum Design Temperature Capability (°F):	150.0
Maximum Design Air Flow Rate (acfm):	3,000.0
Maximum Air Flow Rate to Filter Area Ratio:	5.00
Minimum Operating Pressure Drop (in. H2O):	2.00
Maximum Operating Pressure Drop (in. H2O):	8.00
Maximum Inlet Temperature (°F):	150.0
Maximum Operating Exhaust Gas Flow Rate (acfm):	2,400.0
Method for Determining When Cartridge Replacement is Required:	Continuous high differential pressure
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	High pressure switch
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:

000000 CD3210 (Particulate Filter (Cartridge))
Print Date: 9/15/2020

Make:	Modu-Kleen
Manufacturer:	
Model:	Series 343 Model 600A
Number of Cartridges:	6
Size of Cartridges (ft²):	100.00
Total Cartridge Area (ft²):	600.00
Maximum Design Temperature Capability (°F):	150.0
Maximum Design Air Flow Rate (acfm):	3,000.0
Maximum Air Flow Rate to Filter Area Ratio:	5.00
Minimum Operating Pressure Drop (in. H2O):	2.00
Maximum Operating Pressure Drop (in. H2O):	8.00
Maximum Inlet Temperature (°F):	150.0
Maximum Operating Exhaust Gas Flow Rate (acfm):	2,400.0
Method for Determining When Cartridge Replacement is Required:	Continuous high differential pressure
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	High pressure switch
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:

000000 CD3211 (Particulate Filter (Cartridge))
Print Date: 9/15/2020

Make:	
Manufacturer:	Modu-Kleen Series 343
Model:	Model 400
Number of Cartridges:	4
Size of Cartridges (ft²):	100.00
Total Cartridge Area (ft²):	400.00
Maximum Design Temperature Capability (°F):	150.0
Maximum Design Air Flow Rate (acfm):	2,000.0
Maximum Air Flow Rate to Filter Area Ratio:	5.00
Minimum Operating Pressure Drop (in. H2O):	2.00
Maximum Operating Pressure Drop (in. H2O):	8.00
Maximum Inlet Temperature (°F):	150.0
Maximum Operating Exhaust Gas Flow Rate (acfm):	1,000.0
Method for Determining When Cartridge Replacement is Required:	Continuous differential pressure
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	High Pressure Switch
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:

000000 CD3212 (Adsorber)
Print Date: 9/15/2020

Make:	
Manufacturer:	
Model:	
Adsorber Type:	FN
Description:	
Maximum Gas Flow Rate to Adsorber (acfm):	90850.0
Maximum Temperature of Vapor Stream to Adsorber (°F):	120.00
Minimum Temperature of Vapor Stream to Adsorber (°F):	
Minimum Moisture Content of Vapor Stream to Adsorber (%):	
Type of Adsorbant:	Mixed - Lignite, Coconut
Bed Height:	3.00
Bed Length:	
Bed Width:	
Units:	Feet
Other Bed Dimension:	Diameter
Value:	38.00
Units:	feet
Minimum Pressure Drop Across Adsorbant (in. H20):	10.500
Maximum Pressure Drop Across Adsorber (in. H20):	15.000
Total Weight of Adsorbant (lbs):	85000.0
Total Weight of Adsorbant When Saturated (lbs):	
Maximum Adsorbant Capacity (lbs Adsorbate/lbs Adsorbant):	43.00
Minimum Adsorbant Capacity (lbs Adsorbate/lbs Adsorbant):	33.00
Set-up Type:	Single

Method of Determining Breakthrough (check all that apply):

Continuous Emissions Monitor (CEM):	☐
Replacement By Weight:	☐
Periodic Testing:	☐
Sampling Frequency:	
Sampling Device:	
Other:	☑
Description:	H2S handheld
Minimum Concentration at Breakthrough (ppmvd):	50.00
Handling Method of Saturated Adsorbant:	Disposed of off-site
Method of Regeneration:	

000000 CD3212 (Adsorber)
Print Date: 9/15/2020

Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	
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:	Total Weight of Adsorbant when saturated = 126,300 lbs.

000000 CD3300 (Biofilter)
Print Date: 9/15/2020

Make:	EcoFilter EF92
Manufacturer:	Bio-Air
Model:	Single Bed Scrubber
Maximum Air Flow Rate to Biofilter (acfm):	3000.0
Maximum Temperature of Vapor Stream to Biofilter (°F):	99.00
Minimum Temperature of Vapor Stream to Biofilter (°F):	59.00
Minimum Moisture Content of Vapor Stream to Biofilter (%):	60.0
Bed Composition:	EcoBase Media
Type of Adsorbate:	EcoBase Media
Bed Height:	8.00
Bed Length:	
Bed Width:	
Units:	Feet
Other Bed Dimension:	Diameter
Value:	9.00
Units:	Feet
Minimum Pressure Drop Across Biofilter (in. H20):	0.100
Maximum Pressure Drop Across Biofilter (in. H20):	1.500
Bed Activity (pH):	2.0
Method Used to Maintain Bed Moisture:	Automated Intermittent Irrigation
Method Used to Maintain Bed Activity:	Air flow, foul air concentration, nutrient addition (if required)
Method Used to Maintain Bed Temperature:	None
Method Used to Reactivate Biofilter Material:	Add Activated Sludge

000000 CD3300 (Biofilter)
Print Date: 9/15/2020

Method Used to Determine When Biofilter Should be Reactivated:	Drain pH measurement
Method used to Dispose of Biofilter Material?	Not Applicable
Is the Biofilter Covered?	(●) Yes ( ) No
Is the Biofilter Heated?	( ) Yes (●) No
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-permitted Sources):	
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	H2S removal measurement
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:	A counter current bio scrubber is used with the Bio Trickling Filter. Min Scrubber medium inlet pressure: As required to maintain airflow Min operating liquid flow rate: 33 gpm Max operating liquid flow rate: 43 gpm method of monitoring flow rate: Flow Transmitter Min operating gas flow rate: 300 acfm Max operating gas flow rate: 3000 acfm Alternative method to demonstrate control apparatus is operating properly: PLC Monitoring/Alarms

000000 CD3301 (Adsorber)
Print Date: 9/15/2020

Make:	
Manufacturer:	General Carbon, See box
Model:	
Adsorber Type:	FN
Description:	
Maximum Gas Flow Rate to Adsorber (acfm):	3000.0
Maximum Temperature of Vapor Stream to Adsorber (°F):	100.00
Minimum Temperature of Vapor Stream to Adsorber (°F):	40.00
Minimum Moisture Content of Vapor Stream to Adsorber (%):	30.0
Type of Adsorbant:	Carbon
Bed Height:	2.00
Bed Length:	20.00
Bed Width:	8.00
Units:	Feet
Other Bed Dimension:	
Value:	
Units:	
Minimum Pressure Drop Across Adsorbant (in. H20):	
Maximum Pressure Drop Across Adsorber (in. H20):	
Total Weight of Adsorbant (lbs):	11250.0
Total Weight of Adsorbant When Saturated (lbs):	
Maximum Adsorbant Capacity (lbs Adsorbate/lbs Adsorbant):	0.22
Minimum Adsorbant Capacity (lbs Adsorbate/lbs Adsorbant):	0.18
Set-up Type:	Parallel

Method of Determining Breakthrough (check all that apply):

Continuous Emissions Monitor (CEM):	☐
Replacement By Weight:	☐
Periodic Testing:	☐
Sampling Frequency:	
Sampling Device:	
Other:	☑
Description:	Daily Monitoring with handheld monitor
Minimum Concentration at Breakthrough (ppmvd):	5.00
Handling Method of Saturated Adsorbant:	Disposed of off-site
Method of Regeneration:	

000000 CD3301 (Adsorber)
Print Date: 9/15/2020

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

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:

000000 CD3302 (Adsorber)
Print Date: 9/15/2020

Make:	
Manufacturer:	General Carbon, See box
Model:	
Adsorber Type:	FN
Description:	
Maximum Gas Flow Rate to Adsorber (acfm):	3000.0
Maximum Temperature of Vapor Stream to Adsorber (°F):	100.00
Minimum Temperature of Vapor Stream to Adsorber (°F):	40.00
Minimum Moisture Content of Vapor Stream to Adsorber (%):	30.0
Type of Adsorbant:	Carbon
Bed Height:	2.00
Bed Length:	20.00
Bed Width:	8.00
Units:	Feet
Other Bed Dimension:	
Value:	
Units:	
Minimum Pressure Drop Across Adsorbant (in. H20):	
Maximum Pressure Drop Across Adsorber (in. H20):	
Total Weight of Adsorbant (lbs):	11250.0
Total Weight of Adsorbant When Saturated (lbs):	
Maximum Adsorbant Capacity (lbs Adsorbate/lbs Adsorbant):	0.22
Minimum Adsorbant Capacity (lbs Adsorbate/lbs Adsorbant):	0.18
Set-up Type:	Parallel

Method of Determining Breakthrough (check all that apply):

Continuous Emissions Monitor (CEM):	☐
Replacement By Weight:	☐
Periodic Testing:	☐
Sampling Frequency:	
Sampling Device:	
Other:	☑
Description:	Daily Monitoring with handheld monitor
Minimum Concentration at Breakthrough (ppmvd):	5.00
Handling Method of Saturated Adsorbant:	Disposed of off-site
Method of Regeneration:	

000000 CD3302 (Adsorber)
Print Date: 9/15/2020

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

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:

000000 CD3801 (Flare)
Print Date: 9/15/2020

Make:	Varec Biogas
Manufacturer:	Varec Enclosed Flare
Model:	244E
Type:	EN
Minimum Residence Time (sec):	
Maximum Rated Gross Heat Input (MMBtu/hr):	32.80
Auxilliary Fuel:	Natural gas
Description:	
Method of Pilot Flame Monitoring:	Flame detect sensor
Monitoring Location:	Remote
Automatic Gas Shutoff After Loss of Flame?	(●) Yes ( ) No
Automatic Reignition After Loss of Flame?	(●) Yes ( ) No
Minimum Gas Flow Rate (acfm):	900.0
Minimum Operating Temperature (ºF):	1,400.0
Minimum Heat Content at Burner Tip (Btu/ft³):	
Flare Operation Type:	
Does Flare have smokeless design?	( ) Yes (●) No
Is Flare equipped with flame retainer?	(●) Yes ( ) No
Is Flare equipped with flame arrestor?	(●) Yes ( ) No
Is Flare equipped with LEL monitor?	(●) Yes ( ) No
Flare Stack Diameter (inches):	
Lower Heat Content of source gas (BTU/scf):	600
Lower Heat Content of Supplemental Fuel (BTU/scf):	1000
Destruction and Removal Efficency (%):	98.00
How was Efficency determined?	Vendor provided
Maximum Number of Sources Using this Apparatus as a Control Device (Include Permitted and Non-Permitted Sources):	4
Alternative Method to Demonstrate Control Apparatus is Operating Properly:	visual
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

● Yes ○ No

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

● Yes ○ No

Comments:

000000 CD3802 (Selective Catalytic Reduction)
Print Date: 9/15/2020

Make:	Hug Engineering
Manufacturer:	Hug Engineering Combikat DeNOx System
Model:	EM66.120
Minimum Temperature at Catalyst Bed (°F):	518.0
Maximum Temperature at Catalyst Bed (°F):	932.0
Minimum Temperature at Reagent Injection Point (°F):	518.0
Maximum Temperature at Reagent Injection Point (°F):	932.0
Type of Reagent:	Urea
Description:	
Chemical Formula of Reagent:	32.5% Urea water solution
Minimum Reagent Charge Rate (gpm):	1.1
Maximum Reagent Charge Rate (gpm):	1.4
Minimum Concentration of Reagent in Solution (% Volume):	32.50
Minimum NOx to Reagent Mole Ratio:	0.95
Maximum NOx to Reagent Mole Ratio:	1.10
Maximum Anticipated Ammonia Slip (ppm):	8.000
Type of Catalyst:	V2O5
Volume of Catalyst (ft^3):	38.60
Form of Catalyst:	Sheet layers
Anticipated Life of Catalyst:	16000.00
Units:	hours
Have you attached a catalyst replacement schedule?	○ Yes ● No
Method of Determining Breakthrough:	See commnents below
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:	See commnents below
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

000000 CD3802 (Selective Catalytic Reduction)
Print Date: 9/15/2020

Comments:

Combi-Kat system includes:
2 layers of combiKat® reduction catalysts SCR
1 layers of combiKat® oxidation catalysts OCT

Method of Determining Breakthrough:
The system is sized using an internal software to determine the breakthrough performance. This software considers the input process parameters (exhaust gas flow, exhaust gas temperature, mass of pollutants to be removed, etc.), and provides a general sizing. In addition to this general sizing, the experience from other installations are considered to define the system in a detail way.

Alternate Method to Demonstrate CD is Operating Properly.
The supplied system is autoregulated, therefore there are 2 redundant electrochemical cells for reading NO (non-NOx) and to maintain the correct dosage of urea. In case any inconsistencies/errors are detected in the measurement system, a special alarm is generated. A portable Analyzer (text type/Ecom) allows verification of emissions on site.

000000 CD3803 (Selective Catalytic Reduction)
Print Date: 9/15/2020

Make:	Hug Engineering
Manufacturer:	Hug Engineering Combikat DeNOx System
Model:	EM66.120
Minimum Temperature at Catalyst Bed (°F):	518.0
Maximum Temperature at Catalyst Bed (°F):	932.0
Minimum Temperature at Reagent Injection Point (°F):	518.0
Maximum Temperature at Reagent Injection Point (°F):	932.0
Type of Reagent:	Urea
Description:	
Chemical Formula of Reagent:	32.5% Urea water solution
Minimum Reagent Charge Rate (gpm):	1.1
Maximum Reagent Charge Rate (gpm):	1.4
Minimum Concentration of Reagent in Solution (% Volume):	32.50
Minimum NOx to Reagent Mole Ratio:	0.95
Maximum NOx to Reagent Mole Ratio:	1.10
Maximum Anticipated Ammonia Slip (ppm):	8.000
Type of Catalyst:	V2O5
Volume of Catalyst (ft^3):	38.60
Form of Catalyst:	Sheet layers
Anticipated Life of Catalyst:	16000.00
Units:	hours
Have you attached a catalyst replacement schedule?	○ Yes ● No
Method of Determining Breakthrough:	See commnents below
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:	See commnents below
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

000000 CD3803 (Selective Catalytic Reduction)
Print Date: 9/15/2020

Comments:

Combi-Kat system includes:
2 layers of combiKat® reduction catalysts SCR
1 layers of combiKat® oxidation catalysts OCT

Method of Determining Breakthrough:
The system is sized using an internal software to determine the breakthrough performance. This software considers the input process parameters (exhaust gas flow, exhaust gas temperature, mass of pollutants to be removed, etc.), and provides a general sizing. In addition to this general sizing, the experience from other installations are considered to define the system in a detail way.

Alternate Method to Demonstrate CD is Operating Properly.
The supplied system is autoregulated, therefore there are 2 redundant electrochemical cells for reading NO (non-NOx) and to maintain the correct dosage of urea. In case any inconsistencies/errors are detected in the measurement system, a special alarm is generated. A portable Analyzer (text type/Ecom) allows verification of emissions on site.

000000 CD3804 (Oxidizer (Catalytic))
Print Date: 9/15/2020

Make:	Hug Engineering
Manufacturer:	Hug Engineering CombiKat DeNOx system
Model:	EM66.120
Minimum Inlet Temperature (°F):	300.0
Maximum Inlet Temperature (°F)	1076.0
Minimum Outlet Temperature (°F)	660.0
Maximum Outlet Temperature (°F):	1010.0
Minimum Residence Time (sec)	0.02
Fuel Type:	Other
Description:	BioGas
Maximum Rated Gross Heat Input (MMBtu/hr):	3.20
Minimum Pressure Drop Across Catalyst (psi):	0.060
Maximum Pressure Drop Across Catalyst (psi):	0.080
Catalyst Material:	Ceramic
Form of Catalyst:	Other
Description:	466 mm x 466 mm x 3.5"
Minimum Expected Life of Catalyst:	16000.00
Units:	hours
Volume of Catalyst (ft^3):	4.08
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:	See comments below
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:	Method of Determining Breakthrough: The system is sized using an internal software to determine the breakthrough performance. This software considers the input process parameters (exhaust gas flow, exhaust gas temperature, mass of pollutants to be removed, etc.), and provides a general sizing. In addition to this general sizing, the experience

from other installations are considered to define the system in a detail way.

Alternate Method to Demonstrate CD is Operating Properly.
A portable Analyzer (text type/Ecom) allows verification of emissions on site.

000000 CD3805 (Oxidizer (Catalytic))
Print Date: 9/15/2020

Make:	Hug Engineering
Manufacturer:	Hug Engineering CombiKat DeNOx system
Model:	EM66.120
Minimum Inlet Temperature (°F):	300.0
Maximum Inlet Temperature (°F)	1076.0
Minimum Outlet Temperature (°F)	660.0
Maximum Outlet Temperature (°F):	1010.0
Minimum Residence Time (sec)	0.02
Fuel Type:	Other
Description:	BioGas
Maximum Rated Gross Heat Input (MMBtu/hr):	3.20
Minimum Pressure Drop Across Catalyst (psi):	0.060
Maximum Pressure Drop Across Catalyst (psi):	0.080
Catalyst Material:	Ceramic
Form of Catalyst:	Other
Description:	466 mm x 466 mm x 3.5"
Minimum Expected Life of Catalyst:	16000.00
Units:	hours
Volume of Catalyst (ft^3):	4.08
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:	See comments below
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:	Method of Determining Breakthrough: The system is sized using an internal software to determine the breakthrough performance. This software considers the input process parameters (exhaust gas flow, exhaust gas temperature, mass of pollutants to be removed, etc.), and provides a general sizing. In addition to this general sizing, the experience

from other installations are considered to define the system in a detail way.

Alternate Method to Demonstrate CD is Operating Properly.
A portable Analyzer (text type/Ecom) allows verification of emissions on site.

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1 OS1 (Primary Fuel)
Print Date: 9/15/2020

Is this fuel a blend?	No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	0.0100
Amount of Ash in Fuel (%):	0.01
Fuel Heating Value:	1,020.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	71.87
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	18.25
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1 OS2 (Primary Fuel)
Print Date: 9/15/2020

Is this fuel a blend?	No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	0.0100
Amount of Ash in Fuel (%):	0.01
Fuel Heating Value:	1,020.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	71.87
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	18.25
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1 OS5 (Primary Fuel)
Print Date: 9/15/2020

Is this fuel a blend?	No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	0.0100
Amount of Ash in Fuel (%):	0.01
Fuel Heating Value:	1,020.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	71.87
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	18.25
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS101 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Waste
Fuel Type:	Other
Description (if other):	Digester Gas
Amount of Sulfur in Fuel (%):	0.0025
Amount of Ash in Fuel (%):	
Fuel Heating Value:	608.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	405.40
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	405.40
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS101 (Waste Fuel Constituents)
Print Date: 9/15/2020

Waste Fuel Constituent	Concentration (ppmw)	Amount by Weight (%)
Arsenic compounds		
Beryllium compounds		
Cadmium compounds		
Chromium compounds		
Lead Emissions		
Mercury		
Nickel		
Nitrogen		
PCBs		
Sulfur, Total Reduced		
Total Halogens		

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS101 (Efficiency Table - CD3802)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO	100.00	83.00	83.00
HAP (Total)			
NOx	100.00	88.00	88.00
Other (Total)			
Pb			
PM-10	100.00	90.00	90.00
PM-2.5	100.00	90.00	90.00
SO2			
TSP	100.00	90.00	90.00
VOC (Total)	100.00	25.00	25.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS102 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Waste
Fuel Type:	Other
Description (if other):	Digester Gas
Amount of Sulfur in Fuel (%):	0.0025
Amount of Ash in Fuel (%):	
Fuel Heating Value:	608.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	405.40
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	405.40
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS102 (Efficiency Table - CD3803)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO	100.00	83.00	83.00
HAP (Total)			
NOx	100.00	88.00	88.00
Other (Total)			
Pb			
PM-10	100.00	90.00	90.00
PM-2.5	100.00	90.00	90.00
SO2			
TSP	100.00	90.00	90.00
VOC (Total)	100.00	25.00	25.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS103 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	1,040.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	237.00
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	237.00
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS103 (Efficiency Table - CD3802)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
Pb			
PM-10	100.00	90.00	90.00
PM-2.5	100.00	90.00	90.00
SO2			
TSP	100.00	90.00	90.00
VOC (Total)	100.00	63.00	63.00
CO	100.00	77.00	77.00
HAP (Total)			
NOx	100.00	86.00	86.00
Other (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS104 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	1,040.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	237.00
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	237.00
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS104 (Efficiency Table - CD3803)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO	100.00	77.00	77.00
HAP (Total)			
NOx	100.00	86.00	86.00
Other (Total)			
Pb			
PM-10	100.00	90.00	90.00
PM-2.5	100.00	90.00	90.00
SO2			
TSP	100.00	90.00	90.00
VOC (Total)	100.00	63.00	63.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS105 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	690,000
Units:	gallons
Density of Contents:	45.000
Units:	lb/ft^3
Estimated Minimum Storage Temperature (deg F):	1,400.000
Estimated Maximum Storage Temperature (deg F):	1,600.000
Estimated Average Storage Temperature (deg F):	1,500.000
Does the Content Contain VOCs?:	Yes
Organic Density:	87.400
Units:	lb/ft^3
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	405.4000
Units:	MMft^3
Estimated Maximum Annual Throughput:	405.4000
Units:	MMft^3

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS105 (Efficiency Table - CD3801)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2	100.00	98.00	98.00
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS106 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	690,000
Units:	gallons
Density of Contents:	45.000
Units:	lb/ft^3
Estimated Minimum Storage Temperature (deg F):	1,400.000
Estimated Maximum Storage Temperature (deg F):	1,600.000
Estimated Average Storage Temperature (deg F):	1,500.000
Does the Content Contain VOCs?:	Yes
Organic Density:	87.400
Units:	lb/ft^3
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	405.4000
Units:	MMft^3
Estimated Maximum Annual Throughput:	405.4000
Units:	MMft^3

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS106 (Efficiency Table - CD3801)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2	100.00	98.00	98.00
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS107 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	690,000
Units:	gallons
Density of Contents:	45.000
Units:	lb/ft^3
Estimated Minimum Storage Temperature (deg F):	1,400.000
Estimated Maximum Storage Temperature (deg F):	1,600.000
Estimated Average Storage Temperature (deg F):	1,500.000
Does the Content Contain VOCs?:	Yes
Organic Density:	87.400
Units:	lb/ft^3
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	405.4000
Units:	MMft^3
Estimated Maximum Annual Throughput:	405.4000
Units:	MMft^3

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS107 (Efficiency Table - CD3801)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2	100.00	98.00	98.00
TSP			
VOC (Total)			
CO			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS108 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	690,000
Units:	gallons
Density of Contents:	45.000
Units:	lb/ft^3
Estimated Minimum Storage Temperature (deg F):	1,400.000
Estimated Maximum Storage Temperature (deg F):	1,600.000
Estimated Average Storage Temperature (deg F):	1,500.000
Does the Content Contain VOCs?:	Yes
Organic Density:	87.400
Units:	lb/ft^3
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	405.4000
Units:	MMft^3
Estimated Maximum Annual Throughput:	405.4000
Units:	MMft^3

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS108 (Efficiency Table - CD3801)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2	100.00	98.00	98.00
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS109 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	690,000
Units:	gallons
Density of Contents:	45.000
Units:	lb/ft^3
Estimated Minimum Storage Temperature (deg F):	1,400.000
Estimated Maximum Storage Temperature (deg F):	1,600.000
Estimated Average Storage Temperature (deg F):	1,500.000
Does the Content Contain VOCs?:	Yes
Organic Density:	87.400
Units:	lb/ft^3
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	405.4000
Units:	MMft^3
Estimated Maximum Annual Throughput:	405.4000
Units:	MMft^3

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS109 (Efficiency Table - CD3801)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2	100.00	98.00	98.00
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS110 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	690,000
Units:	gallons
Density of Contents:	45.000
Units:	lb/ft^3
Estimated Minimum Storage Temperature (deg F):	1,400.000
Estimated Maximum Storage Temperature (deg F):	1,600.000
Estimated Average Storage Temperature (deg F):	1,500.000
Does the Content Contain VOCs?:	Yes
Organic Density:	87.400
Units:	lb/ft^3
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	405.4000
Units:	MMft^3
Estimated Maximum Annual Throughput:	405.4000
Units:	MMft^3

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS110 (Efficiency Table - CD3801)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2	100.00	98.00	98.00
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS111 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	690,000
Units:	gallons
Density of Contents:	45.000
Units:	lb/ft^3
Estimated Minimum Storage Temperature (deg F):	1,400.000
Estimated Maximum Storage Temperature (deg F):	1,600.000
Estimated Average Storage Temperature (deg F):	1,500.000
Does the Content Contain VOCs?:	Yes
Organic Density:	87.400
Units:	lb/ft^3
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	405.4000
Units:	MMft^3
Estimated Maximum Annual Throughput:	405.4000
Units:	MMft^3

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS111 (Efficiency Table - CD3801)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2	100.00	98.00	98.00
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS112 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	690,000
Units:	gallons
Density of Contents:	45.000
Units:	lb/ft^3
Estimated Minimum Storage Temperature (deg F):	1,400.000
Estimated Maximum Storage Temperature (deg F):	1,600.000
Estimated Average Storage Temperature (deg F):	1,500.000
Does the Content Contain VOCs?:	Yes
Organic Density:	87.400
Units:	lb/ft^3
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	405.4000
Units:	MMft^3
Estimated Maximum Annual Throughput:	405.4000
Units:	MMft^3

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2 OS112 (Efficiency Table - CD3801)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2	100.00	98.00	98.00
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U3 OS201 (Blended Fuels)
Print Date: 9/15/2020

Fuel Category	Fuel Type	Description	Amount in Blend (%)	Amount of Sulfur in Fuel (%)	Amount of Ash in Fuel (%)	Fuel Heating Value	Units
Commercial	Natural gas	Natural gas		0.0001		1,040.00	BTU/scf
Waste	Other	Digester gas		0.0025		608.00	BTU/scf

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U3 OS201 (Primary Fuel)
Print Date: 9/15/2020

Is this fuel a blend?	Yes
Fuel Category:	
Fuel Type:	
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	
Units:	
Estimated Maximum Amount of Fuel Burned Annually:	
Units:	
Estimated Actual Amount of Fuel Burned Annually:	
Units:	
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	maximum amount of natural gas and digester gas burned annual are 25.10 MMft3 and 42.94 MMft3, respectively.

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U4 OS301 (Fuel Information Table)
Print Date: 9/15/2020

Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	1,040.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	0.09
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	
Units:	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U21 OS1 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Wastewater influent		Liquid		Yes				lb/gal

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U21 OS1 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	400.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U21 OS1 (Efficiency Table - CD21)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			
Hydrogen Sulfide	100.00	90.00	90.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U21 OS2 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
wastewater influent		Liquid						

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U21 OS2 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	400.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U21 OS2 (Efficiency Table - CD21)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
VOC (Total)			
Hydrogen Sulfide	100.00	80.00	80.00
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U22 OS1 (Efficiency Table - CD22)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U23 OS1 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Gasoline (RVP 9)
CAS Number:	8006A-61-9
Is the Content Under Pressure?	No
Pressure (PSIG):	
Physical State:	Liquid
Estimated Average Working Volume:	6,000
Units:	gallons
Density of Contents:	
Units:	lb/gal
Estimated Minimum Storage Temperature (deg F):	70.000
Estimated Maximum Storage Temperature (deg F):	70.000
Estimated Average Storage Temperature (deg F):	53.000
Does the Content Contain VOCs?:	Yes
Organic Density:	
Units:	lb/gal
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	24,000.0000
Units:	gallons
Estimated Maximum Annual Throughput:	48,000.0000
Units:	gallons

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U24 OS1 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	#2 Fuel oil
CAS Number:	68476-30-2
Is the Content Under Pressure?	
Pressure (PSIG):	
Physical State:	Liquid
Estimated Average Working Volume:	6,000
Units:	gallons
Density of Contents:	6.943
Units:	lb/gal
Estimated Minimum Storage Temperature (deg F):	70.000
Estimated Maximum Storage Temperature (deg F):	70.000
Estimated Average Storage Temperature (deg F):	70.000
Does the Content Contain VOCs?:	Yes
Organic Density:	
Units:	lb/gal
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	
Units:	
Estimated Maximum Annual Throughput:	
Units:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS1 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	100.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS1 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Other (Total)		Sludge		Yes				

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS1 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)	100.00	98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)	100.00	98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS2 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	100.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS2 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Other (Total)		Sludge		Yes				

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS2 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)	100.00	98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)	100.00	98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Other (Total)		Sludge		Yes				

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	3,500.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Efficiency Table - CD3201)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	98.00	98.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Efficiency Table - CD3204)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Efficiency Table - CD3207)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	80.00	80.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Efficiency Table - CD3208)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)		98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Efficiency Table - CD3300)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS7 (Efficiency Table - CD3301)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		50.00	50.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	3,500.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Other (Total)		Sludge		Yes				

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Efficiency Table - CD3202)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	98.00	98.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Efficiency Table - CD3205)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Efficiency Table - CD3207)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	80.00	80.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Efficiency Table - CD3208)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)		98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Efficiency Table - CD3300)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS8 (Efficiency Table - CD3301)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		50.00	50.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Other (Total)		Sludge		Yes				

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	3,500.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Efficiency Table - CD3203)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	98.00	98.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Efficiency Table - CD3206)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Efficiency Table - CD3207)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	80.00	80.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Efficiency Table - CD3208)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)		98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Efficiency Table - CD3300)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS9 (Efficiency Table - CD3301)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		50.00	50.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS13 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	2,000.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS14 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	2,000.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS16 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	
Units:	
Density of Contents:	
Units:	
Estimated Minimum Storage Temperature (deg F):	
Estimated Maximum Storage Temperature (deg F):	
Estimated Average Storage Temperature (deg F):	
Does the Content Contain VOCs?:	
Organic Density:	
Units:	
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	
Units:	
Estimated Maximum Annual Throughput:	
Units:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS16 (Efficiency Table - CD3209)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
SO2			
TSP	100.00	99.00	99.00
VOC (Total)			
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	99.00	99.00
PM-2.5	100.00	99.00	99.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS16 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)	100.00	98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)	100.00	98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS17 (Storage Vessel Content)
Print Date: 9/15/2020

Content Name:	Other (Total)
CAS Number:	
Is the Content Under Pressure?	
Pressure (PSIG):	
Physical State:	Sludge
Estimated Average Working Volume:	
Units:	
Density of Contents:	
Units:	
Estimated Minimum Storage Temperature (deg F):	
Estimated Maximum Storage Temperature (deg F):	
Estimated Average Storage Temperature (deg F):	
Does the Content Contain VOCs?:	
Organic Density:	
Units:	
Molecular Weight (Lbs/Lbs-Mole):	
Vapor Pressure at Average Storage Temperature (PSIA):	
Vapor Pressure at 70 deg F (mmHg):	
Estimated Average Annual Throughput:	
Units:	
Estimated Maximum Annual Throughput:	
Units:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS17 (Efficiency Table - CD3210)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	99.00	99.00
PM-2.5	100.00	99.00	99.00
SO2			
TSP	100.00	99.00	99.00
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS17 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)	100.00	98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)	100.00	98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS18 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	100.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS18 (Efficiency Table - CD3211)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS18 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)	100.00	98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)	100.00	98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS19 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Other (Total)		Sludge		Yes				

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS19 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	3,500.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS19 (Efficiency Table - CD3201)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	98.00	98.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS19 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)		98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS19 (Efficiency Table - CD3301)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		50.00	50.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS20 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Other (Total)		Sludge		Yes				

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS20 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	3,500.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS20 (Efficiency Table - CD3202)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	98.00	98.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS20 (Efficiency Table - CD3205)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS20 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)		98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS20 (Efficiency Table - CD3301)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		50.00	50.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS21 (Raw Material)
Print Date: 9/15/2020

Raw Material	CAS Number	Physical State	Molecular Weight (lbs/lbs-mole)	Does the Material Contain VOC?	Weight Fraction (%)	Vapor Pressure @ 70°F (mmHg)	Organic Density	Units
Other (Total)		Sludge		Yes				

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS21 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	3,500.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS21 (Efficiency Table - CD3203)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10	100.00	98.00	98.00
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS21 (Efficiency Table - CD3212)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)		98.00	98.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U111 OS21 (Efficiency Table - CD3301)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
Hydrogen Sulfide		98.00	98.00
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U112 OS1 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	
Units:	
Estimated Maximum Amount of Fuel Burned Annually:	
Units:	
Estimated Actual Amount of Fuel Burned Annually:	
Units:	
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U112 OS2 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	
Units:	
Estimated Maximum Amount of Fuel Burned Annually:	
Units:	
Estimated Actual Amount of Fuel Burned Annually:	
Units:	
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U112 OS3 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Commercial
Fuel Type:	#2 fuel oil
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	
Units:	
Estimated Maximum Amount of Fuel Burned Annually:	
Units:	
Estimated Actual Amount of Fuel Burned Annually:	
Units:	
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U112 OS4 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Commercial
Fuel Type:	#2 fuel oil
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	
Units:	
Estimated Maximum Amount of Fuel Burned Annually:	
Units:	
Estimated Actual Amount of Fuel Burned Annually:	
Units:	
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1001 OS1 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	88,000.00

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1001 OS1 (Efficiency Table - CD1001)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			
Hydrogen Sulfide	100.00	83.61	83.61
Toluene	100.00	46.15	46.15

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1001 OS1 (Efficiency Table - CD1002)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
VOC (Total)			
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1001 OS8 (Efficiency Table - CD1001)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1001 OS8 (Efficiency Table - CD1002)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1001 OS9 (Efficiency Table - CD1001)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1001 OS9 (Efficiency Table - CD1002)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1002 OS1 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	1,020.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	11.76
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	11.76
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U1002 OS2 (Fuel Information Table)
Print Date: 9/15/2020

Is this fuel a blend?	○ Yes ● No
Fuel Category:	Commercial
Fuel Type:	Natural gas
Description (if other):	
Amount of Sulfur in Fuel (%):	
Amount of Ash in Fuel (%):	
Fuel Heating Value:	1,020.00
Units:	BTU/scf
Estimated Maximum Amount of Fuel Burned Annually:	11.76
Units:	MMft^3/yr
Estimated Actual Amount of Fuel Burned Annually:	11.76
Units:	MMft^3/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2301 OS32 (Efficiency Table - CD23)
Print Date: 9/15/2020

Pollutant Category	Capture Efficiency (%)	Removal Efficiency (%)	Overall Efficiency (%)
CO			
HAP (Total)			
NOx			
Other (Total)			
Pb			
PM-10			
PM-2.5			
SO2			
TSP			
VOC (Total)			

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2301 OS32 (Scrubber Multi Stage - CD23)
Print Date: 9/15/2020

Stage	Liquid Recirculation Method	Liquid Being Used for Adsorption	Chemical Additive in Scrubbing Medium	Minimum Concentration of Chemical Additive	Maximum Concentration of Chemical Additive	How is the Activity of the Scrubbing Medium Maintained?	Maximum pH
1							
2							

	Min Ph	Max Oxi Re	Min Oxi Redu
	Minimum pH	**Maximum Oxidation Reduction Potential (mV)**	**Minimum Oxidation Reduction Potential (mV)**

50163 Camden County MUA Delaware # 1 WPCF BOP000000 U2303 OS1 (Other Equipment)
Print Date: 9/15/2020

Volume of Gas Discharged from this Source (acfm):	2.00

Attachment B

Title V Maximum Potential to Emit Calculations

Facility Name: Camden County Municipal Utilities Authority
Program Interest Number: 50163

Facility PTE from all Significant Source Operations (Tons per year)

	Primary						Secondary				
Source Categories	**VOC**	**NOx**	**CO**	**SO2**	**TSP**	**Other**	**PM10**	**PM2.5**	**Pb**	**HAPs**	**CO2e**
Emission Units Summary	32.59	28.17	52.73	4.73	5.15	NA	5.14	NA	NA	2.88	51180.18
Batch Process Summary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Group Summary	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Emissions from Significant Source Operations	**32.59**	**28.17**	**52.73**	**4.73**	**5.15**	**0.00**	**5.14**	**0.00**	**0.00**	**2.88**	**51180.18**

Emissions from all Insignificant Source Operations and Non-Source Fugitive Emissions (tons per year)

	Primary						**Secondary**			
Source Categories	**VOC**	**NOx**	**CO**	**SO2**	**TSP**	**Other**	**PM10**	**PM2.5**	**Pb**	**HAPs**
Estimate of Total Emissions from Insignificant Source Operations	**0.03**	**0.30**	**0.25**	**0.00**	**0.02**		**0.02**			**0.00**
Total Non-Source Fugitive Emissions	**11.52**									
	32.62	28.47	52.99	4.73	5.17	0.00	5.16	0.00	0.00	2.88

Pollutant	TPY
H2S	3.6536
HAPs	2.88

Facility Name: Camden County Municipal Utilities Authority

Program Interest Number: 50163

Emission Units PTE Summary[1]

tpy

Permit ID	Status	Status Date	EU ID	Emission Unit Description	CO	HAPs	Nox	Pb	PM-10	SO2	TSP	VOC	H2S	Acrolein	1,3-Butadiene	Ammonia	Formaldehyde	Acetaldehyde	Methane	GHG
GEN170001	Approved	8/3/2017	U3104	Used Oil Space Heater[5]			0.11			0.496										174.21
PCP040002	Renewed	10/27/2015	U2301	PTF Odor PTF Bldg odor control								4.9	2.83							
PCP040003	Renewed	3/14/2019	U20	Thickening and Dewatering Facilities									0.22							
PCP040004	Renewed	3/15/2019	U21	Junction Chamber Emissions to Biofilter									0.0066							
PCP040007	Renewed	10/27/2015	U22	Scum Area Ventilation									0.075							
PCP070004	Renewed	3/15/2019	U1	PTF Boiler Stack[4]	6.74		8.02		0.56	0.24	0.56	0.50								9,684
PCP150001	Renewed	9/4/2016	U111	Sludge Drying System		0.74			2.02	0.009	2.03	6.82	0.242					0.68		
PCP150001	Renewed	9/4/2016	U112	Thermal Oil Heaters	9.68		8.04		0.9	0.36	0.9	0.56								16389
PCP150002	Renewed	9/4/2016	U1001	Sludge handling biofilter system								4.22	0.28							
PCP150002	Renewed	9/4/2016	U1002	Two Natural Gas Boilers (Serving Biofilter Odor Control System)	2.54		0.964													4099
PCP180001	Approved	4/29/2019	U2	Two CHPs and Four Digester Tanks	33.11	2.14	9.93		1.4	3.62	1.4	13.97		0.05	0.026	1.02	2.07		28.87	19296
PCP180001	Approved	4/29/2019	U3	Dual Fuel Boiler	0.529		1.04		0.26		0.26									9
PCP180001	Approved	4/29/2019	U4	Emergency Gen Engine	0.137		0.068					0.033								1528
PCP970001	Renewed	12/27/2017	U2302	Stage II Vapor Control Gasoline Dispensing[2]								0.54								
PCP970002	Renewed	12/27/2017	U23	Gasoline Tank[2]								1.0								
Unknown			U24	Diesel Tank[3]								0.00095								
Unknown			U2303	Stage I Vapor Control Diesel Dispensing[3]								0.046								
Total Emissions from Significant Sources					**52.7**	**2.88**	**28.2**	**0.00**	**5.1**	**4.7**	**5.1**	**32.6**	**3.7**	**0.1**	**0.0**	**1.0**	**2.1**	**0.7**		51,180
Major Source Thresholds					100	25	25	10	100	100	100	25	NA	10	10	10	10	10		100,000
Fugitive Emission- Uncovered Liquid Processes												11.5								
IS Emission for Title V					0.25		0.30	0.000	0.023	0.0018	0.023	0.027								
Total (INCLUDING Fugitive and IS Emission)					53.0	2.9	28.5	0.00	5.2	4.7	5.2	44.1	3.7	0.1	0.0	1.0	2.1	0.7		

Notes:

1) PTE is obtained from all current PCPs except PCP 070004, PCP 970001 and PCP040002

2) PTE for PCP 970002 and PCP970001 is estimated

3) A diesel storage tank and diesel dispensing has been existing at the faclity since December 1996. This has been added here to complete the inventory. PTE for U24/U2303 are based on the worst case 5-year throughput, plus a 20% safety factor.

4) PTF Boiler No. 3 emissions are added in U1, and PTF Boiler No. 1 and 2 are revised to remove fuel oil usage related emissions. The facility has disconnected all fuel oil related storage and piping from all three boilers in PTF Building.

5) PTE for GEN170001 calculated based on AP-42 default emission factors. Only pollutants that are above reporting thresholds are included in PTE table.

Facility Name: Camden County Municipal Utilities Authority
Program Interest Number: 50163
Non-Source Fugitive Emissions

FG NJID	Description of Activity Causing Emission	Location Description	Reasonable Estimate of Emissions (tpy)								
			VOC (Total)	NOx	CO	SO	TSP (Total)	PM-10	Pb	HAPs (Total)	Other (Total)
FG1	Uncovered Liquid Processes	Throughout	11.520								
Total			11.520								

Notes:

1) Based on WATER9 model for maximum design scenario for 60 MGD flow (21,900 million gallons per year) for the influent concentration data for past 5 years (2015-2019)

Facility Name: Camden County Municipal Utilities Authority
Program Interest Number: 50163
Insignificant Source Emissions

IS NJID	Source/Group Description	Equipment Type	Location Description	Estimate of Emissions (tpy)								
				VOC (Total)	NOx	CO	SO	TSP (Total)	PM-10	Pb	HAPs (Total)	Other (Total)
IS1	Sodium Hypochlorite Tanks (<9000)	Storage Vessel	Throughout									
IS2	Sodium Hydroxide Tanks (<5750)	Storage Vessel	Throughout									
IS3	Heating Fuel Tanks (<8000)	Storage Vessel	Throughout	0.009								
IS4	Waste Oil Tanks (<1000)	Storage Vessel	Throughout	0.000								
IS5	VX 456 Pressroom Odor Control	Storage Vessel	Outside									
IS6	Sulfuric Acid Tank	Storage Vessel	Outside									
IS7	Diesel Tanks (<8000)	Storage Vessel	Throughout	0.001								
IS8	Hot Water Heaters (<360,000 BTU/hr)	Fuel Combustion Equipment (Other)	Service Building	0.017	0.300	0.252	0.002	0.023	0.023	0.000		
Total				0.027	0.300	0.252	0.002	0.023	0.023	0.000	0.000	0.000

External Combustion - Boilers and Heaters - Maximum Potential to Emit (Greenhouse Gases)

							Emissions (lb/hr)			Annual Emissions (lb/year)			Annual Emissions (tons/year)				Annual CO2e Emissions (tons/year)			
Emission Unit ID	Description	Design Heat Input Rating	Units	Annual Limit (Permitted)	Units	Max. Annual Hours (hr/yr)	CO2	CH4	N2O	CO2	CH4	N2O	CO2	CH4	N2O	total	CO2	CH4	N2O	Total
U3104	Used Oil Space Heater	0.34	MMBtu/hr			8760	39.8	0.0	0.0				174	3.28E-03	3.28E-04	174	174	0.08	0.10	174.38
U112 OS1	Thermal Oil Heater No. 1 Burning NG	15.5	MMBtu/hr			8760	1813.1	3.42E-02	0.0				7942	1.50E-01	1.50E-02	7942	7942	3.74	4.46	7949.79
U112 OS2	Thermal Oil Heater No. 2 Burning NG	15.5	MMBtu/hr			8760	1813.1	3.42E-02	0.0				7942	1.50E-01	1.50E-02	7942	7942	3.74	4.46	7949.79
U112 OS3	Thermal Oil Heater No. 1 burning FO	15.5	MMBtu/hr			200	2527.3	0.1	0.0				253	1.03E-02	2.05E-03	253	253	0.26	0.61	253.60
U112 OS4	Thermal Oil Heaters No. 2 burning FO	15.5	MMBtu/hr			200	2527.3	0.0	0.0				253	2.25E-04	4.50E-05	253	253	0.01	0.01	252.75
U1002	Biofilter boiler burning nG	4	MMBtu/hr			8760	467.9	0.0	0.0				2049	3.86E-02	3.86E-03	2049	2049	0.97	1.15	2051.56
U1002	Biofilter boiler burning nG	4	MMBtu/hr			8760	467.9	0.0	0.0				2049	3.86E-02	3.86E-03	2049	2049	0.97	1.15	2051.56
U1	Boiler 1 and 2 NG	17.400	MMBtu/hr	71.90	MMscf/yr	8,760				8629344.97	162.63	16.26	4,314.67	8.13E-02	8.13E-03	4315	4315	2.03	2.42	4,319
U1	Boiler 3 NG	10.461	MMBtu/hr			8,760				10719607.6	2.02E+02	2.02E+01	5359.803799	1.01E-01	1.01E-02	5360	5360	2.53	3.01	5,365

Default GHG Emission Factors and High Heat Values

			Emission Factor(kg/mmBtu)			Emission Factor(lb/mmBtu)		
Fuel Type	Default high heat value		CO2	CH4	N2O	CO2	CH4	N2O
Natural Gas	1.026E-03	mmBtu/scf	53.06	1.00E-03	1.00E-04	116.98	2.20E-03	2.20E-04
Fuel Oil # 2	0.138	mmBtu/gal	73.96	3.00E-03	6.00E-04	163.05	6.61E-03	1.32E-03
Digester Gas			52.07	3.20E-03	1.39E-03	114.79	7.05E-03	3.06E-03

Emission Factors			
CO2	CH4	N2O	
120018.71	2.26E+00	2.26E-01	lb/MMscf
22.50	9.13E-04	1.83E-04	lb/gal

Source: 40 CFR 98 Subpart C-1 and C-2

Global Warming Potential

CO2	1
CH4	25
N2O	298

Source: 40 CFR 98

Conversion

1 kg	2.204623 lb
1 ton	2000 lb

Camden County Municipal Utilities Authority
Camden, NJ
Potential to Emit Calculations for PTF Building Boiler No. 1 and 2

External Combustion - Boilers and Heaters - Maximum Potential to Emit (Criteria Pollutants)

						Maximum Hourly Emissions (lbs/hr)						Maximum Annual Emissions (tons/year)					
Description	**Design Heat Input Rating**	**Units**	**Allowable Flow**	**Unit**	**Max. Annual Hours (hr/yr)**	**CO**	**NOx**	**VOC**	**PM10**	**TSP**	**SO2**	**CO**	**NOx**	**VOC**	**PM10**	**PM2.5**	**SO2**
Boiler 1 operating NG	8.700	MMBtu/hr	71.90	MMscf/yr	8,760	0.69	0.82	0.06	0.05	0.05	0.05	3.02	3.59	0.26	0.22	0.22	0.22
Boiler 2 operating NG	8.700	MMBtu/hr	71.90	MMscf/yr	8,760	0.69	0.82	0.06	0.05	0.05	0.05	3.02	3.59	0.26	0.22	0.22	0.22
Total												**6.04**	**7.18**	**0.53**	**0.44**	**0.44**	**0.44**
PTE in permit PC 070004												***4.90***	***6.96***	***0.54***	***0.50***	***0.50***	***4.81***
						Maximum Annual Emissions (lbs/yr)						**Maximum Annual Emissions (tons/year)**					
	Allowable Flow	**Unit**				**CO**	**NOx**	**VOC**	**PM10**	**TSP**	**SO2**	**CO**	**NOx**	**VOC**	**PM10**	**PM2.5**	**SO2**
Boiler 1 and 2 operating NG	71.90	MMscf/yr				5930.51	7047.85	515.70	429.75	429.75	429.75	2.97	3.52	0.26	0.21	0.21	0.21
												2.97	***3.52***	***0.26***	***0.21***	***0.21***	***0.21***

Allowable NG flow 71.9 MMScf/yr

Natural gas heat content 1040 Btu/scf 0.00836538 mmscf/hr 73.3 MMScf/yr
0.00104 mmBtu/scf

Camden County Municipal Utilities Authority
Camden, NJ
Potential to Emit Calculations for PTF Building Boiler No. 3

External Combustion - Boilers and Heaters - Maximum Potential to Emit (Criteria Pollutants)

				Maximum Hourly Emissions (lbs/hr)						
Description	**Design Heat Input Rating**	**Units**	**Max. Annual Hours (hr/yr)**	**CO**	**NOx**	**VOC**	**PM10**	**PM2.5**	**SO2**	**Pb**
Cleaver Brooks Boiler No. 3	10.461	MMBtu/hr	8,760	0.86	1.03	0.06	0.08	0.08	0.01	5.13E-06
				Maximum Annual Emissions (tons/year)						
				CO	**NOx**	**VOC**	**PM10**	**PM2.5**	**SO2**	**Pb**
				3.77	4.49	0.25	0.34	0.34	0.03	2.25E-05

Natural gas heat content 1020 Btu/scf
0.00102 mmBtu/scf

Emission Factors for External Natural Gas Combustion (Criteria Pollutants)

Pollutant	**lb/mmcf**	**lb/MMBtu**
CO	84	8.24E-02
NOx	100	9.80E-02
Pb	5.00E-04	4.90E-07
SO2	0.6	5.88E-04
PM	7.6	7.45E-03
VOC	5.5	5.39E-03

Source: EPA. 2000. AP-42, Chapter 1.3: Fuel Oil Combustion. Available online at: http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s03.pdf [Accessed on April 21, 2016].

Note:

All sulfur in the fuel is assumed to be converted to SO2.

PM emission factor equal to sum of filterable and total condensible particulate matter.

Camden County Municipal Utilities Authority
Camden, NJ
Potential to Emit Calculations for PTF Building Boiler No. 3
Emission Factors for External Natural Gas Combustion (HAPs)

CAS	Pollutant		lb/mmcf	lb/MMBtu	PAH?	
Organic Compounds						
91-57-6	2-Methylnaphthalene		2.40E-05	2.35E-08	Yes	
56-49-5	3-Methylchloranthrene		9.00E-07	8.82E-10	Yes	
	7,12-Dimethylbenz(a)anthracene		8.00E-06	7.84E-09	Yes	
83-32-9	Acenaphthene		9.00E-07	8.82E-10	Yes	
203-96-8	Acenaphthylene		9.00E-07	8.82E-10	Yes	
120-12-7	Anthracene		1.20E-06	1.18E-09	Yes	
56-55-3	Benz(a)anthracene		9.00E-07	8.82E-10	Yes	
71-43-2	Benzene		2.10E-03	2.06E-06	No	
50-32-8	Benzo(a)pyrene		6.00E-07	5.88E-10	Yes	
205-99-2	Benzo(b)fluoranthene		9.00E-07	8.82E-10	Yes	
191-24-2	Benzo(g,h,i)perylene		6.00E-07	5.88E-10	Yes	
205-82-3	Benzo(k)fluoranthene		9.00E-07	8.82E-10	Yes	
218-01-9	Chrysene		9.00E-07	8.82E-10	Yes	
53-70-3	Dibenzo(a,h)anthracene		6.00E-07	5.88E-10	Yes	
25321-22-6	Dichlorobenzene		1.20E-03	1.18E-06	No	
206-44-0	Fluoranthene		3.00E-06	2.94E-09	Yes	
86-73-7	Fluorene		2.80E-06	2.75E-09	Yes	
50-00-0	Formaldehyde		7.50E-02	7.35E-05	No	
110-54-3	Hexane		1.80E+00	1.76E-03	No	
193-39-5	Indeno(1,2,3-cd)pyrene		9.00E-07	8.82E-10	Yes	
91-20-3	Naphthalene		6.10E-04	5.98E-07	No	*<--naphthalene is a PAH, but is regulated separately by the Clean Air A*
85-01-8	Phenanathrene		1.70E-05	1.67E-08	Yes	
129-00-0	Pyrene		5.00E-06	4.90E-09	Yes	
108-88-3	Toluene		3.40E-03	3.33E-06	No	
	Total PAHs		7.00E-05	6.86E-08		
Metals						
7440-38-2	Arsenic		2.00E-04	1.96E-07		
7440-41-7	Beryllium		6.00E-06	5.88E-09		
7440-43-9	Cadmium		1.10E-03	1.08E-06		
7440-47-3	Chromium		1.40E-03	1.37E-06		
7440-48-4	Cobalt		8.40E-05	8.24E-08		
7439-96-5	Manganese		3.80E-04	3.73E-07		
7439-97-6	Mercury		2.60E-04	2.55E-07		
7440-02-0	Nickel		2.10E-03	2.06E-06		
7782-49-2	Selenium		1.20E-05	1.18E-08		

Source: EPA. 1998. AP-42, Chapter 1.4: Natural Gas Combustion. Available online at: http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf [Accessed on April 21, 2016].

U24 Diesel Tank

U2303 Stage I Vapor Control Diesel Dispensing

	Annual Diesel Throughput (gallon)
2015	42499
2016	27631
2017	25531
2018	33159
2019	26311
Safety Factor	20%
Max Throughput[1]	50998

1 - Based on the max annual diesel throughput for the recent 5 years plus a 20% safety facto

U24 Diesel Tank - Based on TANKs model

Components	Working Loss	Breathing Loss	Total VOC Emissions (tpy)
Diesel	0.00046	0.000485	0.00095

U2303 Stage I Vapor Control Diesel Dispensing

Source	Max Throughput (gallon)		AP-42 Emission Factor		Total VOC Emissions (tpy)
	Units	Value	Units	VOC[2]	
Diesel Dispensing	gallons	50998	(lbs/1000 gal)	1.8	0.0459

2 - Emission Factors from AP-42 Chapter 5.2 for gasoline.

No emission factor available for diesel, and gasoline is more volatile than diesel.

Therefore, emission factor for gasoline is used for conservative estimation.

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	CCMUA Diesel Tank
City:	Camden
State:	New Jersey
Company:	CCMUA
Type of Tank:	Horizontal Tank
Description:	CCMUA Diesel Tank

Tank Dimensions

Shell Length (ft):	17.67
Diameter (ft):	8.00
Volume (gallons):	6,000.00
Turnovers:	8.50
Net Throughput(gal/yr):	50,998.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Philadelphia, Pennsylvania (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

CCMUA Diesel Tank - Horizontal Tank
Camden, New Jersey

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	Jan	44.60	41.14	48.06	54.30	0.0037	0.0033	0.0042	130.0000			188.00	Option 1: VP40 = .0031 VP50 = .0045
Distillate fuel oil no. 2	Feb	46.06	42.10	50.02	54.30	0.0039	0.0034	0.0045	130.0000			188.00	Option 1: VP40 = .0031 VP50 = .0045
Distillate fuel oil no. 2	Mar	50.68	45.94	55.42	54.30	0.0046	0.0039	0.0056	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065
Distillate fuel oil no. 2	Apr	55.49	49.99	61.00	54.30	0.0056	0.0045	0.0067	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065
Distillate fuel oil no. 2	May	60.45	54.68	66.21	54.30	0.0066	0.0054	0.0081	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
Distillate fuel oil no. 2	Jun	64.59	58.69	70.48	54.30	0.0076	0.0062	0.0091	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
Distillate fuel oil no. 2	Jul	66.68	61.02	72.34	54.30	0.0082	0.0068	0.0097	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
Distillate fuel oil no. 2	Aug	65.90	60.57	71.23	54.30	0.0080	0.0066	0.0094	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
Distillate fuel oil no. 2	Sep	62.25	57.20	67.30	54.30	0.0071	0.0059	0.0083	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
Distillate fuel oil no. 2	Oct	56.57	51.78	61.37	54.30	0.0058	0.0049	0.0068	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065
Distillate fuel oil no. 2	Nov	51.71	47.76	55.67	54.30	0.0048	0.0042	0.0056	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065
Distillate fuel oil no. 2	Dec	46.86	43.47	50.25	54.30	0.0041	0.0036	0.0046	130.0000			188.00	Option 1: VP40 = .0031 VP50 = .0045

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

CCMUA Diesel Tank - Horizontal Tank
Camden, New Jersey

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.0369	0.0409	0.0640	0.0867	0.1091	0.1230	0.1288	0.1181	0.0966	0.0794	0.0525	0.0388
Vapor Space Volume (cu ft):	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268
Vapor Density (lb/cu ft):	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001
Vapor Space Expansion Factor:	0.0234	0.0273	0.0332	0.0388	0.0404	0.0411	0.0391	0.0367	0.0348	0.0332	0.0270	0.0228
Vented Vapor Saturation Factor:	0.9992	0.9992	0.9990	0.9988	0.9986	0.9984	0.9983	0.9983	0.9985	0.9988	0.9990	0.9991
Tank Vapor Space Volume:												
Vapor Space Volume (cu ft):	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268	565.7268
Tank Diameter (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Effective Diameter (ft):	13.4193	13.4193	13.4193	13.4193	13.4193	13.4193	13.4193	13.4193	13.4193	13.4193	13.4193	13.4193
Vapor Space Outage (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Tank Shell Length (ft):	17.6700	17.6700	17.6700	17.6700	17.6700	17.6700	17.6700	17.6700	17.6700	17.6700	17.6700	17.6700
Vapor Density												
Vapor Density (lb/cu ft):	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0037	0.0039	0.0046	0.0056	0.0066	0.0076	0.0082	0.0080	0.0071	0.0058	0.0048	0.0041
Daily Avg. Liquid Surface Temp. (deg. R):	504.2692	505.7325	510.3484	515.1623	520.1171	524.2574	526.3503	525.5739	521.9192	516.2431	511.3817	506.5281
Daily Average Ambient Temp. (deg. F):	30.3500	32.9000	42.4000	52.3500	62.9000	71.7500	76.6500	75.4500	68.1500	56.3500	46.3500	35.7500
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	513.9692	513.9692	513.9692	513.9692	513.9692	513.9692	513.9692	513.9692	513.9692	513.9692	513.9692	513.9692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	623.7528	877.8861	1,202.4533	1,527.0205	1,759.8967	1,943.2788	1,896.3228	1,711.3544	1,381.7109	1,021.2921	677.6887	536.5036
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0234	0.0273	0.0332	0.0388	0.0404	0.0411	0.0391	0.0367	0.0348	0.0332	0.0270	0.0228
Daily Vapor Temperature Range (deg. R):	13.8411	15.8427	18.9717	22.0286	23.0651	23.5780	22.6345	21.3220	20.1849	19.1894	15.8258	13.5698
Daily Vapor Pressure Range (psia):	0.0010	0.0011	0.0017	0.0023	0.0026	0.0029	0.0029	0.0027	0.0024	0.0020	0.0014	0.0010
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0037	0.0039	0.0046	0.0056	0.0066	0.0076	0.0082	0.0080	0.0071	0.0058	0.0048	0.0041
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0033	0.0034	0.0039	0.0045	0.0054	0.0062	0.0068	0.0066	0.0059	0.0049	0.0042	0.0036
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0042	0.0045	0.0056	0.0067	0.0081	0.0091	0.0097	0.0094	0.0083	0.0068	0.0056	0.0046
Daily Avg. Liquid Surface Temp. (deg R):	504.2692	505.7325	510.3484	515.1623	520.1171	524.2574	526.3503	525.5739	521.9192	516.2431	511.3817	506.5281
Daily Min. Liquid Surface Temp. (deg R):	500.8090	501.7718	505.6055	509.6552	514.3508	518.3629	520.6917	520.2434	516.8729	511.4458	507.4252	503.1356
Daily Max. Liquid Surface Temp. (deg R):	507.7295	509.6932	515.0913	520.6695	525.8834	530.1519	532.0089	530.9044	526.9654	521.0405	515.3381	509.9205
Daily Ambient Temp. Range (deg. R):	15.1000	16.2000	18.4000	20.5000	20.4000	19.9000	18.9000	18.3000	18.9000	19.9000	17.5000	15.3000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9992	0.9992	0.9990	0.9988	0.9986	0.9984	0.9983	0.9983	0.9985	0.9988	0.9990	0.9991
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0037	0.0039	0.0046	0.0056	0.0066	0.0076	0.0082	0.0080	0.0071	0.0058	0.0048	0.0041
Vapor Space Outage (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Losses (lb):	0.0492	0.0519	0.0610	0.0736	0.0870	0.1006	0.1075	0.1049	0.0929	0.0765	0.0637	0.0534
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0037	0.0039	0.0046	0.0056	0.0066	0.0076	0.0082	0.0080	0.0071	0.0058	0.0048	0.0041
Net Throughput (gal/mo.):	4,249.8333	4,249.8333	4,249.8333	4,249.8333	4,249.8333	4,249.8333	4,249.8333	4,249.8333	4,249.8333	4,249.8333	4,249.8333	4,249.8333
Annual Turnovers:	8.4997	8.4997	8.4997	8.4997	8.4997	8.4997	8.4997	8.4997	8.4997	8.4997	8.4997	8.4997
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tank Diameter (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.0862	0.0929	0.1250	0.1603	0.1961	0.2236	0.2363	0.2230	0.1895	0.1559	0.1162	0.0922

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

CCMUA Diesel Tank - Horizontal Tank
Camden, New Jersey

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.92	0.97	1.90

Used Oil Heater U3104

Maximum heat input capacity 0.34 MMBtu/hr

Used oil heat content 150 MMBtu/10^3 gal (Based on AP-42 Chapter 1.11, for waste oil blended with residual oil)

Used Oil Heater U3104	Nox	CO	SOx	PM10	VOC	PM2.5	Ammonia	Pb	TSP	Units
AP42 Factors (Space Heater, Vaporizing Burner; Ch.	11	1.7	50	0.42	1	0.42	0.8	0.205	0.42	lb/10^3 gal
Factors (Lb/mmBtu)	0.07	0.01	0.33	0.00	0.01	0.00	0.01	0.00	0.00	
Emissions lb/hr	0.02	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	lbs/yr
Emissions tpy	**0.11**	**0.02**	**0.50**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**tons/yr**

Allowable Sulfur content in used oil fuel 5000 ppmw (Subchapter 20. 3(b)12 https://www.state.nj.us/dep/aqm/currentrules/Sub20.pdf)
0.5 %

Allowable ash content for used fuel oil 15%

Hazardous Air Pollutants

	lb/10^3 gal	lb/mMBtu	lb/hr	tpy
Antimony	3.40E-04	2.27E-06	7.71E-07	3.38E-06
Arsenic	2.50E-03	1.67E-05	5.67E-06	2.48E-05
Beryllium	BDL	-	-	-
Cadmium	1.50E-04	1.00E-06	3.40E-07	1.49E-06
Chromium	1.90E-01	1.27E-03	4.31E-04	1.89E-03
Cobalt	5.70E-03	3.80E-05	1.29E-05	5.66E-05
Manganese	2.20E-03	1.47E-05	4.99E-06	2.18E-05
Nickel	5.00E-02	3.33E-04	1.13E-04	4.96E-04
Selenium	BDL	-	-	-
Phosphorus	3.60E-02	2.40E-04	8.16E-05	3.57E-04
Phenol	2.40E-03	1.60E-05	5.44E-06	2.38E-05
Dichlorobenzene	8.00E-07	5.33E-09	1.81E-09	7.94E-09
Napthalene	1.30E-02	8.67E-05	2.95E-05	1.29E-04
Phenanthrene/Anthracene	1.10E-02	7.33E-05	2.49E-05	1.09E-04
Dibutylphthalate	ND	-	-	-
Butylbenzylphthalate	5.10E-04	3.40E-06	1.16E-06	5.06E-06
Bis(2-ethylhexyl)phthalate	2.20E-03	1.47E-05	4.99E-06	2.18E-05
Pyrene	7.10E-03	4.73E-05	1.61E-05	7.05E-05
Benz(a)anthracene/chrysene	4.00E-03	2.67E-05	9.07E-06	3.97E-05
Benzo(a)pyrene	4.00E-03	2.67E-05	9.07E-06	3.97E-05
Trichloroethylene	ND	-	-	-
				0.003

Attachment C

Compliance Plan Red-Line Markups
for Each PCP

U2301 PCP040002 PTF Odor PTF Bldg Odor Control

Date: 2/29/2008

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040002

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2301 PTF Bldg odor control
PT2301 PTF Odor Control Stack

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No changes to the approved stack shall be made without prior approval from the Department, unless such change constitutes a seven-day-notice change pursuant to N.J.A.C. 7:27-8.20(b) and the permittee has complied with the appropriate seven-day-notice provisions of N.J.A.C. 7:27-8.20.[N.J.A.C. 7:27- 8.3(a)]			
2	Distance from Stack to Nearest Property Line >= 115 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
3	Stack Height Above Ground >= 80 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
4	Inside Flue Diameter at Stack Exit <= 60 inches. [N.J.A.C. 7:27- 8.13(d)2ii]			
5	Volume of Gas Discharged at Stack Conditions >= 48,000 ACFM. [N.J.A.C. 7:27- 8.13(d)2ii]			
6	Emissions from the source shall be vented to the atmosphere upward through the approved stack.[N.J.A.C. 7:27- 8.13(d)2ii]			

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040002

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2301 PTF Bldg odor control

CD23 PTF Odor Control Scrubbers

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Stage 1 and Stage 2: Scrubbing Medium Flow Rate >= 400 and Scrubbing Medium Flow Rate <= 1,000 gal/min. [N.J.A.C. 7:27- 8.13(a)]	Scrubbing Medium Flow Rate: Monitored by scrubber flow rate instrument continuously, based on no averaging period for each stage. [N.J.A.C. 7:27- 8.13(d)2]	Scrubbing Medium Flow Rate: Recordkeeping by strip chart, round chart or data acquisition (DAS) system / electronic data storage continuously for each stage. [N.J.A.C. 7:27- 8.13(d)3]	
2	Scrubbing Medium pH >= 8 su. [N.J.A.C. 7:27- 8.13(a)]	Scrubbing Medium pH: Monitored by pH instrument continuously, based on no averaging period for each stage. [N.J.A.C. 7:27- 8.13(d)2]	Scrubbing Medium pH: Recordkeeping by strip chart, round chart or data acquisition (DAS) system / electronic data storage continuously for each stage. [N.J.A.C. 7:27- 8.13(d)3]	
3	Stage 1: Oxidation Reduction Potential >= 350 millivolts. [N.J.A.C. 7:27- 8.13(a)]	Oxidation Reduction Potential: Monitored by oxidation/reduction potential meter continuously. Maintaining ORP is not required if the permittee installs a continuous H2S monitor and recorder at the inlet of the scrubber and the inlet H2S concentration is less than or equal to 1.0 ppm. [N.J.A.C. 7:27- 8.13(d)2]	Oxidation Reduction Potential: Recordkeeping by strip chart, round chart or data acquisition (DAS) system / electronic data storage continuously. [N.J.A.C. 7:27- 8.13(d)3]	
4	Stage 2: Oxidation Reduction Potential >= 350 millivolts. [N.J.A.C. 7:27- 8.13(a)]	Oxidation Reduction Potential: Monitored by oxidation/reduction potential meter continuously. Maintaining ORP is not required if the permittee installs a continuous H2S monitor and recorder at the inlet of the scrubber and the inlet H2S concentration is less than or equal to 1.0 ppm. [N.J.A.C. 7:27- 8.13(d)2]	Oxidation Reduction Potential: Recordkeeping by strip chart, round chart or data acquisition (DAS) system / electronic data storage continuously. [N.J.A.C. 7:27- 8.13(d)3]	
5	If permittee installs a continuous H2S monitor at the outlet of CD23 PTF Odor, the permittee shall submit equipment protocol to the Department for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit an equipment protocol: Within 60 days from the date of the approved permit or initial startup (as applicable). [N.J.A.C. 7:27- 8.13(d)1]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040002

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	A continuous hydrogen sulfide emissions monitor shall be installed at the inlet to the CD23 PTF Odor. [N.J.A.C. 7:27- 8.13(a)]			CEMS/COMS - Submit equipment protocol, submit a PST protocol, conduct PST and submit results: Within 60 days from the date of the approved permit. The listed information concerning the hydrogen sulfide continuous emission monitor equipment shall be submitted for review and approval to the Bureau of Technical Services within 60 days of the date of this permit. The PST shall only be done after the PST protocol has been approved. [N.J.A.C. 7:27-8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)
PCP040002

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2301 PTF Bldg odor control

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	VOC (Total) <= 4.9 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	
2	H2S <= 2.83 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	
3	VOC (Total) <= 1.1 lb/hr. [N.J.A.C. 7:27-8.13(h)]	VOC (Total): Monitored by stack emission testing once initially, based on any 60 minute period. [N.J.A.C. 7:27- 8.13(d)1]	VOC (Total): Recordkeeping by stack test results once initially. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: Once initially. [N.J.A.C. 7:27- 8.13(d)1]
4	H2S <= 0.645 lb/hr. [N.J.A.C. 7:27-8.13(h)]	H2S: Monitored by stack emission testing once initially, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)1]	H2S: Recordkeeping by stack test results once initially. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: Once initially. [N.J.A.C. 7:27- 8.13(d)4]
5	The permittee shall submit a stack test protocol to BTS for review and approval. [N.J.A.C. 7:27- 8.4(f)1]			Submit a stack test protocol: Within 90 days from the date of the approved permit or initial startup (as applicable). [N.J.A.C. 7:27- 8.4(f)1]
6	The permittee shall conduct a stack test using a protocol approved by the Department. [N.J.A.C. 7:27- 8.4(f)3]			Conduct a stack test: Within 180 days from the date of the approved permit or initial startup (as applicable). The permittee shall conduct the stack test no later than 90 days from the date of approval of the stack test protocol by the Department. [N.J.A.C. 7:27-8.13(d)1]
7	Submit stack test results to BTS for review and approval. [N.J.A.C. 7:27- 8.4(f)5]			Submit a stack test report: Within 210 days from the date of the approved permit or initial startup (as applicable) to the Department for review and approval. The permittee shall submit the results of the stack test no later than 30 days from the date of testing. The test results must be certified by a New Jersey licensed professional engineer or certified industrial hygienist. [N.J.A.C. 7:27- 8.13(d)4]

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)
PCP040002

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	H2S <= 2.5 ppm. [N.J.A.C. 7:27- 8.13(h)]	H2S: Monitored by periodic emission monitoring once per shift during operation using Jerome x-631 H2S analyzer or equivalent as approved by the Bureau of Technical Services. The permittee shall submit an equipment protocol to the Department for review and approval as per approved sampling protocol. [N.J.A.C. 7:27-8.13(d)2]	H2S: Recordkeeping by manual logging of parameter once per shift during operation. The permittee must retain the following records: (1) Date and time of measurement; (2) H2S concentration; (3) Description of corrective actions taken if needed; (4) Date and time the problem was solved, if applicable; and (5) H2S concentration after the corrective actions. [N.J.A.C. 7:27-8.13(d)3]	Excess H2S concentrations: 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. [N.J.A.C. 7:27- 8.13(d)4]
9	Jerome x-631 H2S Analyzer: the permittee shall submit an equipment protocol to the Department for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit an equipment protocol: Within 60 days from the date of the approved permit if required by BTS. [N.J.A.C. 7:27- 8.13(d)1]
10	Maximum No. of Billable Compliance Inspections <= 4 inspections. The equipment covered by this permit will be subject to inspection fees for the maximum periodic compliance inspections (as defined in N.J.A.C. 7:27-8.1) over the life of the Certificate, after it receives final approval for a five year duration. The permittee will be invoiced for a service fee per inspection pursuant to N.J.A.C. 7:27-8.6 after the periodic compliance inspection is conducted. [N.J.A.C. 7:27- 8.13(e)]			
11	The permittee shall operate the second odor control system if the hydrogen sulfide concentration is equal to or exceeds 2 parts per million by volume as measured in Reference 8 above. The second odor control system shall remain operative until the hydrogen sulfide concentration is less than 2 ppmv as measured in Reference 8 above. [N.J.A.C. 7:27- 8.13(a)]	Monitored by other method (provide description) upon occurrence of event, based on an instantaneous determination. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	
12	The permittee shall submit an odor threshold monitoring protocol to BTS for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit a stack test protocol: Other. The odor threshold monitoring protocol shall be submitted at least 180 days prior to the permit renenewal date. [N.J.A.C. 7:27-8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040002

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
13	Odor: The permittee shall determine the odor intensity (dilutions-to-threshold) at the stack (as determined according to ASTM E679-91 or ASTM E679-04 as referenced in the NJDEP Technical Manual 3001 entitled: "Guidance Document for Odor Control at Municipal Wastewater/ Sludge Handling & Treatment Facilities"). The Department reserves the right to require the permittee to implement additional measures to minimize the emissions of odor causing compounds based on the results of the odor intensity readings. [N.J.A.C. 7:27-8.13(a)]	Odor: Monitored by odor threshold monitoring once initially and prior to permit renewal, based on the averaging period as per Department approved test method. The odor threshold monitoring shall be performed under typical operating conditions, corresponding to worst case (maximum) emissions operating conditions, using sampling and analytical methodologies that have been reviewed and approved by the Bureau of Technical Services (B.T.S) prior to beginning of the odor threshold monitoring. [N.J.A.C. 7:27-22.16(a)]	Odor: Recordkeeping by odor panel results upon occurrence of event. The permittee shall keep all odor monitoring records on-site or at the permittee's offices, for at least five (5) years, readily made available to the Department upon request. [N.J.A.C. 7:27- 8.13(d)3]	Conduct a stack test: Other. The odor threshold monitoring testing shall be conducted prior to the permit renenewal date. [N.J.A.C. 7:27- 8.13(d)4]
14	The odor panel results shall be submitted to BTS and the Southern Regional Field Office for review and approval. [N.J.A.C. 7:27-8.13(d)4]			Submit a report: Other. Within 60 day of stack testing to the BTS and Southern Regional Field Office. [N.J.A.C. 7:27-8.13(d)4]
15	The permittee shall operate the second odor control system if the hydrogen sulfide concentration is equal to or exceeds 20 parts per million by volume as measured in by the continuous hydrogen sulfide monitor required by CD23, Reference 6. The second odor control system shall remain operative until the hydrogen sulfide concentration is less than 20 ppmv as measured by the continuous hydrogen sulfide monitor required by CD23, Reference 6. [N.J.A.C. 7:27- 8.13(a)]	Monitored by other method (provide description) upon occurrence of event, based on an instantaneous determination. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040002

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
16	If the dilutions-to-threshold reading as measured pursuant to Reference 13, or pursuant to any other test or requirement, exceeds 1205, the permittee shall prepare a proposal for the Department's review and approval outlining modifications to CD23, E2302, E2303, E2304, and E2305 which will be evaluated to bring the D/T ratio to below 1205. The proposal should also propose a schedule for implementing the modifications. At a minimum, the following types of modifications shall be considered: installation of a secondary air pollution control system, improving the characteristics of the scrubbing media by increasing liquid flow rate, the addition of new addtives, modifying the pH, and decreasing the capacity or throughput of the equipment. [N.J.A.C. 7:27- 8.13(a)]			Submit a report: As per the approved schedule. 1) Within 30 days of the receiving the D/T tests results, submit a plan to evaluate the modication that will improve the equipments' ability to control air contaminants; 2) The modifications shall be completed within 90 days of receiving the D/T test results unless additional time is approved by the Department based on the signficance of the modification being implemented; 3) Submit a report on the modifications within 30 days of completion of the modifiications. [N.J.A.C. 7:27-8.13(d)4]
17	If the dilutions-to-threshold reading as measured pursuant to Reference 13 above, or by any other measurement, exceeds 1205, the permittee shall conduct a D/T test, after modifications implemented pursuant to Refenced 16 above have been made.. [N.J.A.C. 7:27- 8.13(a)]	Monitored by odor threshold monitoring upon request of the Department, based on the averaging period as per approved sampling protocol. [N.J.A.C. 7:27-8.13(d)1]		Stack Test - Submit protocol, conduct test and submit results: Submit a performance test protocol. Within 30 days of notification by the Department that a D/T test is necessary, the permittee shall submit an odor threshold monitoring protocol to the BTS for review and approval. The D/T test shall be conducted within 90 days of notification by the Department that a D/T test is necessary. The odor panel results shall be submitted to BTS and the Southern Regional Field Office for review and approval within 60 days of D/T testing. [N.J.A.C. 7:27- 8.13(d)4]

U20 PCP040003 Thickening and Dewatering Facilities

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)
PCP040003

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U20 Thickening and Dewatering Facilities
PT2001 ERA Stack #1

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No changes to the approved stack shall be made without prior approval from the Department, unless such change constitutes a seven-day-notice change pursuant to N.J.A.C. 7:27-8.20(b) and the permittee has complied with the appropriate seven-day-notice provisions of N.J.A.C. 7:27-8.20.[N.J.A.C. 7:27- 8.3(a)]			
2	Distance from Stack to Nearest Property Line >= 238 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
3	Stack Height Above Ground >= 70 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
4	Inside Flue Diameter at Stack Exit <= 48 inches. [N.J.A.C. 7:27- 8.13(d)2ii]			
5	Volume of Gas Discharged at Stack Conditions >= 23,000 ACFM. [N.J.A.C. 7:27- 8.13(d)2ii]			
6	Emissions from the source shall be vented to the atmosphere upward through the approved stack.[N.J.A.C. 7:27- 8.13(d)2ii]			

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040003

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U20 Thickening and Dewatering Facilities

PT2002 ERA Stack #2

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No changes to the approved stack shall be made without prior approval from the Department, unless such change constitutes a seven-day-notice change pursuant to N.J.A.C. 7:27-8.20(b) and the permittee has complied with the appropriate seven-day-notice provisions of N.J.A.C. 7:27-8.20.[N.J.A.C. 7:27- 8.3(a)]			
2	Distance from Stack to Nearest Property Line >= 207 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
3	Stack Height Above Ground >= 48 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
4	Inside Flue Diameter at Stack Exit <= 48 inches. [N.J.A.C. 7:27- 8.13(d)2ii]			
5	Volume of Gas Discharged at Stack Conditions >= 23,000 ACFM. [N.J.A.C. 7:27- 8.13(d)2ii]			
6	Emissions from the source shall be vented to the atmosphere upward through the approved stack.[N.J.A.C. 7:27- 8.13(d)2ii]			

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

Date: 2/29/2008

PCP040003

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U20 Thickening and Dewatering Facilities

CD20 ERA Scrubbers

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Scrubbing Medium Flow Rate >= 1 and Scrubbing Medium Flow Rate <= 3 gal/min. [N.J.A.C. 7:27- 8.13(a)]	Scrubbing Medium Flow Rate: Monitored by scrubber flow rate instrument continuously, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)2]	Scrubbing Medium Flow Rate: Recordkeeping by manual logging of parameter once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	
2	Scrubbing Medium pH >= 8 su. [N.J.A.C. 7:27- 8.13(a)]	Scrubbing Medium pH: Monitored by pH instrument continuously, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)2]	Scrubbing Medium pH: Recordkeeping by strip chart, round chart or data acquisition (DAS) system / electronic data storage continuously. [N.J.A.C. 7:27- 8.13(d)3]	
3	Oxidation Reduction Potential >= 350 millivolts. [N.J.A.C. 7:27- 8.13(a)]	Oxidation Reduction Potential: Monitored by oxidation/reduction potential meter continuously, based on no averaging period. Maintaining ORP is not required if the permittee installs a continuous H2S monitor and recorder at the inlet of the scrubber and the inlet H2S concentration is less than or equal to 1.0 ppm. [N.J.A.C. 7:27- 8.13(d)2]	Oxidation Reduction Potential: Recordkeeping by manual logging of parameter once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	
4	If permittee installs a continuous H2S monitor, the permittee shall submit equipment protocol to the Department for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit an equipment protocol: Within 60 days from the date of the approved permit or initial startup (as applicable). [N.J.A.C. 7:27- 8.13(d)1]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

Date: 2/29/2008

PCP040003

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U20 Thickening and Dewatering Facilities

CD201 ERA Scrubbers

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Scrubbing Medium Flow Rate >= 1 and Scrubbing Medium Flow Rate <= 3 gal/min. [N.J.A.C. 7:27- 8.13(a)]	Scrubbing Medium Flow Rate: Monitored by scrubber flow rate instrument continuously, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)2]	Scrubbing Medium Flow Rate: Recordkeeping by manual logging of parameter once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	
2	Scrubbing Medium pH >= 8 su. [N.J.A.C. 7:27- 8.13(a)]	Scrubbing Medium pH: Monitored by pH instrument continuously, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)2]	Scrubbing Medium pH: Recordkeeping by strip chart, round chart or data acquisition (DAS) system / electronic data storage continuously. [N.J.A.C. 7:27- 8.13(d)3]	
3	Oxidation Reduction Potential >= 350 millivolts. [N.J.A.C. 7:27- 8.13(a)]	Oxidation Reduction Potential: Monitored by oxidation/reduction potential meter continuously, based on no averaging period. Maintaining ORP is not required if the permittee installs a continuous H2S monitor and recorder at the inlet of the scrubber and the inlet H2S concentration is less than or equal to 1.0 ppm. [N.J.A.C. 7:27- 8.13(d)2]	Oxidation Reduction Potential: Recordkeeping by manual logging of parameter once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	
4	If permittee installs a continuous H2S monitor, the permittee shall submit equipment protocol to the Department for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit an equipment protocol: Within 60 days from the date of the approved permit or initial startup (as applicable). [N.J.A.C. 7:27- 8.13(d)1]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040003

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U20 Thickening and Dewatering Facilities

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	H2S <= 0.22 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	
2	H2S <= 0.05 lb/hr. [N.J.A.C. 7:27- 8.13(h)]			
3	H2S <= 0.2 ppm from each scrubber. [N.J.A.C. 7:27- 8.13(h)]	H2S: Monitored by periodic emission monitoring once per shift during operation using Jerome x-631 H2S analyzer or equivalent as approved by the Bureau of Technical Services. The permittee shall submit an equipment protocol to the Department for review and approval as per approved sampling protocol. [N.J.A.C. 7:27-8.13(d)2]	H2S: Recordkeeping by manual logging of parameter once per shift during operation. The permittee must retain the following records: (1) Date and time of measurement; (2) H2S concentration; (3) Description of corrective actions taken if needed; (4) Date and time the problem was solved, if applicable; and (5) H2S concentration after the corrective actions. [N.J.A.C. 7:27-8.13(d)3]	Excess H2S concentrations: 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. [N.J.A.C. 7:27- 8.13(d)4]
4	Maximum No. of Billable Compliance Inspections <= 4 inspections. The equipment covered by this permit will be subject to inspection fees for the maximum periodic compliance inspections (as defined in N.J.A.C. 7:27-8.1) over the life of the Certificate, after it receives final approval for a five year duration. The permittee will be invoiced for a service fee per inspection pursuant to N.J.A.C. 7:27-8.6 after the periodic compliance inspection is conducted. [N.J.A.C. 7:27- 8.13(e)]			
5	The permittee shall submit an odor threshold monitoring protocol to BTS for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit a stack test protocol: Within 30 days from the date of the approved permit. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040003

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	Odor: The permittee shall determine the odor intensity (dilutions-to-threshold) at the stack (as determined according to ASTM E679-91 or ASTM E679-04 as referenced in the NJDEP Technical Manual 3001 entitled: "Guidance Document for Odor Control at Municipal Wastewater/ Sludge Handling & Treatment Facilities"). The Department reserves the right to require the permittee to implement additional measures to minimize the emissions of odor causing compounds based on the results of the odor intensity readings. [N.J.A.C. 7:27- 8.13(a)]	Odor: Monitored by odor threshold monitoring once initially and prior to permit renewal, based on the averaging period as per Department approved test method. The odor threshold monitoring shall be performed under typical operating conditions, corresponding to worst case (maximum) emissions operating conditions, using sampling and analytical methodologies that have been reviewed and approved by the Bureau of Technical Services (B.T.S) prior to beginning of the odor threshold monitoring. [N.J.A.C. 7:27-22.16(a)]	Odor: Recordkeeping by odor panel results upon occurrence of event. The permittee shall keep all odor monitoring records on-site or at the permittee's offices, for at least five (5) years, readily made available to the department upon request. [N.J.A.C. 7:27- 8.13(d)3]	Conduct a stack test: Within 90 days from the date of the approved permit . [N.J.A.C. 7:27- 8.13(d)4]
7	Submit odor panel results to the BTS and the Southern Regional Field Office for review and approval. [N.J.A.C. 7:27-8.13(d)4]			Submit a report: Within 60 days of stack testing to BTS and the Southern Regional Field Office. [N.J.A.C. 7:27- 8.13(d)4]
8	If the dilutions-to-threshold reading as measured pursuant to Reference 6 above, or by any other measurement, exceeds 36, the permittee shall prepare a proposal for the Department's review and approval outlining modifications to CD20, CD 201, E2001, E2002, E2003, E2004, E2005, E2006, E2007, and E2008 which will be evaluated to bring the D/T ratio to below 36. The proposal should also propose a schedule for implementing the modifications. At a minimum, the following types of modifications shall be considered: installation of a secondary air pollution control system, improving the characteristics of the scrubbing media by increasing liquid flow rate, the addition of new addtives, modifying the pH, and decreasing the capacity or throughput of the storage equipment. [N.J.A.C. 7:27- 8.13(a)]			Submit a report: As per the approved schedule 1) Within 30 days of the receiving the D/T tests results, submit a plan to evaluate the modication that will improve the equipments' ability to control air contaminants; 2) The modifications shall be completed within 90 days of receiving the D/T test results unless additional time is approved by the Department based on the signficance of the modification being implemented; 3) Submit a report on the modifications within 30 days of completion of the modifiications. [N.J.A.C. 7:27-8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040003

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	If the dilutions-to-threshold reading as measured pursuant to Reference 6 above, or by any other measurement, exceeds 36, the permittee shall conduct a D/T test after modifications implemented pursuant to Refenced 8 above have been made. [N.J.A.C. 7:27- 8.13(a)]	Monitored by odor threshold monitoring upon request of the Department, based on the averaging period as per approved sampling protocol. [N.J.A.C. 7:27-8.13(d)1]		Stack Test - Submit protocol, conduct test and submit results: Submit a performance test protocol. Within 30 days of notification by the Department that a D/T test is necessary, the permittee shall submit an odor threshold monitoring protocol to the BTS for review and approval. The D/T test shall be conducted within 90 days of notification by the Department that a D/T test is necessary. The odor panel results shall be submitted to BTS and the Southern Regional Field Office for review and approval within 60 days of D/T testing. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

U21 PCP040004 Junction Chamber Emissions to Biofilter

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040004

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U21 JUNCTION CHAMBER EMISSIONS TO BIOFILTER
PT21 JUNCTION CHAMBER STACK

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No changes to the approved biofilter shall be made without prior approval from the Department, unless such change constitutes a seven-day-notice change pursuant to N.J.A.C. 7:27-8.20(b) and the permittee has complied with the appropriate seven-day-notice provisions of N.J.A.C. 7:27-8.20. [N.J.A.C. 7:27- 8.3(a)]			
2	Distance from biofilter to nearest property line >= 45 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
3	Flowrate of gas at the fan outlet to the biofilter >= 375 acfm. [N.J.A.C. 7:27-8.13(d)2ii]			

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040004

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U21 JUNCTION CHAMBER EMISSIONS TO BIOFILTER
CD21 HEADWORKS JUNCTION CHAMBER BIOFILTER

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Pressure Drop >= 4 and Pressure Drop <= 8 inches w.c.. [N.J.A.C. 7:27- 8.13(a)]	Pressure Drop: Monitored by pressure drop Instrument each month during operation, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)2ii]	Pressure Drop: Recordkeeping by manual logging of parameter each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	
2	Bed Moisture >= 55 %. [N.J.A.C. 7:27-8.13(a)]	Bed Moisture: Monitored by grab sampling each week during operation, based on no averaging period. [N.J.A.C. 7:27-8.13(d)2ii]	Bed Moisture: Recordkeeping by manual logging of parameter each week during operation. [N.J.A.C. 7:27- 8.13(d)3]	

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040004

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U21 JUNCTION CHAMBER EMISSIONS TO BIOFILTER

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	H2S <= 0.0066 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	
2	H2S <= 0.00151 lb/hr. [N.J.A.C. 7:27-8.13(h)]			
3	H2S <= 0.74 ppm. [N.J.A.C. 7:27- 8.13(h)]	H2S: Monitored by periodic emission monitoring once per shift during operation using Jerome x-631 H2S analyzer or equivalent as approved by the Bureau of Technical Services. The permittee shall submit an equipment protocol to the Department for review and approval as per approved sampling protocol. [N.J.A.C. 7:27-8.13(d)2]	H2S: Recordkeeping by manual logging of parameter once per shift during operation. The permittee must retain the following records: (1) Date and time of measurement; (2) H2S concentration; (3) Description of corrective actions taken if needed; (4) Date and time the problem was solved, if applicable; and (5) H2S concentration after the corrective actions. [N.J.A.C. 7:27-8.13(d)3]	Excess H2S concentrations: 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. [N.J.A.C. 7:27- 8.13(d)4]
4	Jerome x-631 H2S Analyzer: the permittee shall submit an equipment protocol to the Department for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit an equipment protocol: Within 60 days from the date of the approved permit if required by BTS. [N.J.A.C. 7:27- 8.13(d)1]
5	Maximum No. of Billable Compliance Inspections <= 4 inspections. The equipment covered by this permit will be subject to inspection fees for the maximum periodic compliance inspections (as defined in N.J.A.C. 7:27-8.1) over the life of the Certificate, after it receives final approval for a five year duration. The permittee will be invoiced for a service fee per inspection pursuant to N.J.A.C. 7:27-8.6 after the periodic compliance inspection is conducted. [N.J.A.C. 7:27- 8.13(e)]			
6	The permittee shall submit an odor threshold monitoring protocol to BTS for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit a stack test protocol: Within 30 days from the date of the approved permit. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)
PCP040004

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	Odor: The permittee shall determine the odor intensity (dilutions-to-threshold) at the stack (as determined according to ASTM E679-91 or ASTM E679-04 as referenced in the NJDEP Technical Manual 3001 entitled: "Guidance Document for Odor Control at Municipal Wastewater/ Sludge Handling & Treatment Facilities"). The Department reserves the right to require the permittee to implement additional measures to minimize the emissions of odor causing compounds based on the results of the odor intensity readings. [N.J.A.C. 7:27- 8.13(a)]	Odor: Monitored by odor threshold monitoring once initially and prior to permit renewal, based on the averaging period as per Department approved test method. The odor threshold monitoring shall be performed under typical operating conditions, corresponding to worst case (maximum) emissions operating conditions, using sampling and analytical methodologies that have been reviewed and approved by the Bureau of Technical Services (B.T.S) prior to beginning of the odor threshold monitoring. [N.J.A.C. 7:27-22.16(a)]	Odor: Recordkeeping by odor panel results upon occurrence of event. The permittee shall keep all odor monitoring records on-site or at the permittee's offices, for at least five (5) years, readily made available to the department upon request. [N.J.A.C. 7:27- 8.13(d)3]	Conduct a stack test: Within 90 days from the date of the approved permit . [N.J.A.C. 7:27- 8.13(d)4]
8	Submit odor panel results to the BTS and the Southern Regional Field Office for review and approval upon request of the Department. [N.J.A.C. 7:27- 8.13(d)4]			Submit a report: Upon occurrence of event to BTS and the Southern Regional Field Office. [N.J.A.C. 7:27- 8.13(d)4]
9	If the dilutions-to-threshold reading as measured pursuant to Reference 7 above, or by any other measurement, exceeds 50, the permittee shall prepare a proposal for the Department's review and approval outlining modifications to E21 and CD 21 which will be evaluated to bring the D/T ratio to below 50. The proposal should also propose a schedule for implementing the modifications. At a minimum, the following types of modifications will be considered: installation of a secondary air pollution control system, decreasing the capacity or throughput of the equipment, increasing the size of the biofilter, and modifying the material used to construct the biofilter. [N.J.A.C. 7:27- 8.13(a)]			Submit a report: As per the approved schedule. 1) Within 30 days of the receiving the D/T tests results, submit a plan to evaluate the modication that will improve the equipments' ability to control air contaminants; 2) The modifications shall be completed within 90 days of receiving the D/T test results unless additional time is approved by the Department based on the signficance of the modification being implemented; 3) Submit a report on the modifications within 30 days of completion of the modifiications. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)
PCP040004

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	If the dilutions-to-threshold reading as measured pursuant to Reference 7 above, or by any other measurement, exceeds 50, the permittee shall conduct a D/T test after modifications implemented pursuant to Reference 9 above have been made. [N.J.A.C. 7:27- 8.13(a)]	Monitored by odor threshold monitoring upon request of the Department, based on the averaging period as per approved sampling protocol. [N.J.A.C. 7:27-8.13(d)1]		Stack Test - Submit protocol, conduct test and submit results: Submit a performance test protocol. Within 30 days of notification by the Department that a D/T test is necessary, the permittee shall submit an odor threshold monitoring protocol to the BTS for review and approval. The D/T test shall be conducted within 90 days of notification by the Department that a D/T test is necessary. The odor panel results shall be submitted to BTS and the Southern Regional Field Office for review and approval within 60 days of D/T testing. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

U22 PCP040007 Scum Area ventilation

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)
PCP040007

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U22 SCUM AREA VENTILATION
PT2201 SCUM AREA SCRUBBER STACK

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No changes to the approved stack shall be made without prior approval from the Department, unless such change constitutes a seven-day-notice change pursuant to N.J.A.C. 7:27-8.20(b) and the permittee has complied with the appropriate seven-day-notice provisions of N.J.A.C. 7:27-8.20.[N.J.A.C. 7:27- 8.3(a)]			
2	Distance from Stack to Nearest Property Line >= 400 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
3	Stack Height Above Ground >= 40 ft. [N.J.A.C. 7:27- 8.13(d)2ii]			
4	Inside Flue Diameter at Stack Exit <= 18 inches. [N.J.A.C. 7:27- 8.13(d)2ii]			
5	Volume of Gas Discharged at Stack Conditions >= 6,700 ACFM. [N.J.A.C. 7:27- 8.13(d)2ii]			
6	Emissions from the source shall be vented to the atmosphere upward through the approved stack.[N.J.A.C. 7:27- 8.13(d)2ii]			

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)
PCP040007

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U22 SCUM AREA VENTILATION
CD22 SCUM BLDG ODOR CONTROL SCRUBBER

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The carbon adsorption unit's breakthrough shall occur when either of the following occurs: 1) Grain sampling demonstrates the carbon adsorption unit to have saturation level of 75% or greater; or 2) hydrogen sulfide exhaust concentration greater than 0.315 parts per million by volume. A saturation level of 75% or greater shall be considered to have occurred when hydrogen sulfide or any other reduced sulfur compounds, as applicable, are detected in the from carbon samples taken from the carbon sampling port closest to the outlet of the carbon adsorption unit. [N.J.A.C. 7:27-8.13(a)]	Other: The permittee shall monitor carbon samples taken from the carbon sampling port closest to the outlet of the carbon adsorption unit for the presence of hydrogen sulfide or other reduced sulfur compounds, as applicable, on a monthly basis. The carbon sample shall be extracted and sampled and analyzed consistent with manufacturer's specifications and procedures. Any reduced sulfur compounds detected during the stack sampling required in Reference 5 below shall be monitored for during the analysis of the carbon sample. The carbon sample shall also be monitored with ASTM D-6646. The permittee shall record H2S concentration at the outlet of the carbon adsorption unit each shift with a Jerome meter. [N.J.A.C. 7:27- 8.13(d)2].	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The permittee shall record the results of the carbon samples taken from the carbon sampling port closest to the outlet of the carbon adsorption unit for the presence of hydrogen sulfide or other reduced sulfur compounds, as applicable, on a monthly basis. The carbon sample shall be extracted and sampled and analyzed consistent with manufacturer's specifications and procedures. The prescence of any reduced sulfur compounds detected in the carbon sample shall be recorded. The permittee shall record H2S concentration at the outlet of the carbon adsorption unit each shift with a Jerome meter. [N.J.A.C. 7:27- 8.13(d)3]	Submit an equipment protocol: Within 60 days from the date of the approved permit or initial startup (as applicable) if required by BTS. [N.J.A.C. 7:27- 8.13(d)4]
2	Saturated or partially used adsorption material shall be disposed of in a manner that minimizes releases of air contaminants to the atmosphere. This shall be done in accordance with all applicable State and Federal solid waste management regulations.[N.J.A.C. 7:27- 8.3(b)]			
3	Upon breakthough, as listed in Reference 1 above, the carbon adsorption beds shall be regenerated by water washing within 10 calendar days. When the regeneration occurs, there shall be no septage deliveries. [N.J.A.C. 7:27- 8.13(a)]	Monitored by other method (provide description) upon occurrence of event, based on an instantaneous determination. The event that resulted in having to regenerate the activated carbon unit, the date that the activated carbon unit was regenerated, and period of time that there were no septage deliveries during regeneration shall be monitored. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The event that resulted in having to regenerate the activated carbon unit, the date that the activated carbon unit was regenerated, and period of time that there were no septage deliveries during regeneration shall be recorded. [N.J.A.C. 7:27- 8.13(d)3]	

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040007

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
4	Within 90 days of the date of the approval of this permit, a stack sample shall be taken and analyzed for the prescence of any reduced sulfur compounds. [N.J.A.C. 7:27-8.13(a)]	Monitored by gas sampling once initially, based on the averaging period as per approved sampling protocol . [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. [N.J.A.C. 7:27-8.13(d)3]	Submit a performance test protocol: Within 30 days from the date of the approved permit. The methodology for determining the reduced sulfur compounds shall be submitted to BTS for review and approval within 30 days from the date of the approved permit. [N.J.A.C. 7:27- 8.13(d)4]
5	Every month for 12 months, a sample of carbon shall be taken at each of the three sampling ports of the carbon adsorption beds. The carbon sample shall be analyzed for hydrogen sulfide and any reduced sulfur compounds detected during the stack sampling required in Reference 4 above. This sampling and analysis shall be begin no later than 120 days after the date of this approval and after the results of the stack sampling required in Reference 4 above are known. [N.J.A.C. 7:27- 8.13(a)]	Monitored by other method (provide description) each month during operation. Each month, the testing results of the analysis of the carbon samples shall be monitored. The carbon sample shall also be monitored with ASTM D-6646. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Each month, the testing results of the analysis of the carbon samples shall be recorded. [N.J.A.C. 7:27- 8.13(d)3]	
6	After one year of sampling and analysis, the permittee may file for a compliance plan change, pursuant to NJAC 7:27-8.19, to modify the frequency of sampling and analysis of the CD22 carbon adsorption units. [N.J.A.C. 7:27- 8.13(a)]			
7	After the sampling in Reference 5 above is completed, the permittee shall propose a carbon replacement schedule for review and approval. [N.J.A.C. 7:27- 8.13(a)]			Submit a plan: As per the approved schedule. Within 60 days after the sampling in Reference 5 above is completed, the permittee shall submit propose a carbon replacement schedule for review and approval to the Chief, Bureau of Preconstruction Permits, NJDEP, P.O. Box 27, Trenton, New Jersey 08625. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)

PCP040007

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U22 SCUM AREA VENTILATION

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	H2S <= 0.075 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	
2	H2S <= 0.017 lb/hr. [N.J.A.C. 7:27-8.13(h)]	H2S: Monitored by stack emission testing once initially, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)1]	H2S: Recordkeeping by stack test results once initially. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: Once initially. [N.J.A.C. 7:27- 8.13(d)4]
3	The permittee shall submit a stack test protocol to BTS for review and approval. [N.J.A.C. 7:27- 8.4(f)1]			Submit a stack test protocol: Within 90 days from the date of the approved permit or initial startup (as applicable). [N.J.A.C. 7:27- 8.4(f)1]
4	The permittee shall conduct a stack test using a protocol approved by the Department. [N.J.A.C. 7:27- 8.4(f)3]			Conduct a stack test: Within 180 days from the date of the approved permit or initial startup (as applicable). The permittee shall conduct the stack test no later than 90 days from the date of approval of the stack test protocol by the Department. [N.J.A.C. 7:27-8.13(d)1]
5	Submit stack test results to BTS for review and approval. [N.J.A.C. 7:27- 8.4(f)5]			Submit a stack test report: Within 210 days from the date of the approved permit or initial startup (as applicable) to the Department for review and approval. The permittee shall submit the results of the stack test no later than 30 days from the date of testing. The test results must be certified by a New Jersey licensed professional engineer or certified industrial hygienist. [N.J.A.C. 7:27- 8.13(d)4]
6	H2S <= 0.42 ppm. [N.J.A.C. 7:27- 8.13(h)]	H2S: Monitored by periodic emission monitoring once per shift during operation using Jerome x-631 H2S analyzer or equivalent as approved by the Bureau of Technical Services. The permittee shall submit an equipment protocol to the Department for review and approval as per approved sampling protocol.. [N.J.A.C. 7:27- 8.13(d)2]	H2S: Recordkeeping by manual logging of parameter once per shift during operation. The permittee must retain the following records: (1) Date and time of measurement; (2) H2S concentration; (3) Description of corrective actions taken if needed; (4) Date and time the problem was solved, if applicable; and (5) H2S concentration after the corrective actions. [N.J.A.C. 7:27-8.13(d)3]	Excess H2S concentrations: 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. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

CAMDEN CNTY MUA DELAWARE #1 WPCF (50163)
PCP040007

Date: 2/29/2008

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	Jerome x-631 H2S Analyzer or equivalent shall be used to monitor hydrogen sulfide: the permittee shall submit an equipment protocol to the Department for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit an equipment protocol: Within 60 days from the date of the approved permit . [N.J.A.C. 7:27- 8.13(d)1]
8	Maximum No. of Billable Compliance Inspections <= 4 inspections. The equipment covered by this permit will be subject to inspection fees for the maximum periodic compliance inspections (as defined in N.J.A.C. 7:27-8.1) over the life of the Certificate, after it receives final approval for a five year duration. The permittee will be invoiced for a service fee per inspection pursuant to N.J.A.C. 7:27-8.6 after the periodic compliance inspection is conducted. [N.J.A.C. 7:27- 8.13(e)]			
9	The permittee shall submit an odor threshold monitoring protocol to BTS for review and approval. [N.J.A.C. 7:27- 8.13(d)1]			Submit a stack test protocol: Other by November 30, 2000. [N.J.A.C. 7:27-8.13(d)4]
10	Odor: The permittee shall determine the odor intensity (dilutions-to-threshold) at the stack (as determined according to ASTM E679-91 or ASTM E679-04 as referenced in the NJDEP Technical Manual 3001 entitled: "Guidance Document for Odor Control at Municipal Wastewater/ Sludge Handling & Treatment Facilities"). The Department reserves the right to require the permittee to implement additional measures to minimize the emissions of odor causing compounds based on the results of the odor intensity readings. [N.J.A.C. 7:27- 8.13(a)]	Odor: Monitored by odor threshold monitoring once initially and prior to permit renewal, based on the averaging period as per Department approved test method. The odor threshold monitoring shall be performed under typical operating conditions, corresponding to worst case (maximum) emissions operating conditions, using sampling and analytical methodologies that have been reviewed and approved by the Bureau of Technical Services (B.T.S) prior to beginning of the odor threshold monitoring. [N.J.A.C. 7:27-22.16(a)]	Odor: Recordkeeping by odor panel results upon occurrence of event. The permittee shall keep all odor monitoring records on-site or at the permittee's offices, for at least five (5) years, readily made available to the department upon request. [N.J.A.C. 7:27- 8.13(d)3]	Conduct a stack test: Other by February 28, 2001. [N.J.A.C. 7:27- 8.13(d)4]
11	Submit odor panel results to the BTS and the Southern Regional Field Office for review and approval. [N.J.A.C. 7:27-8.13(d)4]			Submit a report: Other to BTS and the Southern Regional Field Office by March 30, 2001. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
12	If the dilutions-to-threshold reading as measured pursuant to Reference 10 above, or by any other measurement, exceeds 14, the permittee shall prepare a proposal for the Department's review and approval outlining modifications to CD22, E2201, and E2202 which will be evaluated to bring the D/T ratio to below 14.. The proposal should also propose a schedule for implementing the modifications. At a minimum, the following types of modifcation shall be considered: installation of a secondary air pollution control system, increasing the amount of activated carbon, modifying the type of activated carbon used, putting additves into the activated carbon, and decreasing the capacity or throughput of the equipment. [N.J.A.C. 7:27- 8.13(a)]			Submit a report: As per the approved schedule. 1) Within 30 days of the receiving the D/T tests results, submit a plan to evaluate the modication that will improve the equipments' ability to control air contaminants; 2) The modifications shall be completed within 90 days of receiving the D/T test results unless additional time is approved by the Department based on the signficance of the modification being implemented; 3) Submit a report on the modifications within 30 days of completion of the modifiications. [N.J.A.C. 7:27-8.13(d)4]
13	If the dilutions-to-threshold reading as measured pursuant to Reference 10 above, or by any other measurement, exceeds 14, the permittee shall conduct a D/T test, after 1 modifications implemented pursuant to Reference 12 above have been made. [N.J.A.C. 7:27- 8.13(a)]	Monitored by odor threshold monitoring upon request of the Department, based on the averaging period as per approved sampling protocol. [N.J.A.C. 7:27-8.13(d)1]		Stack Test - Submit protocol, conduct test and submit results: Submit a performance test protocol. Within 30 days of notification by the Department that a D/T test is necessary, the permittee shall submit an odor threshold monitoring protocol to the BTS for review and approval. The D/T test shall be conducted within 90 days of notification by the Department that a D/T test is necessary. The odor panel results shall be submitted to BTS and the Southern Regional Field Office for review and approval within 60 days of D/T testing. [N.J.A.C. 7:27- 8.13(d)4]

U1 PCP070004 PTF Boiler Stack

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1 PTF BOILER STACK

Subject Item: E101 PTF BOILER (B-2), E102 PTF BOILER (B-1)

Edit Emission Unit description as follows: "E101 PTF Boiler (B-2), E102 PTF Boiler B-1, and E-103 PTF Boiler (B-3)"

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	n Requirement
1	No person shall use or cause to be used any equipment or control apparatus unless all components connected or attached to, or serving the equipment or control apparatus, are functioning properly and are in use in accordance with the preconstruction permit and certificate and all conditions and provisions thereto.	None.	None.	
2	Maximum Gross Heat Input <= 8.7 MMBTU/hr (HHV). [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
3	Only natural gas and #2 distillate fuel oil shall be burned as boiler fuels. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.

Add New Ref # 4: 4. Maximum Gross Heat Input <= 10.46 MMBtu/hr (HHV) for E103.

Add "for E101 and E102 each"

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1 PTF BOILER STACK

Operating Scenario: OS Summary

Emissions now include PTF Boiler No. 3 and removes fuel oil related emissions.

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No person shall use or cause to be used any equipment or control apparatus unless all components connected or attached to, or serving the equipment or control apparatus, are functioning properly and are in use in accordance with the preconstruction permit and certificate and all conditions and provisions thereto.[N.J.A.C. 7:27-8.3(e)].	TSP <= 0.56 tons/yr		
2	TSP <= ~~0.5 tons/yr~~ [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	PM-10 (Total) <= ~~0.5 tons/yr~~. [N.J.A.C. 7:27- 8.13(h)]	None. PM10 <= 0.56 tons/yr	None.	None.
4	VOC (Total) <= ~~0.54 tons/yr~~. [N.J.A.C. 7:27- 8.13(h)]	None.	VOC <= 0.5 tons/yr	None.
5	NOx (Total) <= ~~6.96 tons/yr~~. [N.J.A.C. 7:27- 8.13(h)]	None. NOx <= 8.02 tons/yr	None.	None.
6	CO <= ~~4.9 tons/yr~~. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
7	SO2 <= ~~4.81 tons/yr~~. [N.J.A.C. 7:27-8.13(h)]	None. CO<= 6.74 tons/yr	None.	None.
8	[N.J.A.C. 7:27- 8.13(h)]	None. SO2<= 0.24 tons/yr (Deminimis)	None.	None.
9	Maximum No. of Billable Compliance Inspections <= 2 inspections over the life of the Operating Certificate. The permittee will be invoiced for a service fee per inspection pursuant to N.J.A.C. 7:27-8.6 after the periodic compliance inspection is conducted. [N.J.A.C. 7:27- 8.13(e)]	None.	None.	None.
10	Natural Gas Usage <= 71.9 MMft^3/yr. [N.J.A.C. 7:27- 8.13(h)] for E101 and E102 total	Natural Gas Usage: Monitored by fuel flow/firing rate instrument daily, based on a 12 calendar month-average. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27- 8.13(d)2]	Natural Gas Usage: Recordkeeping by manual logging of parameter annually. [N.J.A.C. 7:27- 8.13(d)3]	

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
11	No. 2 Fuel Oil Usage <= 299,400 gal/yr. [N.J.A.C. 7:27- 8.13(n)]	No. 2 Fuel Oil Usage: Monitored by fuel flow/firing rate instrument daily, based on a 12 calendar month average. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27- 8.13(d)2]	No. 2 Fuel Oil Usage: Recordkeeping by manual logging of parameter annually. [N.J.A.C. 7:27- 8.13(d)3]	

Delete all Fuel oil related applicable requirements.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1 PTF BOILER STACK

Operating Scenario: OS1 PTF BOILER (B-1) COMBUSTION - NATURAL GAS

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	TSP <= 0.05 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
2	PM-10 (Total) <= 0.05 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	VOC (Total) <= 0.06 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
4	CO <= 0.69 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	NOx (Total) <= 0.82 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
6	SO2 <= 0.05 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
7	No visible emissions. As specified in N.J.A.C. 7:27-3.2(c), this provision does not apply to smoke which is visible for a period of time of not longer than three (3) minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 3.2(a)]	None.	None.	None.
8	The permittee shall annually adjust the combustion process as specified at N.J.A.C. 7:27-19.16(a): Inspect burner, and clean or replace necessary components. Inspect flame patterns and the system controlling air-to-fuel ratio and make necessary adjustments to ensure optimum burner efficiency. [N.J.A.C. 7:27-19.7(a)1]		Recordkeeping by manual logging of parameter annually. The permittee shall record the date and times of the adjustment; the name, title and affiliation of the person who made the adjustment; the concentration of NOx and CO in the effluent stream in ppm after each adjustment was made; and the concentration of O2 at which the NOx and CO concentrations were measured. [N.J.A.C. 7:27-19.16(c)]	
9	Particulate Emissions <= 5.22 lb/hr. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1 PTF BOILER STACK

Operating Scenario: OS2 PTF BOILER (B-2) COMBUSTION - NATURAL GAS

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Particulate Emissions <= 5.22 lb/hr. [N.J.A.C. 7:27- 4.2(a)]	Particulate Emissions: Monitored by stack emission testing once initially and every 5 years, based on any 60 minute period. [N.J.A.C. 7:27- 4.4]	Particulate Emissions: Recordkeeping by stack test results once initially and every 5 years. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
2	TSP <= 0.05 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	PM-10 (Total) <= 0.05 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
4	VOC (Total) <= 0.06 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	CO <= 0.69 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
6	NOx (Total) <= 0.82 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
7	SO2 <= 0.05 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
8	No visible emissions. As specified in N.J.A.C. 7:27-3.2(c), this provision does not apply to smoke which is visible for a period of time of not longer than three (3) minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 3.2(a)]	None.	None.	None.
9	The permittee shall annually adjust the combustion process as specified at N.J.A.C. 7:27-19.16(a): Inspect burner, and clean or replace necessary components. Inspect flame patterns and the system controlling air-to-fuel ratio and make necessary adjustments to ensure optimum burner efficiency. [N.J.A.C. 7:27-19.7(a)1]		Recordkeeping by manual logging of parameter annually. The permittee shall record the date and times of the adjustment; the name, title and affiliation of the person who made the adjustment; the concentration of NOx and CO in the effluent stream in ppm after each adjustment was made; and the concentration of O2 at which the NOx and CO concentrations were measured. [N.J.A.C. 7:27-19.16(c)]	

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1 PTF BOILER STACK

Operating Scenario: OS3 PTF BOILER (B-1) COMBUSTION - NO. 2 FUEL OIL

Delete all applicable requirements related to fuel oil for U1 OS3

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	TSP <= 0.12 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
2	PM-10 (Total) <= 0.12 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	VOC (Total) <= 0.12 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
4	CO <= 0.82 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	NOx (Total) <= 1.43 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
6	SO2 <= 1.88 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	SO2: Monitored by stack emission testing once initially and every 5 years, based on any 60 minute period. [N.J.A.C. 7:27-8.13(d)1]	SO2: Recordkeeping by stack test results once initially and every 5 years. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
7	No visible emissions. As specified in N.J.A.C. 7:27-3.2(c), this provision does not apply to smoke which is visible for a period of time of not longer than three (3) minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 3.2(a)]	Monitored by visual determination each week during operation, based on an instantaneous determination. The permittee shall conduct the visual inspection during daylight hours. Visual inspections shall consist of a visual survey to identify if the stack has visible emissions (other than condensed water vapor) greater than the prescribed standard. If visible emissions are observed and the corrective action taken does not correct the opacity problem within 24 hours, the permittee shall perform a check via a certified opacity reader, in accordance with N.J.A.C. 7:27B-2. Such test shall be conducted each operating day until corrective action is taken to successfully correct the opacity problem. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter each week during operation. The permittee shall maintain the following records: (1) Date and time of inspection; (2) Emission point number; (3) Operational status of equipment; (4) Observed results and conclusions; (5) Description of corrective actions taken if necessary; (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. 7:27-8.13(d)3]	Conduct an inspection: Upon occurrence of event. If visible emissions are observed, the permittee shall verify that the equipment and/ or control device causing the emission is operating according to manufacturer's specifications and the compliance plan. If the equipment or control device is not operating properly, the permittee shall take corrective action immediately to eliminate the excess emissions. The permittee shall report any permit violation to the Department pursuant to N.J.A.C. 7:27-8.13(d)4. [N.J.A.C. 7:27- 8.13(d)4]
8	Sulfur Content in Fuel <= 0.2 weight %. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records once per bulk fuel shipment, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)1]	Sulfur Content in Fuel: Recordkeeping by fuel certification receipts once per bulk fuel shipment. [N.J.A.C. 7:27- 8.13(d)1]	

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	SO2 <= 0.21 lb/MMBTU. [N.J.A.C. 7:27-9.2(c)]	SO2: Monitored by review of fuel delivery records once per bulk fuel shipment, based on no averaging period. [N.J.A.C. 7:27-8.13(d)1]	SO2: Recordkeeping by fuel certification receipts once per bulk fuel shipment. [N.J.A.C. 7:27- 8.13(d)1]	
10	The permittee shall annually adjust the combustion process as specified at N.J.A.C. 7:27-19.16(a): Inspect burner, and clean or replace necessary components. Inspect flame patterns and the system controlling air-to-fuel ratio and make necessary adjustments to ensure optimum burner efficiency. [N.J.A.C. 7:27-19.7(a)1]		Recordkeeping by manual logging of parameter annually. The permittee shall record the date and times of the adjustment; the name, title and affiliation of the person who made the adjustment; the concentration of NOx and CO in the effluent stream in ppm after each adjustment was made; and the concentration of O2 at which the NOx and CO concentrations were measured. [N.J.A.C. 7:27-19.16(c)]	
11	Particulate Emissions <= 5.22 lb/hr. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1 PTF BOILER STACK

Operating Scenario: OS4 PTF BOILER (B-2) COMBUSTION - NO. 2 FUEL OIL

The requirements for this item are identical to those for: U1 OS3

Delete all applicable requirements related to fuel oil for U1 OS3

Add New U1 OS5 PTF Boiler (B-3) Combustion - Natural Gas applicable requirements here:
TSP <= 0.08 lb/hr
PM10<= 0.08 lb/hr
NOx<=1.03 lb/hr
CO <= 0.86 lb/hr
VOC <= 0.06 lb/hr
SO2 < = 0.01 lb/hr (Deminimis)

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

U1001 and U1002 PCP150002 Sludge Handling Biofilter System and Two Natural Gas Boilers serving Biofilter Odor Control System

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1001 Sludge handling biofilter system
CD1001 Biofilter- Odor Control System

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Inlet Air Operating Temperature =>45 degrees F. [N.J.A.C. 7:27- 8.13(a)]	Monitored by temperature instrument continuously, based on 5 minute intervals. 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- 8.13(d)2ii]	Recordkeeping by strip chart, round chart or data acquisition (DAS) system / electronic data storage continuously. [N.J.A.C. 7:27-8.13(d)3]	None.
2	pH of the wastewater (leachate) from the bed => 2 and <= 8. [N.J.A.C. 7:27- 8.13(a)]	Monitored by pH instrument each month during operation, based on an instantaneous determination. 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. 7:27-8.13(d)2ii]	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Record pH of leachate from bed in a log book or easily accessible computer data. [N.J.A.C. 7:27- 8.13(d)3]	None.
3	Pressure Drop: across Biofilter shall be =>1 and <=12 inches of W.C. [N.J.A.C. 7:27-8.13(a)]	Pressure Drop: Monitored by pressure drop Instrument continuously, based on 5 minute intervals. 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. 7:27-8.13(d)2ii]	Pressure Drop: Recordkeeping by strip chart or data acquisition (DAS) system continuously. [N.J.A.C. 7:27- 8.13(d)3]	None.
4	Humidity at Biofilter exhaust at the stack shall be =>60% [N.J.A.C. 7:27- 8.13(a)]	Other: Monitor weekly with a portable relative humidity meter. The meter should be kept in operation in accordance with the manufacturer's instructions.[N.J.A.C. 7:27-8.13(d)2ii].	Recordkeeping by manual logging of parameter or storing data in a computer data system each week during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	Hydrogen sulfide <= 0.1 Parts per Million by volume. [N.J.A.C. 7:27- 8.13(a)]	Hydrogen sulfide: Monitored by periodic emission monitoring each month during operation. [N.J.A.C. 7:27- 8.13(d)1]	Hydrogen sulfide: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	Other (provide description): Upon occurrence of event. In the event the hydrogen sulfide concentration determined with the portable monitor exceeds the maximum value (0.1 ppmv), the Permittee shall take corrective action immediately. Following corrective action and operation of the ventilation system, the hydrogen sulfide concentration shall be measured at the outlet of the biofilter to demonstrate compliance with the applicable requirement. . [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U1001 Sludge handling biofilter system**
CD1002 Biofilter- Odor Control System

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Inlet Air Operating Temperature =>45 degrees F. [N.J.A.C. 7:27- 8.13(a)]	Monitored by temperature instrument continuously, based on 5 minute intervals. 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- 8.13(d)2ii]	Recordkeeping by strip chart, round chart or data acquisition (DAS) system / electronic data storage continuously. [N.J.A.C. 7:27-8.13(d)3]	None.
2	pH of the wastewater (leachate) from the bed => 2 and <= 8. [N.J.A.C. 7:27- 8.13(a)]	Monitored by pH instrument each month during operation, based on an instantaneous determination. 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. 7:27-8.13(d)2ii]	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Record pH of leachate from bed in a log book or easily accessible computer data. [N.J.A.C. 7:27- 8.13(d)3]	None.
3	Pressure Drop: across Biofilter shall be =>1 and <=12 inches of W.C. [N.J.A.C. 7:27-8.13(a)]	Pressure Drop: Monitored by pressure drop Instrument continuously, based on 5 minute intervals. 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. 7:27-8.13(d)2ii]	Pressure Drop: Recordkeeping by strip chart or data acquisition (DAS) system continuously. [N.J.A.C. 7:27- 8.13(d)3]	None.
4	Humidity at Biofilter exhaust at the stack shall be =>60% [N.J.A.C. 7:27- 8.13(a)]	Other: Monitor weekly with a portable relative humidity meter. The meter should be kept in operation in accordance with the manufacturer's instructions.[N.J.A.C. 7:27-8.13(d)2ii].	Recordkeeping by manual logging of parameter or storing data in a computer data system each week during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	Hydrogen sulfide <= 0.1 Parts per Million by volume. [N.J.A.C. 7:27- 8.13(a)]	Hydrogen sulfide: Monitored by periodic emission monitoring each month during operation. [N.J.A.C. 7:27- 8.13(d)1]	Hydrogen sulfide: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	Other (provide description): Upon occurrence of event. In the event the hydrogen sulfide concentration determined with the portable monitor exceeds the maximum value (0.1 ppmv), the Permittee shall take corrective action immediately. Following corrective action and operation of the ventilation system, the hydrogen sulfide concentration shall be measured at the outlet of the biofilter to demonstrate compliance with the applicable requirement. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1001 Sludge handling biofilter system

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity: The equipment shall not be used in a manner that will cause visible emissions, exclusive of condensed water vapor. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	Odor <= 5 D/T at nearest receptor with the highest impact. [N.J.A.C. 7:27- 8.13(h)]	Odor: Monitored by odor threshold monitoring upon request of the Department, based on the averaging period as per Department approved test method. The sampling and analytical methodologies must be reviewed and approved by the Bureau of Evaluation and Planning (BEP) prior to beginning the odor threshold monitoring. [N.J.A.C. 7:27- 8.13(d)1]	Odor: Recordkeeping by odor panel results upon request of the Department. The permittee shall maintain all odor monitoring records on-site or at the permittee's offices, for at least five (5) years, readily made available to the Department upon request. [N.J.A.C. 7:27- 8.13(d)3]	Submit a report: Within 60 days of sampling if required by the Department. The odor monitoring records shall be submitted to the REO, for review, within 60 days from the date of completion of work by the odor panel. [N.J.A.C. 7:27- 8.13(d)4]
3	H2S <= 0.28 tons/yr based on maximum hourly emission rate and continuous operation. [N.J.A.C. 7:27- 7.2(i)]	None.	None.	None.
4	The doors and entrances to the sludge storage building shall remain closed all times except during the entrance and departure of the trucks. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
5	A negative pressure shall always be maintained inside the sludge storage building. The suction hoods for the exhaust air shall be placed in such locations that maximum capture efficiency is achieved and fugitive emissions are minimized. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	Other (provide description): Upon occurrence of event The permittee shall submit copies of the diagrams showing the locations and configuration of the suction hoods and ducts to the Department, as they are available. [N.J.A.C. 7:27- 8.13(d)4]
6	The trucks entering the sludge storage building shall remain covered until they enter into the sludge storage building and shall be properly covered before they leave the sludge storage building [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	VOC (Total) <= 4.22 tons/yr based on maximum hourly emission rate and continuous operation. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
8	The other emissions from the equipment covered by this emission unit are stated to be below the reporting thresholds as stated in N.J.A.C. 7:27-8, Appendix 1, Tables A and B. [N.J.A.C. 7:27- 8]	None.	None.	None.
9	Maximum No. of Billable Compliance Inspections <= 4 inspections over the life of the Operating Certificate. The permittee will be invoiced for a service fee per inspection pursuant to N.J.A.C. 7:27-8.6 after the periodic compliance inspection is conducted. [N.J.A.C. 7:27- 8.13(e)]	None.	None.	None.
10	The equipment shall not cause any air contaminant, including an air contaminant detected by the sense of smell, to be present in the outdoor atmosphere in such quantity and duration which is, or tends to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property, except in areas over which the owner or operator has exclusive use or occupancy. [N.J.A.C. 7:27- 5]	None.	None.	Notify by phone: Upon occurrence of event Any operation of equipment which may cause 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 be reported by the Permittee as required by the Air Pollution Control Act. Permittee shall immediately notify the Department of any non-compliance by calling the Environmental Action Hotline at (609) 292-7172. [N.J.S.A. 26:2C-19.e]
11	H2S <= 0.064 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
12	VOC (Total) <= 0.963 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U1002 Two Natural Gas Boilers (Serving Boifilter Odor Control System)

Operating Scenario: OS Summary

Correct Spelling: "Biofilter"

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	NOx (Total) <= 0.964 tons/yr based on maximum houorly emission rate and continuous operation. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
2	CO <= 2.54 tons/yr based on maximum houorly emission rate and continuous operation. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	Opacity: The equipment shall not be used in a manner that will cause visible emissions, exclusive of condensed water vapor. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	The other emissions from the equipment covered by this emission unit are stated to be below the reporting thresholds as stated in N.J.A.C. 7:27-8, Appendix 1, Tables A and B. [N.J.A.C. 7:27- 8]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U1002 Two Natural Gas Boilers (Serving Boifilter Odor Control System)**

Operating Scenario: **OS1 Biofilter Odor Control System Boiler 1**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Gross Heat Input <= 4 MMBTU/hr (HHV). [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
2	CO <= 0.29 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	NOx (Total) <= 0.11 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U1002 Two Natural Gas Boilers (Serving Boifilter Odor Control System)**

OS2 Biofilter Odor Control System Boiler 2

Operating Scenario:

The requirements for this item are identical to those for: U1002 OS1

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

U111 and U112 PCP150001 Sludge Drying System and Thermal Oil Heaters

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U111 Sludge Drying System

Subject Item: CD3204 Venturi Scrubber 001, CD3205 Venturi Scrubber 002, CD3206 Venturi Scrubber 003

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Flowrate of the Scrubbing Solution Through the Scrubber >= 150 gal/min. Total flow rate of scrubbing solution, water, across each spray tower and venturi scrubber in pair (CD3201 and CD3204; CD3202 and CD3205; and CD3203 and CD3206). [N.J.A.C. 7:27- 8.13(a)]	Flowrate of the Scrubbing Solution Through the Scrubber: Monitored by scrubber flow rate instrument continuously, based on an instantaneous determination. 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- 8.13(d)2ii]	Flowrate of the Scrubbing Solution Through the Scrubber: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. Record Total flow rate of scrubbing solution, water, across each spray tower and venturi scrubber in pair (CD3201 and CD3204; CD3202 and CD3205; and CD3203 and CD3206). [N.J.A.C. 7:27- 8.13(d)3]	None.
2	Pressure drop across venturi scrubber: Pressure Drop Across the Scrubber >= 2 and Pressure Drop Across the Scrubber <= 7 inches w.c.. [N.J.A.C. 7:27- 8.13(a)]	Pressure Drop Across the Scrubber: Monitored by pressure drop Instrument each week during operation, based on an instantaneous determination. 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- 8.13(d)2ii]	Pressure Drop Across the Scrubber: Recordkeeping by manual logging of parameter or storing data in a computer data system each week during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**
CD3207 Wet ESP 001

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Volumetric Rate to Surface Area Ratio <= 15.3 ACFM/sq.ft.. [N.J.A.C. 7:27- 8.13(a)]	Velocity to Surface Area Ratio: Monitored by flue gas flow rate instrument continuously, based on a 1 hour block average. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27-8.13(d)2]	Volumetric Rate to Surface Area Ratio: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	The electrostatic precipitator shall be operated and maintained in accordance with the manufacturer's recommendations. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
3	The WetESP (CD3207) may be bypassed. The Spray Tower (CD3201, 3202, 3203) and Venturi Scrubber (CD3204, 3205, 3206) for each dryer train will remain operational when the Wet ESP is bypassed. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U111 Sludge Drying System
CD3208 Biofilter

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Inlet Air Operating Temperature =>45 degrees F. [N.J.A.C. 7:27- 8.13(a)]	Monitored by temperature instrument daily, based on an instantaneous determination. 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- 8.13(d)2ii]	Recordkeeping by manual logging of parameter or storing data in a computer data system daily. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	pH of the wastewater (leachate) from the bed => 6.5 and <= 9.5. [N.J.A.C. 7:27-8.13(a)]	Monitored by pH instrument annually, based on an instantaneous determination. 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- 8.13(d)2ii]	Recordkeeping by manual logging of parameter or storing data in a computer data system annually. Record pH of leachate from bed in a log book or easily accessible computer data. [N.J.A.C. 7:27- 8.13(d)3]	None.
3	Pressure Drop: across Biofilter shall be =>0.1 and <=8 inches of W.C. [N.J.A.C. 7:27- 8.13(a)]	Pressure Drop: Monitored by pressure drop instrument continuously, based on an instantaneous determination. 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- 8.13(d)2ii]	Pressure Drop: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. Record pressure drop across the filter. [N.J.A.C. 7:27-8.13(d)3]	None.
4	Humidity of discharge air at the discharge duct to carbon filter shall be =>60% [N.J.A.C. 7:27- 8.13(a)]	Other: Monitor annually with a portable relative humidity meter. The meter should be kept in operation in accordance with the manufacturer's instructions.[N.J.A.C. 7:27-8.13(d)2ii].	Recordkeeping by manual logging of parameter or storing data in a computer data system annually. Record relative humidity. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	The Biofilter (CD3208) may be bypassed. At least one of the standby Carbon Adsorbers (CD3301 or CD3302) will stay operational during bypass. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Subject Item: **CD3209 Silo Receiver 001, CD3210 Silo Receiver 002, CD3211 Dust Collector 001**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Differential Pressure >= 1 and Differential Pressure <= 10 inches w.c.. Pressure drop across particulate filter cartridge. The pressure drop range will be revised through the modification process after completion of installation and full operation of control device. [N.J.A.C. 7:27- 8.13(a)]	Differential Pressure: Monitored by pressure drop instrument continuously, based on an instantaneous determination when in operation with 99% particulate removal efficiency. 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. 7:27-8.13(d)2ii]	Differential Pressure: Recordkeeping by manual logging of parameter or storing data in a computer data system once per batch during operation. Record pressure drop across particulate filter cartridge in w.c. Also record the high-pressure alarm in a log book or computer data system. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	Each product storage silo is exhausted to the dust collectors (CD 3209 and 3210). The exhaust from the dust collectors is vented to a duct and combined with air from the room before being treated in the Carbon Adsorber (CD 3212). [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**
CD3212 Carbon Adsorber 001

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Weight of Carbon and Contaminants Upon Replacement of Carbon <= 126,300 lb. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	Replacement of carbon shall occur when outlet concentration reachs >=0.5 ppmv hydrogen sulfide or every 5 years, whichever is earlier. The facility may continue to operate after the initial detection of H2S concentration above limit stated herein, provided that one of the two standby carbon adsorbers (CD3301 or CD3302) is operating and either Biofilter (CD3208) or Biotrickling filter (CD3300) is operating. [N.J.A.C. 7:27- 8.13(a)]	Monitored by other method (provide description) each month during operation, based on an instantaneous determination. Monitoring using either concentration readings or hour/time monitor. [N.J.A.C. 7:27- 8.13(h)]	Recordkeeping by manual logging of parameter or storing data in a computer data system per change of material. The permitee shall record the date and time, and the hydrogen sulfide concentration reading once every month and during each event of carbon replacement. [N.J.A.C. 7:27- 8.13(a)]	Comply with the requirement: Upon occurrence of event. [N.J.A.C. 7:27- 8.13(a)]
3	The minimum weight of the carbon adsorber is 85000 lbs. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	The carbon adsorbtion material shall consist of lignite and burnt coconut shells or equivalent with a minimum capacity to adsorb hydrogen sulfide of 0.33 lb H2S and VOC per pound of absorbtion material. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U111 Sludge Drying System
CD3300 Bio Trickling Filter 001

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Bed Operating Temperature >= 59 and Bed Operating Temperature <= 99 degrees F. [N.J.A.C. 7:27- 8.13(a)]	Bed Operating Temperature: Monitored by temperature instrument daily, based on an instantaneous determination. 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- 8.13(d)2ii]	Bed Operating Temperature: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	pH of the wastewater (leachate) from the bed pH >= 2 and pH <= 3 standard units. [N.J.A.C. 7:27- 8.13(a)]	pH: Monitored by pH instrument daily, based on an instantaneous determination '. 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- 8.13(d)2ii]	pH: Recordkeeping by manual logging of parameter or storing data in a computer data system daily. Record pH of the leachate from bed in a log book or easily accessible computer data. [N.J.A.C. 7:27- 8.13(d)3]	None.
3	Pressure Drop >= 0.1 and Pressure Drop <= 1.5 inches w.c. across Biofilter bed. [N.J.A.C. 7:27- 8.13(a)]	Pressure Drop: Monitored by pressure drop instrument quarterly: once per quarter; quarters shall begin on January 1, April 1, July 1, and October 1 of each year, based on an instantaneous determination '. 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- 8.13(d)2ii]	Pressure Drop: 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. Record pressure drop across the filter. [N.J.A.C. 7:27- 8.13(d)3]	None.
4	The Biotrickling filter (CD3300) may be bypassed. At least one of the standby Carbon Adsorber Units(CD3301 or CD3302) will stay operational during bypass. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U111 Sludge Drying System

Subject Item: CD3301 Stand by Carbon Adsorber 002

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The minimum weight of the carbon adsorber is 11,250 lbs [N.J.A.C. 7:27-8.13(a)] [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	At least one of the standby Carbon Adsorber system (CD3301 or CD3302) will stay operational at all times. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
3	Replacement of carbon shall occur when outlet concentration reach >=5 ppmv hydrogen sulfide or every 5 years, whichever is earlier. [N.J.A.C. 7:27-8.13(a)]	Monitored by other method (provide description) each month during operation, based on an instantaneous determination. Monitoring using either concentration readings or hour/time monitor. [N.J.A.C. 7:27- 8.13(h)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The permitee shall record the date and time, and the hydrogen sulfide concentration reading once every month and during each event of carbon replacement. [N.J.A.C. 7:27-8.13(h)]	Comply with the requirement: Upon occurrence of event. [N.J.A.C. 7:27-8.13(a)]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U111 Sludge Drying System

Subject Item: CD3302 Stand by Carbon Adsorber 003

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The minimum weight of the carbon adsorber is 11,250 lbs [N.J.A.C. 7:27-8.13(a)] [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	At least one of the standby Carbon Adsorber system (CD3301 or CD3302) will stay operational at all times. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
3	Replacement of carbon shall occur when outlet concentration reach >=5 ppmv hydrogen sulfide or every 5 years, whichever is earlier. [N.J.A.C. 7:27-8.13(a)]	Monitored by other method (provide description) each month during operation, based on an instantaneous determination. Monitoring using either concentration readings or hour/time monitor. [N.J.A.C. 7:27- 8.13(h)]	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The permitee shall record the date and time, and the hydrogen sulfide concentration reading once every month and during each event of carbon replacement. [N.J.A.C. 7:27-8.13(h)]	Comply with the requirement: Upon occurrence of event. [N.J.A.C. 7:27-8.13(a)]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U111 Sludge Drying System

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	TSP <= 2.03 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
2	PM-10 (Total) <= 2.02 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	VOC (Total) <= 6.82 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
4	SO2 <= 0.009 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
5	HAPs (Total) <= 0.74 tons/yr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
6	Acetaldehyde <= 0.68 tons/yr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
7	Hydrogen sulfide <= 0.242 tons/yr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
8	TSP <= 0.5 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
9	PM-10 (Total) <= 0.5 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
10	Hydrogen sulfide <= 0.06 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
11	Acetaldehyde <= 0.68 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
12	VOC (Total) <= 1.705 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
13	HAPs (Total) <= 0.188 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
14	Maximum No. of Billable Compliance Inspections <= 2 inspections over the life of the Operating Certificate. The permittee will be invoiced for a service fee per inspection pursuant to N.J.A.C. 7:27-8.6 after the periodic compliance inspection is conducted. [N.J.A.C. 7:27- 8.13(e)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS1 Inlet Screw Conveyor 001**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Sludge Feed Rate <= 3,000 dry pounds/hr each. [N.J.A.C. 7:27- 8.13(h)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring each hour during operation. [N.J.A.C. 7:27-8.13(d)1]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system each hour during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(d) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

OS2 Inlet Screw Conveyor 002

Operating Scenario:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Sludge Feed Rate <= 3,000 dry pounds/hr each. [N.J.A.C. 7:27- 8.13(h)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring each hour during operation. [N.J.A.C. 7:27-8.13(d)1]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system each hour during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS3 Wet Cake Silo 001**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The wet cake silo is a vertical fixed roof tank and is designed to fill from the top. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	The air flow from each wet cake silo is vented directly to the carbon adsorber. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
3	The maximum volume of the wet cake silo is 2700 cubic feet. The wet cake silo dimensions are 13.5 ft (dia) x 19.0 ft (h). [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

OS4 Wet Cake Silo 002, OS5 Wet Cake Silo 003, OS6 Wet Cake Silo 004

Operating Scenario:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The wet cake silo is a vertical fixed roof tank and is designed to fill from the top. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	The air flow from each wet cake silo is vented directly to the carbon adsorber. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
3	The maximum volume of the wet cake silo is 2700 cubic feet. The wet cake silo dimensions are 13.5 ft (dia) x 19.0 ft (h). [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS7 Sludge Dryer 001 - normal operation using CD3301 or normal operation using CD3302.**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Sludge Feed Rate <= 24 tons/day (dry sludge to discharge conveyor per each dryer.). [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(d)1]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	VOC (Total) <= 0.568 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
3	Acetaldehyde <= 0.056 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	Hydrogen sulfide <= 0.0004 lb/hr. [N.J.A.C. 7:27- 7.13(a)]	None.	None.	None.
5	TSP <= 0.019 lb/hr at the outlet of the wet electrostatic precipitator before the biofilter. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS8 Sludge Dryer 002 - normal operation using CD3301 or normal operation using CD3302**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Sludge Feed Rate <= 24 tons/day (dry sludge to discharge conveyor per each dryer.). [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(d)1]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	VOC (Total) <= 0.586 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
3	Acetaldehyde <= 0.056 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	Hydrogen sulfide <= 0.0004 lb/hr. [N.J.A.C. 7:27- 7.13(a)]	None.	None.	None.
5	TSP <= 0.019 lb/hr at the outlet of the wet electrostatic precipitator before the biofilter. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS9 Sludge Dryer 003 - normal operation using CD3301 or normal operation using CD3302**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Sludge Feed Rate <= 24 tons/day (dry sludge to discharge conveyor per each dryer.). [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(d)1]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	VOC (Total) <= 0.586 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
3	Acetaldehyde <= 0.056 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	Hydrogen sulfide <= 0.0004 lb/hr. [N.J.A.C. 7:27- 7.13(a)]	None.	None.	None.
5	TSP <= 0.019 lb/hr at the outlet of the wet electrostatic precipitator before the biofilter. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U111 Sludge Drying System

Operating Scenario: OS10 Discharge Screw Conveying System 001

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Sludge Feed Rate <= 2,000 dry pounds/hr each. [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(d)1]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS11 Discharge Screw Conveying System 002, OS12 Discharge Screw Conveying System 003, OS13 Pneumatic Conveying System 001**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Sludge Feed Rate <= 2,000 dry pounds/hr each. [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(d)1]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U111 Sludge Drying System

Operating Scenario: OS14 Pneumatic Conveying System 002, OS15 Pneumatic Conveying System 003

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Maximum Sludge Feed Rate <= 2,000 dry pounds/hr each. [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(d)1]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

OS16 Product Silo 001

Operating Scenario:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	TSP <= 0.11 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	The product storage silo is a vertical fixed roof tank and is designed to fill from the top. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
3	The product storage silo is required to be operated with dust collectors installed to reduce total suspended particulate emissions by 99.99 percent. The dust collectors are 6 Modu Kleen cartridge filters or equivalent cartridge filters for purposes of reducing emissions of total suspended particulate emissions. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	The maximum volume of the product storage silo is 5300 cubic feet. The product storage silo dimensions are 13.5 ft (dia) x 43.5 ft (h). [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

OS17 Product Silo 002

Operating Scenario:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	TSP <= 0.11 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	The product storage silo is a vertical fixed roof tank and is designed to fill from the top. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
3	The product storage silo is required to be operated with dust collectors installed to reduce total suspended particulate emissions by 99.99 percent. The dust collectors are 6 Modu Kleen cartridge filters or equivalent cartridge filters for purposes of reducing emissions of total suspended particulate emissions. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	The maximum volume of the product storage silo is 5300 cubic feet. The product storage silo dimensions are 13.5 ft (dia) x 43.5 ft (h). [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS18 Truck Loading**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The sludge dryer room air ventilation system shall operate at all times when the sludge dryer, product storage silo, pneumatic conveyor or truck loading area operates. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
2	The truck loading area shall be equipped with a dust collector to reduce total suspended particulate emissions. The dust collector is designed to operate with 4 Modu Kleen cartridges or equivalent. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
3	All sludge and dried sludge shall be transported in qualified odor minimization vessels. "Qualified odor minimization vessels" means enclosed vessels utilized for the transportation of sludge or dried sludge which to the maximum extent possible will minimize the emission of odor and dust, as approved by the Authority, such approval not to be unreasonably withheld. The qualified odor minimization vessel shall be clearly marked to meet the specifications approved by Camden County Municipal Utilities Authority. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS19 Sludge Dryer 001 - bypass operation using CD3301 or CD3302**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Max Sludge Feed rate <= 24 tons/day (dry sludge to discharge conveyor per each dryer) [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(h)]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(h)]	None.
2	VOC (Total) <= 0.568 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
3	Acetaldehyde <= 0.056 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	Hydrogen sulfide <= 0.02 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
5	PM-10 (Total) <= 0.094 lb/hr at the outlet of Venturi scrubber, when WetESP is not operating. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS20 Sludge Dryer 002 - bypass operation using CD3301 or CD3302**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Max Sludge Feed rate <= 24 tons/day (dry sludge to discharge conveyor per each dryer) [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(h)]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(h)]	None.
2	VOC (Total) <= 0.568 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
3	Acetaldehyde <= 0.056 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	Hydrogen sulfide <= 0.02 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
5	PM-10 (Total) <= 0.094 lb/hr at the outlet of Venturi scrubber, when WetESP is not operating. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U111 Sludge Drying System**

Operating Scenario: **OS21 Sludge Dryer 003 - bypass operation using CD3301 or CD3302**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Max Sludge Feed rate <= 24 tons/day (dry sludge to discharge conveyor per each dryer) [N.J.A.C. 7:27- 8.13(a)]	Maximum Sludge Feed Rate: Monitored by sludge feed/charge rate monitoring once per shift during operation. [N.J.A.C. 7:27-8.13(h)]	Maximum Sludge Feed Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system once per shift during operation. [N.J.A.C. 7:27- 8.13(h)]	None.
2	VOC (Total) <= 0.568 lb/hr. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
3	Acetaldehyde <= 0.056 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
4	Hydrogen sulfide <= 0.02 lb/hr. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
5	PM-10 (Total) <= 0.094 lb/hr at the outlet of Venturi scrubber, when WetESP is not operating. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U112 Thermal Oil Heaters

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Conduct a comprehensive stack test at emission points PT3111 and PT3112 to demonstrate compliance with the CO, NOx and particulates TSP and PM10 emission limits initially. 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- 8.4(f)]	Monitored by stack emission testing once initially, based on the averaging period as per Department approved test method. Unless otherwise approved in the stack test protocol or by the Department, each test run shall be 60 minutes in sampling duration. Stack test shall be conducted for CO, NOx, TSP and PM10. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by stack test results once initially in a log book or computer accessible data system. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: Once initially. Submit a stack test protocol to the Bureau of Technical Services (BTS) at PO Box 437, Trenton, NJ 08625 within 60 days from the date of the approved initial preconstruction permit. Within 30 days of protocol approval, the permittee must contact BTS at 609-530-4041 to schedule a mutually acceptable test date. The stack test must be conducted within 60 days of the approval of the protocol, but no later than 180 days after initial startup of the new source. A full stack test report must be submitted to BTS and a certified summary test report, as described in the protocol, must be submitted to the Southern Regional Enforcement Office within 45 days by BTS before this permit is approved - The test results must be certified by a licensed professional engineer or certified industrial hygienist. A copy of the certified summary test results must be submitted with the permit renewal application due at least 12 months prior to expiration of the Permit. [N.J.A.C. 7:27-8.4(f)]
2	TSP <= 0.9 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	TSP: Monitored by calculations annually. [N.J.A.C. 7:27- 8.13(d)1]	TSP: Recordkeeping by manual logging of parameter or storing data in a computer data system annually. [N.J.A.C. 7:27- 8.13(d)3]	None.
3	PM-10 (Total) <= 0.9 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	PM-10 (Total): Monitored by calculations annually. [N.J.A.C. 7:27- 8.13(d)1]	PM-10 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system annually. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
4	VOC (Total) <= 0.56 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	VOC (Total): Monitored by calculations annually. [N.J.A.C. 7:27- 8.13(d)1]	VOC (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system annually. [N.J.A.C. 7:27- 8.13(d)3]	None.
5	NOx (Total) <= 8.04 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	NOx (Total): Monitored by calculations annually. [N.J.A.C. 7:27- 8.13(d)1]	NOx (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system annually. [N.J.A.C. 7:27- 8.13(d)3]	None.
6	CO <= 9.68 tons/yr. [N.J.A.C. 7:27-8.13(h)]	CO: Monitored by calculations annually. [N.J.A.C. 7:27- 8.13(d)1]	CO: Recordkeeping by manual logging of parameter or storing data in a computer data system annually. [N.J.A.C. 7:27- 8.13(d)3]	None.
7	SO2 <= 0.36 tons/yr. [N.J.A.C. 7:27-8.13(h)]	SO2: Monitored by calculations annually. [N.J.A.C. 7:27- 8.13(d)1]	SO2: Recordkeeping by manual logging of parameter or storing data in a computer data system annually. [N.J.A.C. 7:27- 8.13(d)3]	None.
8	Maximum No. of Billable Compliance Inspections <= 4 inspections over the life of the Operating Certificate. The permittee will be invoiced for a service fee per inspection pursuant to N.J.A.C. 7:27-8.6 after the periodic compliance inspection is conducted. [N.J.A.C. 7:27- 8.13(e)]	None.	None.	None.
9	All requests, reports, applications, submittal, and other communications required by 40 CFR 60 shall be submitted in duplicate to the EPA Region II Administrator. (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)]
10	Submit copy of all requests, reports, applications, submittals, and other communications required by 40 CFR 60 to the NJDEP Regional Office Enforcement Office. (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)]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
11	Notify the Administrator of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice. (NSPS Subpart A) [40 CFR 60.7(a)(4)]	None.	None.	None.
12	Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (NSPS Subpart A) [40 CFR 60.7(b)]	None.	Other: Recordkeeping by manual logging of event or storing data in a computer data system upon occurrence of event. Maintain readily accessible records of the occurrence and duration of any startup, shutdown, or malfunction in a logbook.[40 CFR 60.7(b)].	None.
13	Maintain a file of all measurements. (NSPS Subpart A) [40 CFR 60.7(f)]	None.	Other: Recordkeeping by manual logging of all measurements or storing data in a computer data system continuously. Maintain a file of all measurements, incl. continuous monitoring systems, monitoring device, & performance testing measurements: all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks: adjustments & maintenance performed on these systems or devices: & all other information required by this part recorded in a permanent form suitable for inspections. The file shall be retained for a least 2 years following the date of such measurements, maintenance, reports, & records.[40 CFR 60.7(f)].	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
14	At all times, including periods of startup, 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 operating and maintenance procedures, and inspection of the source. (NSPS Subpart A) [40 CFR 60.11(d)]	None.	None.	None.
15	No owner or operator 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.
16	The owner or operator shall notify the Administrator of the proposed replacement of components. (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)]
17	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.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
18	Sulfur Content in Fuel <= 0.5 weight % for affected facility that combusts oil. (NSPS Subpart Dc). [40 CFR 60.42c(d)]	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 fuel supplier certifications pursuant to 40 CFR Part 60.48c(f) once per bulk fuel shipment. Records of the name of the oil supplier, a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil as specified at 40 CFR 60.41c, and the sulfur content of the oil shall be maintained. [40 CFR 60.48c(e)(11)]	Submit a report: Semi-annually beginning on the 30th day of the 6th month following initial performance tests. The owner or operator shall submit fuel supplier certifications, and owner/operator certification that the fuel supplier's certifications are representative of all the fuel combusted during the reporting period [40 CFR 60.48c(e)11] and. [40 CFR 60.48c(j)]
19	The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by 40 CFR 60.7. This notification shall include information specified in 40 CFR 60.48c(a)1 through (a)4. (NSPS Subpart Dc) [40 CFR 60.48c(a)]	None.	None.	Submit a report: Upon occurrence of event. [40 CFR 60.48c(a)]
20	The owner or operator of each affected facility subject to the SO2 emission limits or fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall maintain records, and report to the Administrator, all information specified at 40 CFR 60.48c(e). (NSPS Subpart Dc) [40 CFR 60.48c(d)]	None.	Other: The owner or operator shall record all applicable information specified at 40 CFR 60.48c(e)(1) through (e)(11). [40 CFR 60.48c(d)].	Submit a report: Semi-annually beginning on the 30th day of the 6th month following initial performance tests. The owner or operator shall report to the Administrator all applicable information specified at 40 CFR 60.48c(e)(1) through (11). [40 CFR 60.48c(d)] and. [40 CFR 60.48c(j)]
21	The owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f), fuels not subject to an emission standard (excluding opacity), or a mixture of these fuels shall record and maintain records of each fuel combusted during each calendar month. (NSPS Subpart Dc) [40 CFR 60.48c(g)(2)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [40 CFR 60.48c(g)(2)]	None.
22	The owner or operator shall maintain all required records for a period of two years following the date of such record. (NSPS Subpart Dc) [40 CFR 60.48c(i)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
23	The permittee shall submit to the Administrator all reports required under 40 CFR 60.40, et. seq. each six-month period. (NSPS Subpart Dc) [40 CFR 60.48c(j)]	None.	None.	Submit a report: Semi-annually beginning on the 30th day of the 6th month following initial performance tests. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period. [40 CFR 60.48c(j)]
24	Sulfur Content in Fuel <= 0.5 weight % for affected facility that combusts oil. [40 CFR 60.42c(d)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records once per bulk fuel shipment. [40 CFR 60.44c(h)]	Sulfur Content in Fuel: Recordkeeping by fuel supplier certifications pursuant to 40 CFR Part 60.48c(f) once per bulk fuel shipment. Records of the name of the oil supplier, a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil as specified at 40 CFR 60.41c, and the sulfur content of the oil shall be maintained. [40 CFR 60.48c(e)(11)]	Submit a report: Semi-annually beginning on the 30th day of the 6th month following initial performance tests. The owner or operator shall submit fuel supplier certifications, and the owner/operator certification that the fuel supplier's certifications submitted represent all of the fuel combusted during the reporting period. [40 CFR 60.48c(e)(11)]

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
25	Opacity <= 20 % except for one 6-minute period per hour of not more than 27% opacity. This opacity standard does not apply during periods of startup, shutdown or malfunction. [40 CFR 60.43c(c)]	Opacity: Monitored by stack emission testing at the approved frequency, based on 6 minute blocks. An initial performance test shall be conducted as required at 40 CFR 60.8 and 40 CFR 60.11 using test Method 9 specified at 40 CFR 60.45c(a)(8). The subsequent performance tests shall be conducted according to the applicable schedule in 40 CFR 60.47c(a)(1) as follows: per (a)(1)(i), if no visible emissions are observed during the most recent test a subsequent Method 9 performance test shall be completed within 12 calendar months from the date that the most recent test was conducted or, per (a)(1)(ii through iv), if visible emissions are observed during the most recent test, the frequency of subsequent testing shall be either 6 calendar months, 3 calendar months, or 30 calendar days depending on the results of the most recent test. Per 40 CFR 60.47c(a)2, if the maximum 6-min opacity is less than 10 percent during the most recent Method 9 test, the subsequent performance tests may be conducted, as an alternative to Method 9, by Method 22 on operating days the boiler fires fuel oil for which an opacity standard is applicable. Per 40 CFR 60.47c(a)3, if the maximum 6-min opacity is less than 10 percent during the most recent Method 9 test, the subsequent performance tests may be conducted, as an alternative to Method 9, by a digital opacity compliance system according to a site-specific monitoring plan approved by the EPA Administrator. [40 CFR 60.47c(a)]	Opacity: Recordkeeping by stack test results at the approved frequency. If applicable, a copy of the site-specific monitoring plan for a digital opacity compliance system approved by the EPA Administrator per 40 CFR 60.47c(a)(3) shall be kept on site. [40 CFR 60.45c(a)]	Submit a report: Upon occurrence of event. The owner or operator shall submit to the Administrator the performance test data from the initial and any subsequent performance tests. [40 CFR 60.48c(b)]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
26	Particulate Emissions <= 0.03 lb/MMBTU except during periods of startup, shutdown, or malfunction. This limit applies to an affected facility that commences construction, reconstruction, or modification after February 28, 2005, combusts coal, oil, wood, or a mixture of these fuels and has a heat input capacity of 30 MMBtu/hr or greater. [40 CFR 60.43c(e)(1)]	Particulate Emissions: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. Performance tests shall be conducted once initially as specified at 40 CFR 60.8 and subsequently as requested by the Administrator using test methods as specified at 40 CFR 60.45c. [40 CFR 60.45c(a)]	Particulate Emissions: Recordkeeping by stack test results once initially. [40 CFR 60.45c(a)]	Submit a report: Upon occurrence of event. The owner or operator shall submit to the Administrator the performance test data from the initial and all subsequent performance tests. [40 CFR 60.48c(b)]
27	The unit that commences construction, reconstruction, or modification after February 28, 2005 and combusts only oil that contains no more than 0.5% S or a mixture of 0.5% S oil with other fuels not subject to a PM standard under 40 CFR 60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO2 emissions is not subject to the PM limit in 40 CFR 60.43c(e). [40 CFR 60.43c(e)(4)]	Monitored by review of fuel delivery records once per bulk fuel shipment. The owner or operator shall demonstrate compliance via fuel certification per 40 CFR 60.48c(f). [40 CFR 60.45c(d)]	Recordkeeping by fuel supplier certifications pursuant to 40 CFR Part 60.48c(f) once per bulk fuel shipment. The owner or operator shall follow the applicable procedures under 40 CFR 60.48c(f). [40 CFR 60.48c(f)]	None.
28	All SO2, oxygen and carbon dioxide monitors shall be installed, evaluated and operated as specified at 40 CFR 60.46c(c). [40 CFR 60.46c(c)]	None.	None.	None.
29	As an alternative to operating a SO2 CEMS at the inlet of the SO2 control device (or outlet of the steam generating unit if no SO2 control device is used), an owner operator may determine the average SO2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a SO2 CEMS at the outlet of the SO2 control device (or outlet of the steam generating unit if no SO2 control device is used), an owner operator may determine the average SO2 emission rate by using Method 6B of Appendix A to NSPS. The procedures described in 40 CFR 60.46c(d)(1) through (3) shall be followed. [40 CFR 60.46c(d)]	Other: Monitoring shall be conducted in accordance with 40 CFR 60.46c(d)(1) through (3). [40 CFR 60.46c(d)].	Other: Recordkeeping shall be conducted in accordance with 40 CFR 60.46c(d)(1) through (3). [40 CFR 60.46c(d)].	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
30	The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by 40 CFR 60.7. This notification shall include information specified in 40 CFR 60.48c(a)1 through (a)4. [40 CFR 60.48c(a)]	None.	None.	Submit a report: Upon occurrence of event. [40 CFR 60.48c(a)]
31	The owner or operator shall submit excess emission reports for any excess opacity emissions to the Administrator. [40 CFR 60.48c(c)]	None.	None.	Submit an Excess Emissions and Monitoring Systems Performance Report (EEMPR): Semi-annually beginning on the 30th day of the 6th month following initial performance tests. The owner or operator shall submit excess emissions reports for any reporting period for which there are excess opacity emissions and maintain records according to the requirements specified in 40 CFR 60.48c(c)(1) through (c)(3). If there are no excess emissions during the reporting period, the owner or operator shall submit a report stating this semi-annually. [40 CFR 60.48c(c)]
32	The owner or operator of each affected facility subject to the SO2 emission limits or fuel oil sulfur limits, or percent reduction requirements under 40 CFR 60.42c shall maintain records, and report to the Administrator, all information specified at 40 CFR 60.48c(e). [40 CFR 60.48c(d)]	None.	Other: The owner or operator shall record all applicable information specified at 40 CFR 60.48c(e)(1) through (e)(11). [40 CFR 60.48c(d)].	Submit a report: Semi-annually beginning on the 30th day of the 6th month following initial performance tests. The owner or operator shall report to the Administrator all applicable information specified at 40 CFR 60.48c(e)(1) through (11). [40 CFR 60.48c(d)]
33	The owner or operator shall record and maintain records of the amounts of each fuel combusted in the unit each operating day. [40 CFR 60.48c(g)(1)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system daily. [40 CFR 60.48c(g)(1)]	None.
34	The owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in 40 CFR 60.48c(f), fuels not subject to an emission standard (excluding opacity), or a mixture of these fuels shall record and maintain records of each fuel combusted during each calendar month. [40 CFR 60.48c(g)(2)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [40 CFR 60.48c(g)(2)]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

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Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
35	The owner or operator of an affected facility or multiple affected facilities located on a contiguous property where the only fuels combusted in any steam generating unit (including steam generating units not subject to NSPS Dc) at that property are natural gas, wood or distillate oil may record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month. [40 CFR 60.48c(g)(3)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [40 CFR 60.48c(g)(3)]	None.
36	The owner or operator shall maintain all required records for a period of two years following the date of such record. [40 CFR 60.48c(i)]	None.	None.	None.
37	The permittee shall submit to the Administrator all reports required under 40 CFR 60.40, et. seq. each six-month period. [40 CFR 60.48c(j)]	None.	None.	Submit a report: Semi-annually beginning on the 30th day of the 6th month following initial performance tests. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period. [40 CFR 60.48c(j)]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U112 Thermal Oil Heaters

Operating Scenario: OS1 Thermal Oil Heater 1 burning Natural Gas

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No visible emissions. As specified in N.J.A.C. 7:27-3.2(c), this provision does not apply to smoke which is visible for a period of time of not longer than three (3) minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 3.2(a)]	None.	None.	None.
2	Particulate Emissions <= 0.1 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	VOC (Total) <= 0.06 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
4	CO <= 1.08 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	SO2 <= 0.02 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
6	NOx (Total) <= 0.89 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
7	The permittee shall annually adjust the combustion process as specified at N.J.A.C. 7:27-19.16(a): Inspect burner, and clean or replace necessary components. Inspect flame patterns and the system controlling air-to-fuel ratio and make necessary adjustments to ensure optimum burner efficiency. [N.J.A.C. 7:27-19.7(a)1]		Recordkeeping by manual logging of parameter annually. The permittee shall record the date and times of the adjustment; the name, title and affiliation of the person who made the adjustment; the concentration of NOx and CO in the effluent stream in ppm after each adjustment was made; and the concentration of O2 at which the NOx and CO concentrations were measured. [N.J.A.C. 7:27-19.16(c)]	
8	Maximum Gross Heat Input <= 15.5 MMBTU/hr (HHV). [N.J.A.C. 7:27-8.13(a)]	Maximum Gross Heat Input: Monitored by documentation of construction once initially from manufacturer specifications or operations and maintenance manual. [N.J.A.C. 7:27- 8.13(a)]	Maximum Gross Heat Input: Recordkeeping by other recordkeeping method (provide description) at no required frequency Maintain the manufacturers literature or operation and maintenance manual at the sludge dryer facility at all times during operation. The maximum gross heat input rate as specified by the manufacturer should be available on inspection when requested by the Department Bureau of Enforcement Services inspector. [N.J.A.C. 7:27- 8.13(a)]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U112 Thermal Oil Heaters

Operating Scenario: OS2 Thermal Oil Heater 2 burning Natural Gas

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No visible emissions. As specified in N.J.A.C. 7:27-3.2(c), this provision does not apply to smoke which is visible for a period of time of not longer than three (3) minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 3.2(a)]	None.	None.	None.
2	Particulate Emissions <= 0.1 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	VOC (Total) <= 0.06 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
4	CO <= 1.08 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	SO2 <= 0.02 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
6	NOx (Total) <= 0.89 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
7	The permittee shall annually adjust the combustion process as specified at N.J.A.C. 7:27-19.16(a): Inspect burner, and clean or replace necessary components. Inspect flame patterns and the system controlling air-to-fuel ratio and make necessary adjustments to ensure optimum burner efficiency. [N.J.A.C. 7:27-19.7(a)1]		Recordkeeping by manual logging of parameter annually. The permittee shall record the date and times of the adjustment; the name, title and affiliation of the person who made the adjustment; the concentration of NOx and CO in the effluent stream in ppm after each adjustment was made; and the concentration of O2 at which the NOx and CO concentrations were measured. [N.J.A.C. 7:27-19.16(c)]	
8	Maximum Gross Heat Input <= 15.5 MMBTU/hr (HHV). [N.J.A.C. 7:27-8.13(a)]	Maximum Gross Heat Input: Monitored by documentation of construction once initially from manufacturer specifications or operations and maintenance manual. [N.J.A.C. 7:27- 8.13(a)]	Maximum Gross Heat Input: Recordkeeping by other recordkeeping method (provide description) at no required frequency Maintain the manufacturers literature or operation and maintenance manual at the sludge dryer facility at all times during operation. The maximum gross heat input rate as specified by the manufacturer should be available on inspection when requested by the Department Bureau of Enforcement Services inspector. [N.J.A.C. 7:27- 8.13(a)]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U112 Thermal Oil Heaters

Operating Scenario: OS3 Thermal Oil Heater 1 burning Fuel Oil

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No visible emissions. As specified in N.J.A.C. 7:27-3.2(c), this provision does not apply to smoke which is visible for a period of time of not longer than three (3) minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 3.2(a)]	Monitored by visual determination each week during operation, based on an instantaneous determination. The permittee shall conduct the visual inspection during daylight hours. Visual inspections shall consist of a visual survey to identify if the stack has visible emissions (other than condensed water vapor) greater than the prescribed standard. If visible emissions are observed and the corrective action taken does not correct the opacity problem within 24 hours, the permittee shall perform a check via a certified opacity reader, in accordance with N.J.A.C. 7:27B-2. Such test shall be conducted each operating day until corrective action is taken to successfully correct the opacity problem. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter each week during operation. The permittee shall maintain the following records: (1) Date and time of inspection; (2) Emission point number; (3) Operational status of equipment; (4) Observed results and conclusions; (5) Description of corrective actions taken if necessary; (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. 7:27-8.13(d)3]	Conduct an inspection: Upon occurrence of event. If visible emissions are observed, the permittee shall verify that the equipment and/ or control device causing the emission is operating according to manufacturer's specifications and the compliance plan. If the equipment or control device is not operating properly, the permittee shall take corrective action immediately to eliminate the excess emissions. The permittee shall report any permit violation to the Department pursuant to N.J.A.C. 7:27-8.13(d)4. [N.J.A.C. 7:27- 8.13(d)4]
2	Particulate Emissions <= 0.27 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	VOC (Total) <= 0.06 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
4	CO <= 1.09 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	NOx (Total) <= 1.35 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
6	SO2 <= 0.75 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	Hours of Operation While Firing No. 2 Fuel Oil <= 200 hr/yr. [N.J.A.C. 7:27- 8.13(h)]	Hours of Operation While Firing No. 2 Fuel Oil: Monitored by hour/time monitor daily, based on a 12 calendar month average. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27- 8.13(d)2]	Hours of Operation While Firing No. 2 Fuel Oil: Recordkeeping by manual logging of parameter annually. [N.J.A.C. 7:27-8.13(d)3]	
8	Sulfur Content in Fuel <= 0.2 weight %. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records once per bulk fuel shipment, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)1]	Sulfur Content in Fuel: Recordkeeping by fuel certification receipts once per bulk fuel shipment. [N.J.A.C. 7:27- 8.13(d)1]	
9	The permittee shall annually adjust the combustion process as specified at N.J.A.C. 7:27-19.16(a): Inspect burner, and clean or replace necessary components. Inspect flame patterns and the system controlling air-to-fuel ratio and make necessary adjustments to ensure optimum burner efficiency. [N.J.A.C. 7:27-19.7(a)1]		Recordkeeping by manual logging of parameter annually. The permittee shall record the date and times of the adjustment; the name, title and affiliation of the person who made the adjustment; the concentration of NOx and CO in the effluent stream in ppm after each adjustment was made; and the concentration of O2 at which the NOx and CO concentrations were measured. [N.J.A.C. 7:27-19.16(c)]	

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U112 Thermal Oil Heaters

Operating Scenario: OS4 Thermal Oil Heater 2 burning Fuel Oil

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	No visible emissions. As specified in N.J.A.C. 7:27-3.2(c), this provision does not apply to smoke which is visible for a period of time of not longer than three (3) minutes in any consecutive 30-minute period. [N.J.A.C. 7:27- 3.2(a)]	Monitored by visual determination each week during operation, based on an instantaneous determination. The permittee shall conduct the visual inspection during daylight hours. Visual inspections shall consist of a visual survey to identify if the stack has visible emissions (other than condensed water vapor) greater than the prescribed standard. If visible emissions are observed and the corrective action taken does not correct the opacity problem within 24 hours, the permittee shall perform a check via a certified opacity reader, in accordance with N.J.A.C. 7:27B-2. Such test shall be conducted each operating day until corrective action is taken to successfully correct the opacity problem. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter each week during operation. The permittee shall maintain the following records: (1) Date and time of inspection; (2) Emission point number; (3) Operational status of equipment; (4) Observed results and conclusions; (5) Description of corrective actions taken if necessary; (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. 7:27-8.13(d)3]	Conduct an inspection: Upon occurrence of event. If visible emissions are observed, the permittee shall verify that the equipment and/ or control device causing the emission is operating according to manufacturer's specifications and the compliance plan. If the equipment or control device is not operating properly, the permittee shall take corrective action immediately to eliminate the excess emissions. The permittee shall report any permit violation to the Department pursuant to N.J.A.C. 7:27-8.13(d)4. [N.J.A.C. 7:27- 8.13(d)4]
2	Particulate Emissions <= 0.27 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	VOC (Total) <= 0.06 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
4	CO <= 1.09 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	NOx (Total) <= 1.35 lb/hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
6	SO2 <= 0.75 lb/hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	Hours of Operation While Firing No. 2 Fuel Oil <= 200 hr/yr. [N.J.A.C. 7:27- 8.13(h)]	Hours of Operation While Firing No. 2 Fuel Oil: Monitored by hour/time monitor daily, based on a 12 calendar month average. The permittee shall install, calibrate and maintain the monitor(s) in accordance with the manufacturer's specifications. The monitor(s) shall be ranged such that the allowable value is approximately mid-scale of the full range current/voltage output. [N.J.A.C. 7:27- 8.13(d)2]	Hours of Operation While Firing No. 2 Fuel Oil: Recordkeeping by manual logging of parameter annually. [N.J.A.C. 7:27-8.13(d)3]	
8	Sulfur Content in Fuel <= 0.2 weight %. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by review of fuel delivery records once per bulk fuel shipment, based on no averaging period. [N.J.A.C. 7:27- 8.13(d)1]	Sulfur Content in Fuel: Recordkeeping by fuel certification receipts once per bulk fuel shipment. [N.J.A.C. 7:27- 8.13(d)1]	
9	The permittee shall annually adjust the combustion process as specified at N.J.A.C. 7:27-19.16(a): Inspect burner, and clean or replace necessary components. Inspect flame patterns and the system controlling air-to-fuel ratio and make necessary adjustments to ensure optimum burner efficiency. [N.J.A.C. 7:27-19.7(a)1]		Recordkeeping by manual logging of parameter annually. The permittee shall record the date and times of the adjustment; the name, title and affiliation of the person who made the adjustment; the concentration of NOx and CO in the effluent stream in ppm after each adjustment was made; and the concentration of O2 at which the NOx and CO concentrations were measured. [N.J.A.C. 7:27-19.16(c)]	

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

U2, U3 and U4 0PCP180001 – Two CHPs and Four Digester Tanks, Dual Fuel Boilers, Emergency Generator Engine

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U2 Two Combined Heat and Power (CHP) units, and four Sludge Digester Tanks controlled by waste gas Flare**
Subject Item: **CD3801 Biogas Emergency Flare**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The owner or operator shall install, operate, and maintain a Varec Enclosed Flare, Model 244E, in accordance with manufacturer's specifications and instructions. The flare will primarily burn digester gas and natural gas will be used as auxilliary fuel. [N.J.A.C. 7:27-16.13(a)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. Records of maintenance and repair shall be maintained. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	Maximum Gross Heat Input <= 32.8 MMBTU/hr (HHV) based on a HHV of 608 Btu/scf. [N.J.A.C. 7:27- 8.13(a)]	Maximum Gross Heat Input: Monitored by documentation of construction once initially. Review manufacturer's specifications to ensure compliance. [N.J.A.C. 7:27- 8.13(d)1]	Maximum Gross Heat Input: Recordkeeping by manual logging of parameter or storing data in a computer data system once initially and maintain all records on site at all times. [N.J.A.C. 7:27- 8.13(d)3]	None.
3	Operating Temperature >= 1,400 degrees F at the first section of the combustion stack where actual combustion occurs, except during start-up and shutdown. [N.J.A.C. 7:27- 8.13(h)]	Operating Temperature: Monitored by temperature instrument continuously, based on 6 minute blocks average. The permittee shall install, operate and maintain an alarm or other operational warning system, properly shielded from direct contact with the flame. The alarm shall be designed to sound at any time flare temperature is detected to be less than the permitted 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. 7:27-8.13(d)2]	Operating Temperature: Recordkeeping by strip chart or data acquisition (DAS) system continuously. [N.J.A.C. 7:27- 8.13(d)3]	None.
4	The permittee shall monitor the flare pilot burners by a UV scanner or any equivalent device to ensure the presence of a pilot flame. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
5	The permittee shall install, operate and maintain an automatic system (or equivalent) on the flare to relight the flare pilots to maintain flare combustion. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
6	The flare shall have a smokeless design. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
7	Design VOC Control Efficiency >= 95 %. [N.J.A.C. 7:27-16.13(a)]	Design VOC Control Efficiency: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. [N.J.A.C. 7:27-8.13(d)1]	Design VOC Control Efficiency: Recordkeeping by stack test results once initially. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit [N.J.A.C. 7:27- 8.4(f)]
8	Digester gas that cannot be burned in the CHPs and the Boiler due to equipment breakdown and higher gas production than CHPs and the Boiler capacity shall be burned in the flare. [N.J.A.C. 7:27- 8.13(a)]	Monitored by fuel usage totalizing meter continuously, based on a consecutive 12 month period (rolling 1 month basis). Install a non-resettable gas totalizing meter at the inlet of the flare. [N.J.A.C. 7:27- 8.13(d)2]	Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permitttee shall maintain records of the amount of fuel flared during each calendar month and each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.
9	The owner or operator shall inspect the flare before May 1 annually 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)]	None.	Other: The owner or operator shall record the following in a permanently bound log book at the conclusion of each inspection: (1) name of person conducting the inspection; (2) date on which the inspection was 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 stating that the flare is currently being operated in compliance with the manufacturer's specifications.[N.J.A.C. 7:27-16.13(c)].	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2 Two Combined Heat and Power (CHP) units, and four Sludge Digester Tanks controlled by waste gas Flare

Subject Item: CD3802 Selective Catalytic Reduction for Combined Heat and Power engine 1, CD3803 Selective Catalytic Reduction for Combined Heat and Power engine 2

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The catalyst array(s) shall be maintained and replaced in accordance with the recommendations of the manufacturer, and as necessary based on indicated NOx emission levels. [N.J.A.C. 7:27- 8.13(d)]	None.	None.	None.
2	The SCR shall be operated at all times that the engine is operating. [N.J.A.C. 7:27-19]	None.	None.	None.
3	Temperature Downstream of SCR System >= 510 and Temperature Downstream of SCR System <= 932 degrees F Except during startup and shutdown. [N.J.A.C. 7:27- 8.13(a)]	Temperature Downstream of SCR System: Monitored by temperature instrument continuously, based on 6 minute blocks average. The temperature monitor shall be equipped with an alarm to sound at temperature below the acceptable limit.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- 8.13(d)2]	Temperature Downstream of SCR System: Recordkeeping by strip chart or data acquisition (DAS) system continuously. All records created in a calendar year shall be maintained on site for five additional calendar years, and made available to the Department for review, upon request. [N.J.A.C. 7:27- 8.13(d)3]	None.
4	The urea solution injection system shall be equipped with a NOx sensor that will monitor NOx concentration of the engine exhaust and automatically adjust the required amount of urea solution injection to the SCR to control the NOx emission to a preset limit based on the permitted NOx emission limit. Minimum concentration of urea in solution shall be 32.5%. [N.J.A.C. 7:27- 8.13(a)]	Other: The permittee shall monitor the NOx levels in the exhaust stream with a NOx sensor, a part of the ammonia injection system, that will determine the amount of ammonia needed to be injected to the SCR, continuously. The system shall be equipped with an audible alarm which shall signal if the system is not operating properly.[N.J.A.C. 7:27- 8.13(d)2].	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event If the alarm signals, records of each event shall be recorded along with the corrective action taken. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2 Two Combined Heat and Power (CHP) units, and four Sludge Digester Tanks controlled by waste gas Flare

Subject Item: CD3804 Oxidation Catalyst for Combined Heat and Power engine 1, CD3805 Oxidation Catalyst for Combined Heat and Power engine 2

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Temperature at Catalyst Bed >= 660 and Temperature at Catalyst Bed <= 1,010 degrees F Except during startup and shutdown. [N.J.A.C. 7:27- 8.13(d)]	Temperature at Catalyst Bed: Monitored by temperature instrument continuously. The temperature monitor shall be equipped with an alarm to indicate temperatures below the acceptable limit. 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. 7:27-8.13(d)2]	Temperature at Catalyst Bed: Recordkeeping by strip chart or data acquisition (DAS) system continuously. All records created in a calendar year shall be maintained on site for five additional calendar years, and made available to the Department for review, upon request. [N.J.A.C. 7:27- 8.13(d)]	None.
2	The catalyst array(s) shall be maintained and replaced in accordance with the recommendations of the Catalytic Oxidizer manufacturer, and as necessary based on emission levels indicated through portable emission monitoring. [N.J.A.C. 7:27-8.13(d)]	None.	None.	None.
3	The Catalytic Oxidizer shall be operated at all times that the engine is operating, except start-up or shutdown periods. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2 Two Combined Heat and Power (CHP) units, and four Sludge Digester Tanks controlled by waste gas Flare

Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	STACK TESTING SUMMARY: The permittee shall conduct INITIAL stack tests using a protocol approved by the Department to demonstrate compliance with emission limits for CO, NOx, VOC, Ammonia and Formaldehyde for the RICE, Equipment NJIDs E3802 and E3803, for operating scenarios OS NJIDs OS101, OS102, OS103 and OS104, as specified in this permit, in accordance with the state and federal requirements. 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- 8.4(f)]	Other: The stack test must be conducted within 60 days of the protocol approval or within 180 days from the date of start-up, whichever comes later. For an extension of due dates, the permittee shall request the approval, with proper justification, from REO prior to the due date. If approved, in writing, by the REO prior to the due date, the extension of dates for the stack test protocol submittal, stack test performance, or stack test report submittal would not constitute a permit revision. If a source is subject to federal requirements, extending the testing date beyond 180 days after the source's initial start-up requires prior approval from US EPA. [N.J.A.C. 7:27- 8.13(d)1].	Other: Recordkeeping as required under the applicable operating scenarios(s).[N.J.A.C. 7:27- 8.13(d)3].	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 preconstruction 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: http://www.epa.gov/ttnchie1/ert. 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. Unless otherwise specified in this permit, 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 from the date of testing. The test results must be certified by a licensed professional engineer or certified industrial hygienist. [N.J.A.C. 7:27- 8.4(f)]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
2	STACK TESTING SUMMARY: The permittee shall conduct subsequent stack tests every 8,760 hours or 3 years, whichever come first using a protocol approved by the Department to demonstrate compliance with emission limits for CO, NOx and VOC for the RICE, Equipment NJIDs E3802 and E3803, for operating scenarios OS NJIDs OS101, OS102, OS103 and OS104, as specified in this permit, in accordance with the state and federal requirements. 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- 8.4(f)]	Other: Monitoring as required under the applicable operating scenarios(s).[N.J.A.C. 7:27- 8.13(d)1].	Other: Recordkeeping as required under the applicable operating scenarios(s).[N.J.A.C. 7:27- 8.13(d)3].	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 180 days prior to the testing due date OR no later than 90 days prior to the testing due date, request EMS, in writing, to use a previously approved protocol. The protocol and test report must be prepared and submitted on a CD using the Electronic Reporting Tool (ERT) that is downloaded at: http://www.epa.gov/ttnchie1/ert , unless another format is approved by EMS. 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. Unless otherwise specified in this permit, 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 from the date of testing. The test results must be certified by a licensed professional engineer or certified industrial hygienist. . [N.J.A.C. 7:27- 8.4(f)]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	STACK TESTING SUMMARY: The permittee shall conduct stack tests once INITIALLY on the flare CD3801 using a protocol approved by the Department to demonstrate compliance with emission limits for CO, NOx, PM-10, PM-2.5, VOC, Methane and VOC (control efficiency), for the Equipment NJIDs E3303, E3304, E3305 and E3306 utilizing the biogas flare NJID CD3801 for operating scenarios OS NJIDs OS105, OS106, OS107 & OS108, as specified in this permit, in accordance with the state and federal requirements. 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- 8.4(f)]	Other: The stack test must be conducted within 60 days of the protocol approval or within 180 days from the date of start-up, whichever comes later. For an extension of due dates, the permittee shall request the approval, with proper justification, from REO prior to the due date. If approved, in writing, by the REO prior to the due date, the extension of dates for the stack test protocol submittal, stack test performance, or stack test report submittal would not constitute a permit revision. If a source is subject to federal requirements, extending the testing date beyond 180 days after the source's initial start-up requires prior approval from US EPA. [N.J.A.C. 7:27- 8.13(d)1].	Other: Recordkeeping as required under the applicable operating scenarios(s).[N.J.A.C. 7:27- 8.13(d)3].	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 preconstruction 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: http://www.epa.gov/ttnchie1/ert. 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. Unless otherwise specified in this permit, 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 from the date of testing. The test results must be certified by a licensed professional engineer or certified industrial hygienist. [N.J.A.C. 7:27- 8.4(f)]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
4	STACK TESTING SUMMARY: The permittee shall conduct subsequent (5-year) stack tests on the flare CD3801 using a protocol approved by the Department to demonstrate compliance with emission limits for CO, NOx and VOC, for the Equipment NJIDs E3303, E3304, E3305 and E3306 utilizing the biogas flare NJID CD3801 for operating scenarios OS NJIDs OS105, OS106, OS107 & OS108, as specified in this permit, in accordance with the state and federal requirements. 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- 8.4(f)]	Other: Monitoring as required under the applicable operating scenarios(s).[N.J.A.C. 7:27- 8.13(d)1].	Other: Recordkeeping as required under the applicable operating scenarios(s).[N.J.A.C. 7:27- 8.13(d)3].	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 180 days prior to the testing due date OR no later than 90 days prior to the testing due date, request EMS, in writing, to use a previously approved protocol. The protocol and test report must be prepared and submitted on a CD using the Electronic Reporting Tool (ERT) that is downloaded at: http://www.epa.gov/ttnchie1/ert , unless another format is approved by EMS. 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. Unless otherwise specified in this permit, 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 from the date of testing. The test results must be certified by a licensed professional engineer or certified industrial hygienist. . [N.J.A.C. 7:27- 8.4(f)]
5	Other Gaseous Fuel Usage <= 405.4 MMft^3/yr , total Digester Gas usage limit for all equipment under this Emission Unit. [N.J.A.C. 7:27- 8.13(h)]	Other Gaseous Fuel Usage: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual fuel usage shall be calculated by adding the annual fuel usage for each equipment under this emission unit. Annual fuel usage for each equipment shall be calculated by adding the fuel usage in the current month and fuel usage in the preceding 11 months. [N.J.A.C. 7:27- 8.13(d)1]	Other Gaseous Fuel Usage: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	Natural Gas Usage <= 237 MMft^3/yr , total Natural Gas usage limit for all equipment under this Emission Unit. [N.J.A.C. 7:27-8.13(h)]	Natural Gas Usage: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual fuel usage shall be calculated by adding the annual fuel usage for each equipment under this emission unit. Annual fuel usage for each equipment shall be calculated by adding the fuel usage in the current month and fuel usage in the preceding 11 months. [N.J.A.C. 7:27- 8.13(d)1]	Natural Gas Usage: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.
7	CO <= 33.11 tons/yr. [N.J.A.C. 7:27-8.13(h)]	CO: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27-8.13(d)1]	CO: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.
8	NOx (Total) <= 9.93 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	NOx (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27-8.13(d)1]	NOx (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
9	HAPs (Total) <= 2.14 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
10	PM-10 (Total) <= 1.4 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	PM-10 (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27-8.13(d)1]	PM-10 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.
11	PM-2.5 (Total) <= 1.4 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	PM-2.5 (Total): Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27-8.13(d)1]	PM-2.5 (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
12	SO2 <= 3.62 tons/yr. [N.J.A.C. 7:27-8.13(h)]	SO2: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27-8.13(d)1]	SO2: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.
13	TSP <= 1.4 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	TSP: Monitored by calculations each month during operation. Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27-8.13(d)1]	TSP: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.
14	VOC (Total) <= 13.97 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	VOC (Total): Monitored by calculations each month during operation. Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27- 8.13(d)1]	VOC (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
15	Acrolein <= 0.05 tons/yr. [N.J.A.C. 7:27-8.13(h)]	Acrolein: Monitored by calculations each month during operation. Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27- 8.13(d)1]	Acrolein: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.
16	Ammonia <= 1.02 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
17	Butadiene (1,3-) <= 0.026 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	Butadiene (1,3-): Monitored by calculations each month during operation. Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27- 8.13(d)1]	Butadiene (1,3-): Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.
18	Formaldehyde <= 2.07 tons/yr. [N.J.A.C. 7:27- 8.13(h)]	Formaldehyde: Monitored by calculations each month during operation. Annual emissions shall be calculated by adding the annual emissions from each equipment under this emission unit. Annual emissions for each equipment shall be calculated by adding the emissions from the current month and emissions from the preceding 11 months. For emission calculation purposes, the permittee shall use monthly average higher heating value of digester gas and higher heating value of 1040 Btu/scf for natural gas. [N.J.A.C. 7:27- 8.13(d)1]	Formaldehyde: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. The permittee shall maintain records of the monthly emission calculations and total emissions for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
19	Methane <= 28.87 tons/yr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
20	Emissions of all other air contaminant, not listed in this permit, shall be below their reporting thresholds for contaminants listed at N.J.A.C. 7:27-8 and 17 or below 0.05 lb/hr for all other air contaminants. For odor causing substances, any emissions shall be considered as exceeding the reporting threshold. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
21	Opacity: NO VISIBLE EMISSIONS from any emission point under this Emission Unit, exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27-8.13(a)]	Opacity: Monitored by visual determination each week during operation. For compliance with the opacity standard, the Permittee shall conduct visual opacity inspections during daylight hours while the source is operating. 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- 8.13(d)1]	Opacity: Recordkeeping by manual logging of parameter or storing data in a computer data system each week during operation and retain the following records: (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; and (7) Name of person(s) conducting inspection. [N.J.A.C. 7:27- 8.13(d)3]	Other (provide description): Upon occurrence of event. If visible emissions are observed, the Permittee shall verify that the equipment and/or control device causing the emission is operating according to manufactures specifications and the air 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. If the opacity problem is not corrected within 24 hrs, the permittee shall perform a check using a certified opacity reader each day until the opacity problem is resolved. [N.J.A.C. 7:27- 8.13(d)]
22	The permittee shall analyze the digester gas for higher and lower heating values (HHV and LHV). [N.J.A.C. 7:27- 8.13(a)]	Monitored by fuel sampling (e.g. gas) each week during operation. The permittee shall analyze the methane concentration of the digester gas and determine the heating values. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter or storing data in a computer data system each week during operation. The permittee shall maintain records of weekly and monthly average digester gas heating values. [N.J.A.C. 7:27- 8.13(d)3]	None.
23	Odor <= 5 D/T at nearest receptor. [N.J.A.C. 7:27- 8.4(q)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
24	If the facility already has an Odor Control Plan, the permittee shall update the plan to include this Emission Unit, in consultation with the REO, within 90 days of the start of operation. If the facility does not have an Odor Control Plan, within 30 days of the start of operation, the permittee shall contact the REO to determine if there is a need for an Odor Control Plan for the Emission Unit. If yes, the permittee shall prepare an Odor Control Plan for this Emission Unit in consultation with the REO, within 90 days of the start of operation. [N.J.A.C. 7:27-8.13(a)]	None.	Recordkeeping by other recordkeeping method (provide description) upon occurrence of event. If an Odor Control Plan is prepared, the permittee shall maintain a copy of the plan on-site at all times. [N.J.A.C. 7:27- 8.13(d)3]	None.
25	Any person responsible for the sulfur dioxide emissions from a facility into the outdoor air resulting from the combustion of facility by-products alone, or from the combustion of facility by-products combined with fuels conforming with N.J.A.C. 7:27-9, shall demonstrate to the Department that the facility's emissions are predictable and will in no case exceed 310 ppm by volume adjusted to 12 percent carbon dioxide by volume. [N.J.A.C. 7:27-9.2(e)]	Monitored by calculations once initially. Using the permitted H2S limits in the digester gas, the permittee shall calculate the SO2 emissions in ppmv adjusted to 12 percent carbon dioxide in the exhaust gas. [N.J.A.C. 7:27- 8.13(d)1]	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. The permittee shall document the calculations of the SO2 emissions in ppmv adjusted to 12 percent carbon dioxide. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
26	No changes to the approved stacks shall be made without prior approval from the Department, unless such change constitutes a seven-day-notice change pursuant to N.J.A.C. 7:27-8.20(b) or amendment pursuant to N.J.A.C. 7:27-8.21(b) and the permittee has complied with the appropriate seven-day-notice or amendments provisions of N.J.A.C. 7:27-8.20 and N.J.A.C. 7:27-8.21. The stack parameters in PT3802 and PT3803 have been used for Risk Assessment and subsequent Air Quality Modeling. Any change in the stack parameters will require a new Risk Assessment and Air Quality Modeling. [N.J.A.C. 7:27- 8.13(a)]	Stack height, stack diameter and distance from the property line Monitored by documentation of construction once initially. [N.J.A.C. 7:27- 8.13(d)1]	Stack height, stack diameter and distance from the property line Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. [N.J.A.C. 7:27- 8.13(d)3]	None.
27	The following permit conditions are applicable to the two Reciprocating Internal Combustion Engines (RICE) Equipment NJIDs E3802 and E3803 ONLY. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
28	The owner or operator of any reciprocating engine that has a maximum rated power output of at least 37 kW or greater, used for generating electricity, and whether or not it is located at a major NOx facility, shall adjust the combustion process in accordance with N.J.A.C. 7:27-19.16, and is carried out according to manufacturer's recommended procedures and maintenance schedules, for each engine. [N.J.A.C. 7:27-19.8(f)2] & [N.J.A.C. 7:27-16.10(e)2]	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. All records must be retained for a minimum of five years and to be made readily accessible to the Department upon request. The owner or operator shall record the following information for each adjustment: 1. The date of the adjustment and the times at which it began and ended; 2. The name, title and affiliation of the person who made the 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 used 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.
29	The owner or operator of the adjusted equipment or source operation shall ensure that the operating parameter settings are established and recorded after the combustion process is adjusted and that the adjusted equipment or source operation is maintained to operate consistent with the annual adjustment. [N.J.A.C. 7:27-19.16(e)]	None.	None.	None.
30	Two digester gas/natural gas-fired, lean burn 4-stroke spark ignition reciprocating internal combustion engines, rated generator output of 1,900 kW, rated engine output of 2,649 bhp, with a displacement of < 10 liters per cylinder, model year 2018, manufactured by AB Energy, Engine Model J612GS-F25, each having a Maximum Gross Heat Input <= 14.85 MMBTU/hr (HHV). [N.J.A.C. 7:27- 8.13(h)]	Maximum Gross Heat Input: Monitored by documentation of construction once initially : Engine nameplate or manufacturer records indicating engine/generator size (HP, kW or MMBTU/hr), manufacturer name, model no. and manufacturing year. [N.J.A.C. 7:27-8.13(d)1]	Maximum Gross Heat Input: Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. All records pertaining to generator/engine manufacturer specifications, shall be kept on-site or at the permittee's main office all times, readily made available to the Department or its representatives upon request. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
31	The owner or operator of stationary SI ICE must operate and maintain stationary 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: The owner or operator must demonstrate compliance as prescribed in 40 CFR 60 Subpart JJJJ. [40 CFR 60].	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.
32	The owner or operator may not install stationary SI ICE that do not meet the applicable requirements in 40 CFR 60.4233 after the deadline established in 40 CFR 60.4236(a) and (b), except for engines that were removed from one existing location and reinstalled at a new location. [40 CFR 60.4236]	Other: The owner or operator must demonstrate compliance as prescribed in 40 CFR 60 Subpart JJJJ. [40 CFR 60].	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.
33	The owner or operator of a non - certified SI ICE engine with maximum engine power > 500 HP (> 375 kW) must keep a maintenance plan and records of conducted maintenance, and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. Additionally, the owner or operator must conduct an initial performance test and conduct subsequent performance testing in accordance with 40 CFR 60.4244 every 8760 hours or 3 years, whichever comes first, as prescribed in 40 CFR 60.4243(b)(2)(ii) to demonstrate compliance. [40 CFR 60.4243(b)(2)(ii)]	Other: The owner or operator shall keep a maintenance plan and records of conducted maintenance and perform stack testing to demonstrate compliance according to 40 CFR 60.4243 (b)(2)(ii)[40 CFR 60.4243].	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The owner or operator shall keep records of conducted maintenance to demonstrate compliance. The owner or operator shall also record the stack test results. [40 CFR 60.4245(a)(4)]	Submit a stack test report: Upon occurrence of event. The owner or operator shall submit the results of a stack test within 60 days, after the test has been completed, to EPA Region 2 and to the Regional Enforcement Office of NJDEP. [40 CFR 60.4245(d)]

NJDEP to replace all Subchapter 8 7:27-8.12(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
34	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: 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.
35	The owner or operator of SI ICE engine with a maximum engine power >= 500 HP (>=375 kW) that have not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231 must submit an initial notification as required in 40 CFR 60.7(a)(1). [40 CFR 60.4245(c)]	None.	None.	Submit notification: Once initially The owner or operator must submit an initial notification as required in 40 CFR 60.7(a)(1) to EPA Region 2 and Regional Enforcement Office of NJDEP. The notification must include the information outlined in 40 CFR 60.4245(c)(1) through (5): (1) Name and address of the owner or operator; (2) The address of the affected source; (3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; (4) Emission control equipment; and (5) Fuel used. [40 CFR 60.4245(c)]
36	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 JJJJ. [40 CFR 63].	Other: Comply with all applicable provisions at NSPS JJJJ. [40 CFR 63].	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
37	All requests, reports, applications, submittals, and other communications to the Administrator pursuant to Part 60 shall be submitted in duplicate to the Regional Office of US Environmental Protection Agency. Submit information to: Director, Division of Enforcement & Compliance Assistance, US EPA, Region 2, 290 Broadway, New York, NY 10007-1866. [40 CFR 60.4(a)]	None.	None.	Submit a report: As per the approved schedule to EPA Region 2 as required by 40 CFR 60. [40 CFR 60.4(a)]
38	Copies of all information submitted to EPA pursuant to 40 CFR Part 60, must also be submitted to the appropriate Regional Enforcement Office of NJDEP. [40 CFR 60.4(b)]	None.	None.	Submit a report: As per the approved schedule to the appropriate Regional Enforcement Office of NJDEP as required by 40 CFR 60. [40 CFR 60.4(b)]
39	Within 60 days after achieving the maximum production rate at which the affected facility will operate, but not later than 180 days after initial startup of the facility, the owner or operator shall conduct performance test(s) and shall furnish the Administrator a written report of the results. [40 CFR 60.8(a)]	None.	None.	Submit a report: At a common schedule agreed upon by the operator and the Administrator. The owner or operator shall submit results of the performance test(s) to the Administrator. [40 CFR 60.8(a)]
40	The owner or operator shall conduct performance tests and data reduced in accordance with the test methods and procedures contained in each applicable subpart, unless otherwise specified and approved by the Administrator. [40 CFR 60.8(b)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.12(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
41	Performance tests shall be conducted under conditions the Administrator specifies to the plant operator based on representative performance of the affected facility. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of the performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard. [40 CFR 60.8(c)]	None.	None.	None.
42	The owner or operator shall provide the Administrator at least 30 days prior notice of any performance test and shall provide adequate performance testing facilities as specified in 40 CFR Part 60.8(e). [40 CFR 60.8(d)]	None.	None.	None.
43	Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. [40 CFR 60.8(f)]	None.	None.	None.
44	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.

NJDEP to replace all Subchapter 8 7:27-8.12(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
45	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.

NJDEP to replace all Subchapter 8 7:27-8.12(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2 Two Combined Heat and Power (CHP) units, and four Sludge Digester Tanks controlled by waste gas Flare

Operating Scenario: OS101 CHP unit 1 burning digester gas, OS102 CHP unit 2 burning digester gas

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Other Gaseous Fuel Usage <= 405.4 MMft^3/yr. Digester gas usage total for OS101 + OS102. [N.J.A.C. 7:27- 8.13(h)]	Other Gaseous Fuel Usage: Monitored by fuel flow/firing rate instrument continuously, based on a consecutive 12 month period (rolling 1 month basis). Annual fuel usage shall be calculated by adding the fuel usage in the current month and fuel usage in the preceding 11 months. A non-resettable gas flow totalizer shall be installed on each engine. [N.J.A.C. 7:27-8.13(d)2]	Other Gaseous Fuel Usage: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	The digester gas shall be pretreated for H2S in a gas treatment system prior to burning in the engine and shall be the first choice as fuel. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
3	CO <= 2.92 lb/hr based on vendor guarantee of 0.5 g/Bhp-hr after control. [N.J.A.C. 7:27- 8.13(h)]	CO: Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. If the source is subject to N.J.A.C. 7:27-19, CO testing shall be conducted concurrently with NOx testing. The applicable NOx emission limits will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C. 7:27-16.10, or the permit limit for CO, whichever is more stringent, is also met. [N.J.A.C. 7:27-19.15(a)2] and. [N.J.A.C. 7:27- 8.13(d)1]	CO: Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
4	CO <= 0.5 grams/brake horsepower-hour based on vendor guarantee after control. [N.J.A.C. 7:27- 8.13(h)]	CO: Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	CO: Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
5	CO <= 500 ppmvd @ 15% O2. [N.J.A.C. 7:27-16.10(b)]	CO: Monitored by stack emission testing once initially, based on the average of three 1-hour tests , each performed over a consecutive 60-minute period specified by the Department and performed in compliance with N.J.A.C. 7:27-16.22. If the source is subject to N.J.A.C. 7:27-19, CO testing shall be conducted concurrently with NOx testing. The applicable NOx emission limits per N.J.A.C. 7:27-19 will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C. 7:27-16.10, or the permit limit for CO, whichever is more stringent, is also met. The owner or operator shall demonstrate compliance within 180 days from the date on which the source operation commences operation. [N.J.A.C. 7:27-16.23(a)2]	CO: Recordkeeping by stack test results once initially. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27-16.22]
6	NOx (Total) <= 0.88 lb/hr based on vendor guarantee of 0.15 g/Bhp-hr after control. [N.J.A.C. 7:27- 8.13(h)]	NOx (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	NOx (Total): Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	NOx (Total) <= 0.15 grams/brake horsepower-hour based on vendor guarantee after control. [N.J.A.C. 7:27- 8.13(h)]	NOx (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	NOx (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
8	NOx (Total) <= 0.9 grams/brake horsepower-hour. [N.J.A.C. 7:27-19.8(e)2]	NOx (Total): Monitored by stack emission testing once initially, based on the average of three 1-hour tests each performed over a consecutive 60-minute period specified by the Department, and performed in compliance with N.J.A.C. 7:27-19.17. Any NOx testing conducted pursuant to N.J.A.C. 7:27-19 shall be conducted concurrently with CO testing. The applicable NOx emission limits will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C. 7:27-16.10, or the permit limit for CO, whichever is more stringent, is also met. The owner or operator shall demonstrate compliance within 180 days from the date on which the source commences operation, and thereafter at the frequency set forth in the permit for such equipment or source operation. [N.J.A.C. 7:27-19.15(a)2]	NOx (Total): Recordkeeping by stack test results once initially. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27-19.15(a)2]
9	PM-10 (Total) <= 0.058 lb/hr based on vendor guarantee of 0.01 g/Bhp-hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
10	PM-2.5 (Total) <= 0.058 lb/hr based on vendor guarantee of 0.01 g/Bhp-hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
11	SO2 <= 0.102 lb/hr based on 25 ppm of H2S in treated digester gas and 100% conversion to SO2. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.

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Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
12	TSP <= 0.058 lb/hr based on vendor guarantee of 0.01 g/Bhp-hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.
13	VOC (Total) <= 0.88 lb/hr (excluding aldehydes) based on vendor guarantee of 0.15 g/Bhp-hr after control. [N.J.A.C. 7:27-8.13(h)]	VOC (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	VOC (Total): Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
14	VOC (Total) <= 0.15 grams/brake horsepower-hour (excluding aldehydes) based on vendor guarantee after control. [N.J.A.C. 7:27- 8.13(h)]	VOC (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	VOC (Total): Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
15	Acrolein <= 0.006 lb/hr based on vendor guarantee of 0.001 g/Bhp-hr after control. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
16	Ammonia <= 0.12 lb/hr based on vendor guarantee of 8 ppm of ammonia slip from SCR @ 10% O2. [N.J.A.C. 7:27- 8.13(h)]	Ammonia: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs based on manufacturer's specifications. [N.J.A.C. 7:27- 8.13(d)1]	Ammonia: Recordkeeping by stack test results once initially. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
17	Butadiene (1,3-) <= 0.0039 lb/hr based on SCAQMD emission factor of 2.62E-04 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
18	Formaldehyde <= 0.23 lb/hr based on vendor guarantee of 0.04 g/Bhp-hr after control. [N.J.A.C. 7:27- 8.13(h)]	Formaldehyde: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. [N.J.A.C. 7:27- 8.13(d)1]	Formaldehyde: Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
19	Methane <= 0.105 lb/hr based on 40 CFR 98 emission facotr of 0.0032 kg/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
20	The owner or operator of a new non-certified SI ICE Landfill/Digester Gas Lean Burn with a maximum engine power of >= 1350 HP manufactured after July 1, 2010 must meet the emission standards for engines HP >=500 summarized in Table 1 in 40 CFR 60 Subpart JJJJ as follows: NOx <= 2.0 g/HP-hr, CO <= 5.0 g/HP-hr, VOC <= 1.0 g/HP-hr or NOx <= 150 ppmvd @15% O2, CO <= 610 ppmvd @15% O2, VOC <= 80 ppmvd @15% O2. [40 CFR 60.4233(e)]	Monitored by stack emission testing at the approved frequency, based on the average of three 1-hour tests. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance, per 40 CFR 60.4243(b)(2)(ii). Each performance test must be conducted according to the requirements in 40 CFR 60.8 and 40 CFR 60.4244 and under the specific conditions specified in Table 2 to 40 CFR 60 Subpart JJJJ. The tests must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and may not be conducted during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c). Three separate test runs for each performance test must be conducted, each test run must last at least 1 hour. Compliance with the emission limits shall be determined based on calculations in 40 CFR 60.4244(d) through (g). The permittee shall monitor the operating hours continuously using a non-resettable hour/time meter. [40 CFR 60.4243(b)(2)]	Recordkeeping by stack test results at the approved frequency. The owner or operator of a SI ICE engine must keep documentation demonstrating compliance with the applicable emission standards. The permittee shall record the operating hours each month during operation. [40 CFR 60.4245(a)]	Submit a stack test report: Within 60 days of stack testing. The owner or operator of a SI ICE engine must submit the results of stack tests to EPA Region 2 and to the Regional Enforcement Office of NJDEP. [40 CFR 60.4245(d)]
21	H2S in Fuel <= 25 Parts per Million. The permittee shall utilize a digester gas pretreatment system to reduce the H2S content in the fuel before burning it in the RICE. [N.J.A.C. 7:27- 8.13(h)]	H2S in Fuel: Monitored by fuel sampling (e.g. gas) each month during operation. After 12 consecutive analysis and compliance the sampling frequency will be reduced to quarterly, However, for any non compliance, the frequency shall revert back to monthly. [N.J.A.C. 7:27- 8.13(d)1]	H2S in Fuel: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Submit notification: Upon occurrence of event. Notify REO, in writing, any non-compliance. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2 Two Combined Heat and Power (CHP) units, and four Sludge Digester Tanks controlled by waste gas Flare

Operating Scenario: OS103 CHP unit 1 burning natural gas, OS104 CHP unit 2 burning natural gas

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Natural Gas Usage <= 237 MMft^3/yr Total for OS103 and OS104. [N.J.A.C. 7:27-8.13(h)]	Natural Gas Usage: Monitored by fuel flow/firing rate instrument continuously, based on a consecutive 12 month period (rolling 1 month basis). Annual fuel usage shall be calculated by adding the fuel usage in the current month and fuel usage in the preceding 11 months. A non-resettable gas flow totalizer shall be installed on each engine. [N.J.A.C. 7:27-8.13(d)2]	Natural Gas Usage: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	CO <= 2.92 lb/hr based on vendor guarantee of 0.5 g/Bhp-hr after control. [N.J.A.C. 7:27- 8.13(h)]	CO: Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. If the source is subject to N.J.A.C. 7:27-19, CO testing shall be conducted concurrently with NOx testing. The applicable NOx emission limits will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C. 7:27-16.10, or the permit limit for CO, whichever is more stringent, is also met. [N.J.A.C. 7:27-19.15(a)2] and. [N.J.A.C. 7:27- 8.13(d)1]	CO: Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	CO <= 0.5 grams/brake horsepower-hour based on vendor guarantee after control. [N.J.A.C. 7:27- 8.13(h)]	CO: Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	CO: Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
4	CO <= 500 ppmvd @ 15% O2. [N.J.A.C. 7:27-16.10(b)]	CO: Monitored by stack emission testing once initially, based on the average of three 1-hour tests , each performed over a consecutive 60-minute period specified by the Department and performed in compliance with N.J.A.C. 7:27-16.22. If the source is subject to N.J.A.C. 7:27-19, CO testing shall be conducted concurrently with NOx testing. The applicable NOx emission limits per N.J.A.C. 7:27-19 will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C. 7:27-16.10, or the permit limit for CO, whichever is more stringent, is also met. The owner or operator shall demonstrate compliance within 180 days from the date on which the source operation commences operation. [N.J.A.C. 7:27-16.23(a)2]	CO: Recordkeeping by stack test results once initially. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27-16.22]
5	NOx (Total) <= 0.88 lb/hr based on vendor guarantee of 0.15 g/Bhp-hr after control. [N.J.A.C. 7:27- 8.13(h)]	NOx (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	NOx (Total): Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	NOx (Total) <= 0.15 grams/brake horsepower-hour based on vendor guarantee after control, as proposed by the applicant. [N.J.A.C. 7:27- 8.13(h)]	NOx (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	NOx (Total): Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
7	NOx (Total) <= 0.9 grams/brake horsepower-hour. [N.J.A.C. 7:27-19.8(e)2]	NOx (Total): Monitored by stack emission testing once initially, based on the average of three 1-hour tests each performed over a consecutive 60-minute period specified by the Department, and performed in compliance with N.J.A.C. 7:27-19.17. Any NOx testing conducted pursuant to N.J.A.C. 7:27-19 shall be conducted concurrently with CO testing. The applicable NOx emission limits will not be considered to have been met unless the concurrent CO testing demonstrates compliance with the CO limit in N.J.A.C. 7:27-16.10, or the permit limit for CO, whichever is more stringent, is also met. The owner or operator shall demonstrate compliance within 180 days from the date on which the source commences operation, and thereafter at the frequency set forth in the permit for such equipment or source operation. [N.J.A.C. 7:27-19.15(a)2]	NOx (Total): Recordkeeping by stack test results once initially. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27-19.15(a)2]
8	PM-10 (Total) <= 0.058 lb/hr based on vendor guarantee of 0.01 g/Bhp-hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
9	PM-2.5 (Total) <= 0.058 lb/hr based on vendor guarantee of 0.01 g/Bhp-hr. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
10	TSP <= 0.058 lb/hr based on vendor guarantee of 0.01 g/Bhp-hr. [N.J.A.C. 7:27-8.13(h)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
11	VOC (Total) <= 0.88 lb/hr (excluding aldehydes) based on vendor guarantee of 0.15 g/Bhp-hr after control. [N.J.A.C. 7:27-8.13(h)]	VOC (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	VOC (Total): Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
12	VOC (Total) <= 0.15 grams/brake horsepower-hour (excluding aldehydes) based on vendor guarantee after control. [N.J.A.C. 7:27- 8.13(h)]	VOC (Total): Monitored by stack emission testing at the approved frequency, based on the average of three Department validated stack test runs. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years (based on completion date of the last stack test), whichever comes first, thereafter to demonstrate compliance. [N.J.A.C. 7:27- 8.13(d)1]	VOC (Total): Recordkeeping by stack test results upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
13	Acrolein <= 0.006 lb/hr based on vendor guarantee of 0.001 g/Bhp-hr after control. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
14	Ammonia <= 0.12 lb/hr based on vendor guarantee of 8 ppm of ammonia slip from SCR @ 10%O2. [N.J.A.C. 7:27- 8.13(h)]	Ammonia: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs based on manufacturer's specifications. [N.J.A.C. 7:27- 8.13(d)1]	Ammonia: Recordkeeping by stack test results once initially. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
15	Butadiene (1,3-) <= 0.0039 lb/hr based on SCAQMD emission factor of 2.62E-04 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
16	Formaldehyde <= 0.23 lb/hr based on vendor guarantee of 0.04 g/Bhp-hr after control. [N.J.A.C. 7:27- 8.13(h)]	Formaldehyde: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. [N.J.A.C. 7:27- 8.13(d)1]	Formaldehyde: Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. [N.J.A.C. 7:27- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
17	Methane <= 0.105 lb/hr based on 40 CFR 98 emission facotr of 0.0032 kg/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

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Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
18	The owner or operator of a new non-certified SI ICE natural gas or lean burn LPG with a maximum engine power of >= 1350 HP manufactured after July 1, 2010 must meet the emission standards for engines HP >=500 summarized in Table 1 in 40 CFR 60 Subpart JJJJ as follows: NOx <= 1.0 g/HP-hr, CO <= 2.0 g/HP-hr, VOC <= 0.7 g/HP-hr or NOx <= 82 ppmvd @15% O2, CO <= 270 ppmvd @15% O2, VOC <= 60 ppmvd @15% O2. [40 CFR 60.4233(e)]	Monitored by stack emission testing at the approved frequency, based on the average of three 1-hour tests. The permittee shall conduct an initial performance test and conduct subsequent performance testing every 8760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance, per 40 CFR 60.4243(b)(2)(ii). Each performance test must be conducted according to the requirements in 40 CFR 60.8 and 40 CFR 60.4244 and under the specific conditions specified in Table 2 to 40 CFR 60 Subpart JJJJ. The tests must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and may not be conducted during periods of startup, shutdown, or malfunction, as specified in 40 CFR 60.8(c). Three separate test runs for each performance test must be conducted, each test run must last at least 1 hour. Compliance with the emission limits shall be determined based on calculations in 40 CFR 60.4244(d) through (g). The permittee shall monitor the operating hours continuously using a non-resettable hour/time meter. [40 CFR 60.4243(b)(2)]	Recordkeeping by stack test results at the approved frequency. The owner or operator of a SI ICE engine must keep documentation demonstrating compliance with the applicable emission standards. The permittee shall record the operating hours each month during operation. [40 CFR 60.4245(a)]	Submit a stack test report: Within 60 days of stack testing. The owner or operator of a SI ICE engine must submit the results of stack tests to EPA Region 2 and to the Regional Enforcement Office of NJDEP. [40 CFR 60.4245(d)]

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U2 Two Combined Heat and Power (CHP) units, and four Sludge Digester Tanks controlled by waste gas Flare**

Operating Scenario: **OS105 Sludge Digester Tank 1, controlled by waste gas Flare, OS106 Sludge Digester Tank 2, controlled by waste gas Flare, OS107 Sludge Digester Tank 3, controlled by waste gas Flare, OS108 Sludge Digester Tank 4, controlled by waste gas Flare**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Design Capacity <= 690,000 gallons , each digester tank. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
2	Total Production Rate <= 405.4 MMft^3/yr of digester gas (total production from all four sludge digester tanks). [N.J.A.C. 7:27-8.13(h)]	Total Production Rate: Monitored by calculations each month during operation, based on a consecutive 12 month period (rolling 1 month basis). Total shall be calculated by adding the digester gas burned in the CHPs, Boilers and flare (treated and untreated). [N.J.A.C. 7:27-8.13(d)1]	Total Production Rate: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.
3	Other Gaseous Fuel Usage <= 221 MMft^3/yr digester gas. Only excess digester gas that could not be burned in the CHPs and the Boiler shall be burned in the flare. Unless otherwise specified in this permit, the digester gas shall be pretreated in a gas treatement system for H2S prior to flaring. [N.J.A.C. 7:27- 8.13(h)]	Other Gaseous Fuel Usage: Monitored by fuel flow/firing rate instrument continuously, based on a consecutive 12 month period (rolling 1 month basis). [N.J.A.C. 7:27- 8.13(d)2]	Other Gaseous Fuel Usage: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. [N.J.A.C. 7:27- 8.13(d)3]	None.
4	CO <= 6.57 lb/hr at the flare outlet, based on manufacturer's warranty of 0.2 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	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. 7:27-8.13(d)1]	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- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
5	CO <= 0.2 lb/MMBTU at the flare outlet, based on manufacturer's warranty.. [N.J.A.C. 7:27- 8.13(h)]	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. 7:27-8.13(d)1]	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- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	NOx (Total) <= 1.97 lb/hr at the flare outlet, based on manufacturer's warranty of 0.06 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	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- 8.13(d)2]	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- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
7	NOx (Total) <= 0.06 lb/MMBTU at the flare outlet, based on manufacturer's warranty. [N.J.A.C. 7:27- 8.13(h)]	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- 8.13(d)2]	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- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
8	PM-10 (Total) <= 0.492 lb/hr at the flare outlet, based on AP-42 Chapter 2.4 Emissin Factor of 15 lb/MMscf of CH4. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
9	PM-2.5 (Total) <= 0.492 lb/hr at the flare outlet, based on AP-42 Chapter 2.4 Emissin Factor of 15 lb/MMscf of CH4. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
10	SO2 <= 0.36 lb/hr at the flare outlet, based on maximum H2S concentration of 40 ppm in pretreated digester gas. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
11	TSP <= 0.492 lb/hr at the flare outlet, based on AP-42 Chapter 2.4 Emissin Factor of 15 lb/MMscf of CH4. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
12	VOC (Total) <= 3.94 lb/hr at the flare outlet, based on manufacturer's warranty of 0.12 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	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- 8.13(d)1]	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- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]
13	VOC (Total) <= 0.12 lb/MMBTU at the flare outlet, based on manufacturer's warranty. [N.J.A.C. 7:27- 8.13(h)]	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- 8.13(d)1]	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- 8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.4(f)5]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
14	Methane <= 13.71 lb/hr at the flare outlet, based on manufacturer's warranty of 99% removal efficiency for total organic compounds. [N.J.A.C. 7:27- 8.13(h)]	Methane: Monitored by stack emission testing once initially, based on the average of three Department validated stack test runs. [N.J.A.C. 7:27- 8.13(d)1]	Methane: Recordkeeping by stack test results once initially. [N.J.A.C. 7:27-8.13(d)3]	Stack Test - Submit protocol, conduct test and submit results: As per the approved schedule. Refer to stack testing requirements specified in this permit. [N.J.A.C. 7:27- 8.f(f)]
15	H2S in Fuel <= 40 Parts per Million. The permittee shall utilize a digester gas pretreatment system to reduce the H2S content in the fuel before burning it to the flare. [N.J.A.C. 7:27- 8.13(h)]	H2S in Fuel: Monitored by fuel sampling (e.g. gas) each month during operation. After 12 consecutive analysis and compliance the sampling frequency will be reduced to quarterly, However, for any non compliance, the frequency shall revert back to monthly. [N.J.A.C. 7:27- 8.13(d)1]	H2S in Fuel: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Submit notification: Upon occurrence of event. Notify REO, in writing, any non-compliance. [N.J.A.C. 7:27- 8.13(d)4]

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U2 Two Combined Heat and Power (CHP) units, and four Sludge Digester Tanks controlled by waste gas Flare

Operating Scenario: OS109 Sludge Digester Tank 1 bypass, controlled by waste gas Flare, OS110 Sludge Digester Tank 2 bypass, controlled by waste gas Flare, OS111 Sludge Digester Tank 3 bypass, controlled by waste gas Flare, OS112 Sludge Digester Tank 4 bypass, controlled by waste gas Flare

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	The digester gas bypass to the Flare CD3801 for burning untreated gas shall only be operated when the digester gas pre-treatment system is not operable. [N.J.A.C. 7:27-8.13(a)]	None.	Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. The following records shall be kept: 1. Date, start time and end time 2. Reason for the by-pass use 3. Hours of the bypass event and total hours year to date . [N.J.A.C. 7:27- 8.13(d)3]	Repair equipment: Upon occurrence of event. The permittee shall take necessary steps expeditiously to fix the gas treatment system. The permittee shall notify the REO within 24 hours of breakgown. [N.J.A.C. 7:27-8.13(d)4]
2	H2S in Fuel <= 3,000 Parts per Million in untreated digester gas. [N.J.A.C. 7:27-8.13(h)]	H2S in Fuel: Monitored by fuel sampling (e.g. gas) each month during operation. After twelve consecutive analysis and compliance the sampling frequency will be reduced to quarterly, However, for any non-compliance, the frequency shall revert back to monthly. [N.J.A.C. 7:27- 8.13(d)1]	H2S in Fuel: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Submit notification: Upon occurrence of event. Notify REO, in writing, any non-comliance. [N.J.A.C. 7:27- 8.13(d)4]
3	CO <= 6.57 lb/hr at the flare outlet, based on manufacturer's warranty of 0.2 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
4	NOx (Total) <= 1.97 lb/hr at the flare outlet, based on manufacturer's warranty of 0.06 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	PM-10 (Total) <= 0.492 lb/hr at the flare outlet, based on AP-42 Chapter 2.4 Emissin Factor of 15 lb/MMscf of CH4. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
6	PM-2.5 (Total) <= 0.492 lb/hr at the flare outlet, based on AP-42 Chapter 2.4 Emissin Factor of 15 lb/MMscf of CH4. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
7	SO2 <= 26.93 lb/hr at the flare outlet, based on maximum H2S concentration of 3,000 ppm in untreated digester gas. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
8	TSP <= 0.492 lb/hr at the flare outlet, based on AP-42 Chapter 2.4 Emissin Factor of 15 lb/MMscf of CH4. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
9	VOC (Total) <= 3.94 lb/hr at the flare outlet, based on manufacturer's warranty of 0.12 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
10	Methane <= 13.71 lb/hr at the flare outlet, based on manufacturer's warranty of 99% removal efficiency for total organic compounds. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U3 Dual Fuel Boiler
Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	CO <= 0.529 tons/yr and over any consecutive 12 month period. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
2	NOx (Total) <= 1.04 tons/yr and over any consecutive 12 month period. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	PM-10 (Total) <= 0.26 tons/yr and over any consecutive 12 month period. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
4	PM-2.5 (Total) <= 0.26 tons/yr and over any consecutive 12 month period. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	TSP <= 0.26 tons/yr and over any consecutive 12 month period. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
6	Emissions of all other air contaminant, not listed in this permit, shall be below their reporting thresholds for contaminants listed at N.J.A.C. 7:27-8 and 17 or below 0.05 lb/hr for all other air contaminants. For odor causing substances, any emissions shall be considered as exceeding the reporting threshold. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U3 Dual Fuel Boiler**
Operating Scenario: **OS201 Dual fuel boiler firing natural gas and/or digester gas**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	A dual fuel (capable of burning natural gas and digester gas simultaneously) water tube boiler, equipped with low NOx burner, manufactured by Cleaver Brooks, Model CBLE, having a Maximum Gross Heat Input <= 6.04 MMBTU/hr (HHV). [N.J.A.C. 7:27- 8.13(h)]	Maximum Gross Heat Input: Monitored by documentation of construction once initially. [N.J.A.C. 7:27- 8.13(d)1]	Maximum Gross Heat Input: Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	CO <= 0.24 lb/hr based on manufacturers DG emission factor of 0.0405 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	NOx (Total) <= 0.48 lb/hr based on manufacturers DG emission factor of 0.0798 lb/MMBtu. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
4	PM-10 (Total) <= 0.12 lb/hr based on manufacturers DG emission factor of 0.02 lb/MMBtu (0.0075 filterable + 0.0125 condensable). [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
5	PM-2.5 (Total) <= 0.12 tons/yr based on manufacturers DG emission factor of 0.02 lb/MMBtu (0.0075 filterable + 0.0125 condensable). [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
6	TSP <= 0.12 lb/hr based on manufacturers DG emission factor of 0.02 lb/MMBtu (0.0075 filterable + 0.0125 condensable). [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
7	Hours of Operation <= 4,320 hr/yr. [N.J.A.C. 7:27- 8.13(h)]	Hours of Operation: Monitored by hour/time monitor continuously, based on a consecutive 12 month period (rolling 1 month basis). The equipment shall be equipped with a non-resettable hour meter. [N.J.A.C. 7:27- 8.13(d)2]	Hours of Operation: Recordkeeping by manual logging of parameter or storing data in a computer data system each month during operation. Records shall include the total hours for each consecutive 12-month period. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	The permittee shall annually adjust combustion process in the same quarter of each calendar year as specified at N.J.A.C. 7:27-19.16. The permittee shall: 1. Inspect the burner, and clean or replace any components of the burner as necessary; 2. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern consistent with the manufacturer's specifications; 3. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly 4. Minimize total emissions of NOx and CO consistent with the manufacturer's specifications; [N.J.A.C. 7:27-19.16(a)]	Monitored by periodic emission monitoring annually Measure the concentrations in the effluent stream of NOx, CO and O2 in ppmvd, before and after the adjustment is made; and Convert the emission values of the NOx, CO and O2 concentrations to pounds per million BTU (lb/MM BTU) according to the following formula: lb/MM BTU = ppmvd x MW x F dry factor x O2 correction factor / 387,000,000 Where: ppmvd is the concentration in parts per million by volume, dry basis, of NOx or CO MW is the Molecular Weight for: NOx = 46 lb/lb-mole; CO = 28 lb/lb-mole F dry factor for: Natural gas = 8,710 dscf/MM BTU and Residual or fuel oil = 9,190 dscf/MM BTU O2 correction factor: (20.9%) / (20.9% - O2 measured) O2 measured is percent oxygen on a dry basis. [N.J.A.C. 7:27-19.16(a)]	Recordkeeping by manual logging of parameter or storing data in a computer data system annually Records shall contain the following information for each adjustment: 1. The date of the adjustment and the times at which it began and ended; 2. The name, title and affiliation of the person who made the adjustment; 3. The NOx and CO concentrations in the effluent stream, in ppmvd, before and after each actual adjustment was made; 4. The concentration of O2 (in percent dry basis) at which the CO and NOx concentrations were measured ; 5. A description of any corrective action taken; 6. Results from any subsequent tests performed after taking any corrective action, including concentrations and converted emission values in pounds per million BTU (lb/MM BTU); 7. The type and amount of fuel used over the 12 months prior to the annual adjustment. . [N.J.A.C. 7:27-19.16(a)]	Submit a report: Annually within 45 days of the adjustment. Reports shall be submitted electronically in the format the department specifies at its website. The report shall contain the following: 1. The concentrations of NOx and CO in the effluent stream in ppmvd, and O2 in percent dry basis, measured before and after the adjustment of the combustion process 2. The converted emission values in lb/MM BTU for the measurements taken before and after the adjustment of the combustion process; 3. A description of any corrective actions taken as a part of the combustion adjustment; and 4. The type and amount of fuel used over the 12 months prior to the annual adjustment.. [N.J.A.C. 7:27-19.16(c)]
9	Opacity: NO VISIBLE EMISSIONS, exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27-8.13(a)]	None.	None.	None.
10	Any person responsible for the sulfur dioxide emissions from a facility into the outdoor air resulting from the combustion of facility by-products alone, or from the combustion of facility by-products combined with fuels conforming with N.J.A.C. 7:27-9, shall demonstrate to the Department that the facility's emissions are predictable and shall be SO2 <= 310 ppmvd @ 12% CO2. [N.J.A.C. 7:27- 9.2(e)]	SO2: Monitored by calculations once initially. Using the fuel sulfur content, the permittee shall demonstrate compliance with the Applicable Requirements. [N.J.A.C. 7:27- 9.2(e)]	SO2: Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. The permittee shall document the calculations including the documents supporting the calculations. [N.J.A.C. 7:27- 8.13(d)3]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
11	H2S in Fuel <= 25 Parts per Million. The permittee shall utilize a digester gas pretreatment system to reduce the H2S content in the fuel before burning it in the Boiler. [N.J.A.C. 7:27- 8.13(h)]	H2S in Fuel: Monitored by fuel sampling (e.g. gas) each month during operation. After 12 consecutive analysis and compliance the sampling frequency will be reduced to quarterly, However, for any non compliance, the frequency shall revert back to monthly. [N.J.A.C. 7:27- 8.13(d)1]	H2S in Fuel: Recordkeeping by manual logging of parameter or storing data in a computer data system upon occurrence of event. [N.J.A.C. 7:27- 8.13(d)3]	Submit notification: Upon occurrence of event. Notify REO, in writing, any non-compliance. [N.J.A.C. 7:27- 8.13(d)4]

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: U4 Black Start Engine (230kW) Emergency Generator
Operating Scenario: OS Summary

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	CO <= 0.137 tons/yr based on EPA certification of 5.4 g/kW-hr and 100 hr/yr normal testing and maintenance operations only. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
2	NOx (Total) <= 0.068 tons/yr based on EPA certification of 2.7 g/kW-hr and 100 hr/yr normal testing and maintenance operations only. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
3	VOC (Total) <= 0.033 tons/yr based on EPA certification of 1.3 g/kW-hr and 100 hr/yr normal testing and maintenance operations only. [N.J.A.C. 7:27- 8.13(h)]	None.	None.	None.
4	Emissions of all other air contaminant, not listed in this permit, shall be below their reporting thresholds for contaminants listed at N.J.A.C. 7:27-8 and N.J.A.C. 7:27-17 or below 0.05 lb/hr for all other air contaminants. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Emission Unit: **U4 Black Start Engine (230kW) Emergency Generator**
Operating Scenario: **OS301 Black start EG engine opering on natural gas**

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	A natural gas fired, rich burn reciprocating internal combustion engine, rated generator output of 230 kW, rated engine output of 368 bhp (standby), with a displacement of < 10 liters per cylinder, model year 2018, manufactured by Genrec, Engine Model SG-230, USEPA Certificate # JGNXB14.22C1-043 certified to comply with 40 CFR 60 Subpart JJJJ Emergency Use only, having a Maximum Gross Heat Input <= 2.89 MMBTU/hr (HHV). [N.J.A.C. 7:27- 8.13(h)]	Maximum Gross Heat Input: Monitored by documentation of construction once initially : Engine nameplate or manufacturer records indicating engine/generator size {HP, kW or MMBTU/hr}, manufacturer name, model no., EPA Certification No. and manufacturing year. [N.J.A.C. 7:27-8.13(d)1]	Maximum Gross Heat Input: Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. All records pertaining to engine manufacturer specifications, shall be kept on-site or at the permittee's main office all times, readily made available to the Department or its representatives upon request. [N.J.A.C. 7:27- 8.13(d)3]	None.
2	Opacity: No visible emissions, exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
3	TSP <= 1.73 lb/hr. [N.J.A.C. 7:27- 4.2(a)]	None.	None.	None.
4	Fuel use is limited to Natural Gas only. [N.J.A.C. 7:27- 8.13(a)]	None.	None.	None.
5	Hours of Operation <= 100 hr/yr for testing and maintenance, as requested by the permittee. This does not include emergency operating hours. 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- 8.13(h)]	Hours of Operation: Monitored by hour/time monitor continuously. Permittee shall install and operate a totalizing, non-resettable hour meter monitoring the total hours of operation for the generator. [N.J.A.C. 7:27- 8.13(d)2]	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.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	Emergency generators shall not be used: 1) In a circumstance other than an emergency; for normal testing and maintenance on days when the Department forecasts air quality anywhere in New Jersey to be "unhealthy for sensitive groups," "unhealthy," or "very unhealthy" or "hazardous" as defined in the EPA's Air Quality Index at http.//airnow.gov/, 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 air quality web site at http://www.state.nj.us/dep/aqpp/aqforecast ; and 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)]	Other: The Permittee shall check the air quality forecast for New Jersey available at the Department air quality website at http://www.state.nj.us/dep/aqpp/aqforecast prior to operating during testing and maintenance periods.[N.J.A.C. 7:27-8.13(d)1].	None.	Submit a report: Upon occurrence of event. The permittee shall report any non-compliance in writing within 3 working days after the event to the Regional Enforcement Office. [N.J.A.C. 7:27-8.13(d)4]
7	The owner or operator of a new certified natural gas Emergency SI ICE (except gasoline and rich burn engines that use LPG) with a maximum engine power of => 130 HP manufactured after January 1, 2009 must meet the emission standards for emergency engines summarized in Table 1 in 40 CFR 60 Subpart JJJJ as follows: NOx <= 2.0 g/HP-hr, CO <= 4.0 g/HP-hr, VOC <= 1.0 g/HP-hr or NOx <= 160 ppmvd @15% O2, CO <= 540 ppmvd @15% O2, VOC <= 86 ppmvd @15% O2. [40 CFR 60.4233(e)]	Monitored by documentation of construction once initially. The permittee shall purchase a stationary SI ICE certified to the emission standards in 40 CFR 60.4233(e), for the same model year. [40 CFR 60.4243(b)(1)]	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially. The owner or operator of a SI ICE engine must keep certifications related to the applicable emission standards. [40 CFR 60.4245(a)]	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
8	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]	None.	Other: The owner or operator must keep records of the documentation that the engine meets the emission standards and keep the manufacturer's emission-related written instructions for the entire life of the engine.[40 CFR 60.4245(a)].	None.
9	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 documentation of construction once initially. 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)]	Recordkeeping by manual logging of parameter or storing data in a computer data system once initially 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.

NJDEP to replace all Subchapter 8 7:27-8.12(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
10	The owner or operator of a SI ICE who must comply with the emission standards specified in 40 CFR 60.4233(d) or (e), must demonstrate compliance by purchasing an engine certified according to procedures specified in 40 CFR 60 Subpart JJJ, for the same model year. In addition, the owner or operator must operate and maintain the certified stationary SI ICE and control device according to the manufacturer's emission-related written instructions, keep records of conducted maintenance to demonstrate compliance, but no performance testing is required for an owner or operator. The owner or operator must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to the owner or operator. If the engine settings are adjusted according to and consistent with the manufacturer's instructions, the stationary SI ICE will not be considered out of compliance. If the certified stationary SI ICE and control device is not operated and maintained according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the owner or operator must demonstrate compliance according to 40 CFR 60.4243 (a)(2)(i) through (iii), as appropriate. [40 CFR 60.4243(b)]	Other: The owner or operator must demonstrate compliance as prescribed in 40 CFR 60.4243(b).[40 CFR 60.4243].	Other: The owner or operator must keep records of the documentation that the engine meets the emission standards.[40 CFR 60.4245(a)].	None.

NJDEP to replace all Subchapter 8 7:27-8.13(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
11	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)]	Monitored by hour/time monitor continuously 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.
12	For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing is prohibited. [40 CFR 60.4243(d)]	Monitored by hour/time monitor continuously , 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.[40 CFR 60.4245(b)].	None.
13	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.

NJDEP to replace all Subchapter 8 7:27-8.12(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
14	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 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.
15	All requests, reports, applications, submittals, and other communications to the Administrator pursuant to Part 60 shall be submitted in duplicate to the Regional Office of US Environmental Protection Agency. Submit information to: Director, Division of Enforcement & Compliance Assistance, US EPA, Region 2, 290 Broadway, New York, NY 10007-1866. [40 CFR 60.4(a)]	None.	None.	Submit a report: As per the approved schedule to EPA Region 2 as required by 40 CFR 60. [40 CFR 60.4(a)]
16	Copies of all information submitted to EPA pursuant to 40 CFR Part 60, must also be submitted to the appropriate Regional Enforcement Office of NJDEP. [40 CFR 60.4(b)]	None.	None.	Submit a report: As per the approved schedule to the appropriate Regional Enforcement Office of NJDEP as required by 40 CFR 60. [40 CFR 60.4(b)]
17	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.

NJDEP to replace all Subchapter 8 7:27-8.12(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

New Jersey Department of Environmental Protection
Facility Specific Requirements

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
18	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.

NJDEP to replace all Subchapter 8 7:27-8.12(a) applicable requirements to Subchapter 22 N.J.A.C. 7:27-22.16.

U23 PCP970002 Gasoline Tank

NJDEP to include permit requirements from PCP 970002

U2302 PCP970001 Stage II Vapor Control Gasoline Dispensing

NJDEP to include requirements from PCP 970001

U3104 GEN170001 Used Oil Space Heater

NJDEP to include requirements from GEN170001

Attachment D

Recent Compliance Stack Test Report (Summary)

Executive Summary

PACE Environmental (PACE) was contracted by Anaergia Inc. to perform an Emission Compliance Test at the Camden County Municipal Utility Authority Delaware 1 Wastewater Treatment facility located in Camden, NJ. Testing was performed to determine the carbon monoxide (CO), oxides of nitrogen (NO_x), non-methane non-ethane organic compounds (NMEOC), formaldehyde (HCOH), and ammonia emissions rates of the facility's two 1900kw engine generators. Testing was conducted firing only natural gas.

In our assessment of the results, this source is in compliance with all applicable emission limits found in the permit.

Test Results Summary

PI:	**50163**			
Permit Activity:	**PCP180001**			
TST:	**TST190001**			
Sources:	CHP1/OS103 CHP2/OS104			
Test Date:	September 18-19, 2019			
Tested Pollutant/Test Method	**Average Test Result**		**Emission Limit**	**Compliance Status**
	CHP 1	**CHP 2**		
CO	0.98	1.48	270 ppm @ 15% O_2 500 ppm @ 15% O_2	Compliant
	0.007	0.01	0.5 g/bhp-hr 2.0 g/bhp-hr	Compliant
	0.04	0.07	2.92 lb/hr	Compliant
NO_X	8.26	8.67	82 ppm @ 15% O_2	Compliant
	0.10	0.11	0.15 g/bhp-hr 0.9 g/bhp-hr 1.0 g bhp-hr	Compliant
	0.59	0.66	0.88 lb/hr	Compliant
VOC (NMEOC as CH_4, including HCOH)	< 0.02	<0.01	0.15 g/bhp-hr	Compliant
	< 0.09	<0.09	0.88 lb/hr	Compliant
VOC (NMEOC as C3H8)	0.90	0.77	60 ppm @ 15% O_2	Compliant
	0.01	0.01	0.7 g/bhp-hr	Compliant
Formaldehyde	< 0.003	< 0.002	0.23 lb/hr	Compliant
Ammonia	0.04	0.0009	0.12 lb/hr	Compliant

Responsible Official Certification

I certify under penalty of law, that I have personally examined and am familiar with the information submitted in this document and all attached documents and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

I am aware that there are significant civil and criminal penalties, including the possibility of fines or imprisonment or both for submitting false, inaccurate or incomplete information.

I am the responsible official as defined in N.J.A.C. 7:27-1.4 with direct knowledge and overall responsibility for the information contained in this report.

Robert Cornforth

Name

Director of Operations + Maintenance

Title

Robert Cornforth

Signature

11-1-2019

Date

Field sampling on this project was performed by:

Brandon Gallagher Tim Beam Larkin Recke Cody Wendt

Observed by:

Neil Nissim - NJDEP EMS

ERT preparation performed by:

Brandon Gallagher

PACE Personnel Certification

I certify that, to the best of my knowledge and ability, the work on this project was reported truly, accurately and completely.

Reviewed by:

Brandon Gallagher

John Donnelly
Partner

I certify, under penalty of law that I believe the information provided in this document is true, accurate, and complete. I am aware that there are significant civil and criminal penalties, including the possibility of fine or imprisonment or both, for submitting false, inaccurate, or incomplete information.

Project/Field Personnel

Brandon Gallagher
Project Manager

CCMUA
Compliance Testing Process Data

CHP	Run	Date	Start Time	End Time	Temp Downstream of SCR (510-932F)	Catalyst Bed Temp (660-1010F)	Natural Gas Usage (100 SCF)	KW (Generator)	HP (Generator)	BHP (Engine)
1	1	9/18/2019	14:35	15:46	718.8	716.2	165.2	1900.1	2548.0	2659.7
1	2	9/18/2019	16:35	17:47	719.0	716.9	169.9	1900.3	2548.3	2660.0
1	3	9/18/2019	18:15	19:26	719.5	714.6	166.7	1900.3	2548.3	2660.0
2	1	9/19/2019	8:20	9:37	694.2	706.9	166.3	1900.3	2548.3	2660.0
2	2	9/20/2019	10:12	11:26	702.5	711.2	168.9	1899.8	2547.7	2659.4
2	3	9/21/2019	12:05	13:21	703.8	713.7	167.6	1900.4	2548.4	2660.1

ENERGY GENERATED BY GENERATOR IN HP = ENERGY MADE BY GENERATOR IN KW * 1.341
ENERGY GENERATED BY ENGINE IN BHP = ENERGY GENERATED BY GENERATOR IN HP/95.8% GENERATOR EFFICIENCY

M323 Formaldehyde Emissions Calculator

Customer Name: Anaergia
Location: CAMDEN, NJ
Source: CHP 1 OUTLET

Contaminant: **Formaldehyde** Molar Mass (lb/lb-mol) (A) = 30.03

	Run	1	2-Dup	2	3		
	Date	**09/18/19**	**09/18/19**	**09/18/19**	**09/18/19**		
	Time	**1435-1535**	**1635-1735**	**1635-1735**	**1815-1915**		
Stack Flowrate (DSCFM) (B)		6,406.0	6,279.3	6,279.3	6,305.2		
Stack Moisture (%) (C)		10.30	10.45	10.45	9.70		
Meter Volume (DSCF) (D)		0.708	0.771	0.765	0.706		
Oxygen (%) (L)		11.54	11.55	11.55	11.58		
Engine Output (kW)		1900.1	1900.3	1900.3	1900.3		
Blank Concentration (ug) (E1)		0.0	0.0	0.0	0.0		
Blank Volume (mL) (E2)		41	41	41	41		
Sample Volume (mL) (E3)		42	41	41	42		
Scaled-up Blank Concentration (ug) (E4)		0.0	0.0	0.0	0.0		
Sample Concentration (ug) (F1)		< 2.1	3.00	2.00	2.10		
Net Sample Concentration (ug) (G)		< 2.1	3.00	2.00	2.10		
						Average	**Emission Limit**
Parts/million (wet) (K)		< 0.08	0.10	0.07	0.08	< 0.08	
Parts/million (dry) (J)		**< 0.08**	**0.11**	**0.07**	**0.08**	**< 0.09**	
Parts/million (dry) @ 15% O_2 (M)		**< 0.05**	**0.07**	**0.05**	**0.05**	**< 0.06**	
Emissions (pounds / hour) (H)		**< 0.003**	**0.003**	**0.002**	**0.002**	**< 0.003**	**0.23**

Equations Used:

(E4) = (E1/E2)*(E3)
(G) = (F1-E4)*1000
(H) = (G)(B)(60 min / hour)(2.2 x 10^{-9} pounds / microgram) / (D)
(J) = (G)(386.8 scf/lb-mol) / (A x D x 453.59g/lb)
(K) = (J)((100 - C) / 100)
(M) = (J)(5.9/(20.9-L))
(N) = (G * 35.315 ft^3/m^3) / D
(L) =((F2) / (F1 + F2)) * 100%

EMISSION CALCULATIONS- VOC

Customer Name: Anaergia
Location: CAMDEN, NJ
Source: CHP 2 OUTLET

	Run No.	1	2	3	
	Date	09/19/19	09/19/19	09/19/19	
	Time	820-937	1012-1126	1205-1321	
					AVERAGE
Stack Flowrate (dscfm) (A)		6,789.1	7,208.9	6,415.1	6,804
Stack Moisture (%) (B)		10.18	9.88	10.18	10.08
Correct to:	15 % O_2 (C)				
Engine Output (kW)		1,900.3	1,899.8	1,900.4	1,900.2

Oxygen (O_2)

	1	2	3	AVERAGE
Run Average, dry, corrected (%) (J)	**11.74**	**11.72**	**11.71**	**11.72**

Non-Methane Non-Ethane Hydrocarbons (NMNEHC as C_3H_8)

Molar Mass (E) = 44.1

	1	2	3	AVERAGE	EMISSION LIMIT
Run Average, wet (ppmv) (W)	1.39	1.44	1.59	1.47	
Run Average, dry (ppmv) (X)	**1.55**	**1.60**	**1.77**	**1.64**	
pounds/hour (Y)	**0.07**	**0.08**	**0.08**	**0.08**	
ppmv, dry @ 15% O_2 (S)	**1.00**	**1.03**	**1.14**	**1.05**	**60.00**
grams/BHP-hr (U)	**0.01**	**0.01**	**0.01**	**0.01**	**0.7**

Non-Methane Non-Ethane Hydrocarbons (NMNEHC as CH_4)

Molar Mass (E) = 16.04

	1	2	3	AVERAGE	EMISSION LIMIT
Run Average, dry (ppmv) (X)	**4.64**	**4.79**	**5.31**	**4.92**	

Formaldehyde

Molar Mass (E) = 30.03

	1	2	3	AVERAGE	
pounds/hour (Y)	**< 0.002**	**< 0.003**	**< 0.002**	**< 0.003**	**0.23**

Non-Methane Non-Ethane Hydrocarbons (NMNEHC as CH_4), including formaldehyde

	1	2	3	AVERAGE	EMISSION LIMIT
pounds/hour (W)	**< 0.08**	**< 0.09**	**< 0.09**	**< 0.09**	**0.88**
grams/BHP-hr (U)	**< 0.01**	**< 0.02**	**< 0.01**	**< 0.01**	**0.2**

Equations:

(X) = (W)/((100-B)/100)
(Y) = (A)(X)(E)(60 min/hr)(1lb-mol/385.3 ft^3)(10^{-6})
(U) = (Y)(453.59g/lb)(0.746 kw/hp)(0.958- Gen efficiency) / (kW)
(W) = (A)(X)(E)(60 min/hr)(1lb-mol/386.8 ft^3)(10^{-6})

Definitions:

(A) = In-stack flowrate as measured by U.S. EPA Methods 1-4 (See Stack Flow Calculation
(B) = In-stack moisture as measured by U.S. EPA Method 4. (See Stack Flow Calculation
(E) = Molar mass of compound in lb/lb-mole
(W) = Analyzer response to stack gas. Hydrocarbons are measured wet.

Note: Formaldehyde R1 is averaging the R1 and R1-Dup results

EMISSION CALCULATIONS- NH_3

Customer Name: Anaergia
Location: CAMDEN, NJ
Source: CHP 1 OUTLET

Contaminant: **Ammonia** Molar Mass (lb/ lb-mol) (A1) = 17.03
Ammonium Molar Mass (lb/ lb-mol) (A2) = 18.04

	Run	1	2	3		
	Date	09/18/19	09/18/19	09/18/19		
	Time	1435-1546	1635-1747	1815-1926		
Stack Flowrate (DSCFM) (B)		6,406.0	6,279.3	6,305.2		
Meter Volume (DSCF) (C)		47.391	46.951	47.862		
Oxygen Concentration (%) (C1)		11.54	11.55	11.58		
Blank Ammonium Concentration (mg/l NH_4) (D)		0.0	0.0	0.0		
Blank Volume (l) (E)		0.192	0.192	0.192		
Impinger 1 Sample Volume (liters) (F)		0.230	0.229	0.229		
Impinger 2 Sample Volume (liters) (G)		0.229	0.230	0.229		
Impinger 3 Sample Volume (liters) (H)		0.230	0.229	0.228		
Impinger 4 Sample Volume (liters) (R)		0.230	0.229	0.229		
Total Blank NH_3 (ug) (I)		0.0	0.0	0.0		
Impinger 1 Sample Ammonium (ug) (J)		0.0	31.0	0.0		
Impinger 2 Sample Ammonium (ug) (K)		6300.0	120.0	21.0		
Impinger 3 Sample Ammonium (ug) (L)		140.0	0.0	0.0		
Impinger 4 Sample Ammonium (ug) (S)		0.0	0.0	0.0	**Averages**	**QA/QC Allowable**
Total Sample Ammonia (ug) (M)		6079.4	142.5	19.8		
Breakthrough (N)		*0.0%*	*0.0%*	*0.0%*		*<10%*
Emissions:						**Emission Limit**
Pounds / hour (O)		0.1087	0.0025	0.0003	0.04	**0.12**
Parts/million (dry) (P)		**6.42**	**0.15**	**0.02**	2.20	
Parts/million (dry) @ 15% O2 (Q)		**4.05**	**0.10**	**0.01**	1.39	

(G) = (F1-E4)*1000

Equations:

(I) = (D)*(E)*1000 ug/mg*(A1)/(A2)
(M) = (J + K + L+S) *(A1/A2) - (I)
(N) = (S) / (L)
(O) = (M) * (B) * (60 min / hour) * (2.205 x 10^-9 pounds / microgram) / (C)
(P) = (M)*(386.8 scf/ lb-mol) / [(A1) * (C) * 453.59 g/ lb]
(Q) = (P)*(20.9-15) / (20.9-C1)

Definitions:

(A) = Molecular weight of Ammonia as NH_3 and Ammonium as NH_4^+.
(B) = Measured stack flow rate (see flow Calculation Sheets)
(C) = Meter volume converted to standard conditions (see Flow Calculation Sheets)
(D) = Reported concentration for Blank (see Laboratory Report).
(E) = Volume of blank reagent used in each impinger.
(F) = Volume of Impinger 1 Sample (see Laboratory Report).
(G) = Volume of Impinger 2 Sample (see Laboratory Report).
(H) = Volume of Impinger 3 Sample (see Laboratory Report).
(J) = Reported result for Impinger 1 Sample (see Laboratory Report).
(K) = Reported result for Impinger 2 Sample (see Laboratory Report).
(L) = Reported result for Impinger 3 Sample (see Laboratory Report).

M323 Formaldehyde Emissions Calculator

Customer Name: Anaergia
Location: CAMDEN, NJ
Source: CHP 2 OUTLET

Contaminant: **Formaldehyde** Molar Mass (lb/lb-mol) (A) = 30.03

	Run	1	1-Dup	2	3		
	Date	**9/19/19**	**9/19/19**	**9/19/19**	**9/19/19**		
	Time	**820-920**	**820-920**	**1012-1112**	**1205-1305**		
Stack Flowrate (DSCFM) (B)		6,789.1	6,789.1	7,208.9	6,415.1		
Stack Moisture (%) (C)		10.18	10.18	9.88	10.18		
Meter Volume (DSCF) (D)		0.781	0.807	0.740	0.727		
Oxygen (%) (L)		11.74	11.74	11.72	11.71		
Engine Output (kW)		1900.3	1900.3	1899.8	1900.4		
Blank Concentration (ug) (E1)		0.0	0.0	0.0	0.0		
Blank Volume (mL) (E2)		41	41	41	41		
Sample Volume (mL) (E3)		42	42	42	42		
Scaled-up Blank Concentration (ug) (E4)		0.0	0.0	0.0	0.0		
Sample Concentration (ug) (F1)		< 2.10	< 2.10	< 2.10	< 2.10		
Net Sample Concentration (ug) (G)		< 2.10	< 2.10	< 2.10	< 2.10		
						Average	**Emission Limit**
Parts/million (wet) (K)		< 0.07	< 0.07	< 0.07	< 0.07	< 0.07	
Parts/million (dry) (J)		**< 0.08**	**< 0.07**	**< 0.08**	**< 0.08**	**< 0.08**	
Parts/million (dry) @ 15% O_2 (M)		**< 0.05**	**< 0.05**	**< 0.05**	**< 0.05**	**< 0.05**	
Emissions (pounds / hour) (H)		**< 0.002**	**< 0.002**	**< 0.003**	**< 0.002**	**< 0.002**	**0.23**

Equations Used:

(E4) = (E1/E2)*(E3)
(G) = (F1-E4)*1000
(H) = (G)(B)(60 min / hour)(2.2 x 10^{-9} pounds / microgram) / (D)
(J) = (G)(386.8 scf/lb-mol) / (A x D x 453.59g/lb)
(K) = (J)((100 - C) / 100)
(M) = (J)(5.9/(20.9-L))
(N) = (G * 35.315 ft^3/m^3) / D
(L) =((F2) / (F1 + F2)) * 100%

EMISSION CALCULATIONS- VOC

Customer Name: Anaergia
Location: CAMDEN, NJ
Source: CHP1 OUTLET

	Run No.	1	2	3	
	Date	09/18/19	09/18/19	09/18/19	
	Time	1435-1546	1635-1747	1815-1926	
					AVERAGE
Stack Flowrate (dscfm) (A)		6,406.0	6,279.3	6,305.2	6,330
Stack Moisture (%) (B)		10.30	10.45	9.70	10.15
Correct to:	15 % O_2 (C)				
Engine Output (kW)		1,900.1	1,900.3	1,900.3	1,900.2

Oxygen (O_2)

	1	2	3	AVERAGE
Run Average, dry, corrected (%) (J)	**11.54**	**11.55**	**11.58**	**11.56**

Non-Methane Non-Ethane Hydrocarbons (NMNEHC as C_3H_8)

Molar Mass (E) = 44.1

	1	2	3	AVERAGE	EMISSION LIMIT
Run Average, wet (ppmv) (W)	2.33	1.68	1.15	1.72	
Run Average, dry (ppmv) (X)	**2.60**	**1.88**	**1.27**	**1.92**	
pounds/hour (Y)	**0.11**	**0.08**	**0.06**	**0.08**	
ppmv, dry @ 15% O_2 (S)	**1.64**	**1.18**	**0.81**	**1.21**	**60.00**
grams/BHP-hr (U)	**0.02**	**0.01**	**0.01**	**0.01**	**0.7**

Non-Methane Non-Ethane Hydrocarbons (NMNEHC as CH_4)

Molar Mass (E) = 16.04

	1	2	3	AVERAGE	EMISSION LIMIT
Run Average, dry (ppmv) (X)	**7.79**	**5.63**	**3.82**	**5.75**	

Formaldehyde

Molar Mass (E) = 30.03

	1	2	3	AVERAGE	
pounds/hour (Y)	**< 0.003**	**< 0.003**	**< 0.002**	**< 0.003**	**0.23**

Non-Methane Non-Ethane Hydrocarbons (NMNEHC as CH_4), including formaldehyde

	1	2	3	AVERAGE	EMISSION LIMIT
pounds/hour (W)	**< 0.13**	**< 0.09**	**< 0.06**	**< 0.09**	**0.88**
grams/BHP-hr (U)	**< 0.02**	**< 0.02**	**< 0.01**	**< 0.02**	**0.2**

Equations:

(X) = (W)/((100-B)/100)
(Y) = (A)(X)(E)(60 min/hr)(1lb-mol/385.3 ft^3)(10^{-6})
(U) = (Y)(453.59g/lb)(0.746 kw/hp)(0.958- Gen efficiency) / (kW)
(W) = (A)(X)(E)(60 min/hr)(1lb-mol/386.8 ft^3)(10^{-6})

Definitions:

(A) = In-stack flowrate as measured by U.S. EPA Methods 1-4 (See Stack Flow Calculation
(B) = In-stack moisture as measured by U.S. EPA Method 4. (See Stack Flow Calculation
(E) = Molar mass of compound in lb/lb-mole
(W) = Analyzer response to stack gas. Hydrocarbons are measured wet.

Note: Formaldehyde R2 is averaging the R2 and R2-Dup results

EMISSION CALCULATIONS- NH_3

Customer Name: Anaergia
Location: CAMDEN, NJ
Source: CHP 2 OUTLET

Contaminant: **Ammonia** Molar Mass (lb/ lb-mol) (A1) = 17.03
Ammonium Molar Mass (lb/ lb-mol) (A2) = 18.04

	Run	1	2	3		
	Date	09/19/19	09/19/19	09/19/19		
	Time	820-937	1012-1126	1205-1321		
Stack Flowrate (DSCFM) (B)		6,789.1	7,208.9	6,415.1		
Meter Volume (DSCF) (C)		50.301	53.830	52.432		
Oxygen Concentration (%) (C1)		11.74	11.72	11.71		
Blank Ammonium Concentration (mg/l NH_4) (D)		0.0	0.0	0.0		
Blank Volume (l) (E)		0.192	0.192	0.192		
Impinger 1 Sample Volume (liters) (F)		0.229	0.227	0.228		
Impinger 2 Sample Volume (liters) (G)		0.229	0.229	0.229		
Impinger 3 Sample Volume (liters) (H)		0.230	0.229	0.229		
Impinger 4 Sample Volume (liters) (R)		0.228	0.228	0.228		
Total Blank NH_3 (ug) (I)		0.0	0.0	0.0		
Impinger 1 Sample Ammonium (ug) (J)		0.0	0.0	0.0		
Impinger 2 Sample Ammonium (ug) (K)		36.0	86.0	50.0		
Impinger 3 Sample Ammonium (ug) (L)		0.0	0.0	0.0		
Impinger 4 Sample Ammonium (ug) (S)		0.0	0.0	0.0	**Averages**	**QA/QC Allowable**
Total Sample Ammonia (ug) (M)		34.0	81.2	47.2		
Breakthrough (N)		*0.0%*	*0.0%*	*0.0%*		*<10%*
Emissions:						**Emission Limit**
Pounds / hour (O)		0.0006	0.0014	0.0008	0.0009	**0.12**
Parts/million (dry) (P)		**0.03**	**0.08**	**0.05**	0.05	
Parts/million (dry) @ 15% O2 (Q)		**0.02**	**0.05**	**0.03**	0.03	

(G) = (F1-E4)*1000

Equations:

(I) = (D)*(E)*1000 ug/mg*(A1)/(A2)
(M) = (J + K + L+S) *(A1/A2) - (I)
(N) = (S) / (L)
(O) = (M) * (B) * (60 min / hour) * (2.205 x 10^-9 pounds / microgram) / (C)
(P) = (M)*(386.8 scf/ lb-mol) / [(A1) * (C) * 453.59 g/ lb]
(Q) = (P)*(20.9-15) / (20.9-C1)

Definitions:

(A) = Molecular weight of Ammonia as NH_3 and Ammonium as NH_4^+.
(B) = Measured stack flow rate (see flow Calculation Sheets)
(C) = Meter volume converted to standard conditions (see Flow Calculation Sheets)
(D) = Reported concentration for Blank (see Laboratory Report).
(E) = Volume of blank reagent used in each impinger.
(F) = Volume of Impinger 1 Sample (see Laboratory Report).
(G) = Volume of Impinger 2 Sample (see Laboratory Report).
(H) = Volume of Impinger 3 Sample (see Laboratory Report).
(J) = Reported result for Impinger 1 Sample (see Laboratory Report).
(K) = Reported result for Impinger 2 Sample (see Laboratory Report).
(L) = Reported result for Impinger 3 Sample (see Laboratory Report).

Final Test Report
for

CCMUA CHP1 and 2 Compliance Testing Sept 2019 - Natural Gas

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this test report are true, accurate, and complete.

Permitted Facility Representative / Date

Name:
Title:
Company:
Sign Date:

I have reviewed all testing details and results in this test report and hereby certify that the test report is authentic and accurate.

Testing Company Representative / Date

Name: Brandon Gallagher
Title:
Company: PACE Environmental
Sign Date: 11/1/2019

CCMUA CHP1 and 2 Compliance Testing Sept 2019 - Natural Gas

Facility Information:

Camden County MUA Delaware #1 WPCF
200 Jackson St
Camden NJ 08104-

Contact: Andrew Kricun
Phone: (856) 583-1223
Fax:
Email: andy@ccmua.org

Testing Company:

PACE Environmental
5260 W Coplay Rd
Whitehall PA 18052-

Contact: Brandon Gallagher
Phone: (610) 262-3818
Fax:
Email: brandon@paceenvironmental.com

Industry/SCC/NAIS 221320 **AFS #:** **FRS #:** 110022414350

Air Permit Number: PCP150003

Permitted Source ID/Name: E3802(CHP1)/ 1900kw/2649bhp AB Energy J612GS-F25 4SLB RICE

Permitted Maximum Process Rate: 1900kw

Max. Normal Operation Process Rate:

Target Process Test Rat 1710kw

SCC / Description 20200204 Internal Combustion Engines - Industrial - Natural Gas - Reciprocating: Cogeneration

The following state and federal regulations that apply to the proposed testing:

Part/Sub-Part	Regulation Description	Compound	Limit	Unit
	NJ PERMIT	NMOC (VOC) as Methane	0.88	lb/hr
	NJ PERMIT	Carbon Monoxide	2.92	lb/hr
	NJ PERMIT	Carbon Monoxide	500	ppm@15%O2
	NJ PERMIT	Nitrogen oxides (NOx)	0.88	lb/hr
	NJ PERMIT	Formaldehyde	0.23	lb/hr
Part 60 Subpart JJJJ	NATURAL GAS Stationary Spark Ignition Internal Combustion Engines	Nitrogen oxides (NOx)	1	grams / Brake Horsepower of Energy Generated
Part 60 Subpart JJJJ	NATURAL GAS Stationary Spark Ignition Internal Combustion Engines	Nitrogen oxides (NOx)	82	ppm@15%O2
Part 60 Subpart JJJJ	NATURAL GAS Stationary Spark Ignition Internal Combustion Engines	Carbon Monoxide	2	grams / Brake Horsepower of Energy Generated
Part 60 Subpart JJJJ	NATURAL GAS Stationary Spark Ignition Internal Combustion Engines	Carbon Monoxide	270	ppm@15%O2
Part 60 Subpart JJJJ	NATURAL GAS Stationary Spark Ignition Internal Combustion Engines	NMOC(VOC) as Propane	0.7	grams / Brake Horsepower of Energy Generated
Part 60 Subpart JJJJ	NATURAL GAS Stationary Spark Ignition Internal Combustion Engines	NMOC(VOC) as Propane	60	ppm@15%O2
	NJ PERMIT	Carbon Monoxide	0.5	grams / Brake Horsepower of Energy Generated

	NJ PERMIT	Nitrogen oxides (NOx)	0.15	grams / Brake Horsepower of Energy Generated
	NJ PERMIT	Nitrogen oxides (NOx)	0.9	grams / Brake Horsepower of Energy Generated
	NJ PERMIT	NMOC (VOC) as Methane	0.15	grams / Brake Horsepower of Energy Generated
	NJ PERMIT	Ammonia	0.12	lb/hr
Part 60 Subpart JJJJ	DIGESTER GAS Stationary Spark Ignition Internal Combustion Engines	Nitrogen oxides (NOx)	2	grams / Brake Horsepower of Energy Generated
Part 60 Subpart JJJJ	DIGESTER GAS Stationary Spark Ignition Internal Combustion Engines	Carbon Monoxide	5	grams / Brake Horsepower of Energy Generated
Part 60 Subpart JJJJ	DIGESTER GAS Stationary Spark Ignition Internal Combustion Engines	NMOC(VOC) as Propane	1	grams / Brake Horsepower of Energy Generated
Part 60 Subpart JJJJ	DIGESTER GAS Stationary Spark Ignition Internal Combustion Engines	Nitrogen oxides (NOx)	150	ppm@15%O2
Part 60 Subpart JJJJ	DIGESTER GAS Stationary Spark Ignition Internal Combustion Engines	Carbon Monoxide	610	ppm@15%O2
Part 60 Subpart JJJJ	DIGESTER GAS Stationary Spark Ignition Internal Combustion Engines	NMOC(VOC) as Propane	80	ppm@15%O2

Description of the source (including control equipment). Please see the attachments for source or process flow diagram:

CHP 1 (E3802) TO OXYCAT 1 (CD3804) TO SCR 1 (CD3802) TO STACK 1 (PT3802)
CHP 2 (E3803) TO OXYCAT 2 (CD3805) TO SCR 2 (CD3803) TO STACK 2 (PT3803)

Sampling Location Information:

Location	Round Duct Diam.	Rect. Duct Length /Width		Equiv. Diam	Distance from upstream dist.	Distance from downstream dist.	Number of Traverse Ports	Min.Travers Points
CHP1 E3802 Outlet	20				420	48	2	8
CHP2 E3803 Outlet	20				420	48	2	8

Test Parameter Information:

Location	Target Parameter	Test Method	Number of Test Runs	Test Run Duration	Comments
CHP1 E3802 Outlet	% H2O	Method 1 - 4			
CHP1 E3802 Outlet	Flowrate	Method 1 - 4			
CHP1 E3802 Outlet	Carbon Monoxide	Method 10			

CHP1 E3802 Outlet	Ammonia	CTM - 027			OUT OF STACK FILTER
CHP1 E3802 Outlet	Oxygen	Method 3A O2			
CHP1 E3802 Outlet	Carbon Dioxide	Method 3A CO2			
CHP1 E3802 Outlet	Formaldehyde	Method 323			
CHP1 E3802 Outlet	Nitrogen oxides (NOx)	Method 7E			
CHP2 E3803 Outlet	% H2O	Method 1 - 4			
CHP2 E3803 Outlet	Flowrate	Method 1 - 4			
CHP2 E3803 Outlet	Carbon Monoxide	Method 10			
CHP2 E3803 Outlet	Ammonia	CTM - 027			OUT OF STACK FILTER
CHP2 E3803 Outlet	Oxygen	Method 3A O2			
CHP2 E3803 Outlet	Carbon Dioxide	Method 3A CO2			
CHP2 E3803 Outlet	Formaldehyde	Method 323			
CHP2 E3803 Outlet	Nitrogen oxides (NOx)	Method 7E			

The following describes any modifications and/or deviations to the applicable test methods. If alternative methods were requested, see the attachments for documentation of request AND approval, including dates.

ALT-106 Approval of Alternative VOC Measurement for Engines

Sampling / Stack Data Results Summary

Location CHP1 E3802 Outlet - CTM - 027

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:46:00 PM	5:47:00 PM	7:26:00 PM	
Net Run Time, minutes	60	60	60	
Dry Gas Meter Volume Sampled, dscf	47.391	46.951	47.862	47.401
Moisture Content of Stack Gas, %	10.30	10.45	9.70	10.150
Moisture Saturation at Stack Gas Temperature, %	100.00	100.00	100.00	100.000
Carbon Dioxide, %	5.2923	5.262	5.2461	5.267
Oxygen, %	11.5548	11.5539	11.5789	11.563
Average Stack Gas Temperature, °F	711.38	711.88	712.00	711.753
Dry Volumetric Flow Rate, dry scfm	6,406.0	6,279.3	6,305.2	6,330.167
Actual Wet Volumetric Flue Gas Flow Rate, acfm	15,524.5	15,249.6	15,186.7	15,320.267
Percent Isokinetic of Sampling Rate, %	92.4	93.4	94.9	93.567
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP1 E3802 Outlet - Method 10

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:36:00 PM	5:47:00 PM	7:25:00 PM	
Carbon Dioxide, %	5.2923	5.262	5.2461	5.267
Oxygen, %	11.5548	11.5539	11.5789	11.563
Dry Volumetric Flow Rate, dry scfm	6406	6279.3	6305.2	6,330.167
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.3	10.45	9.7	10.150
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP1 E3802 Outlet - Method 3A CO2

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:45:00 PM	5:47:00 PM	7:25:00 PM	
Carbon Dioxide, %	5.2923	5.262	5.2461	5.267
Oxygen, %	11.5548	11.5539	11.5789	11.563
Dry Volumetric Flow Rate, dry scfm	6406	6279.3	6305.2	6,330.167
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.3	10.45	9.7	10.150
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP1 E3802 Outlet - Method 3A O2

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:46:00 PM	5:47:00 PM	7:25:00 PM	
Carbon Dioxide, %	0	0	0	0.000
Oxygen, %	11.5548	11.5539	11.5789	11.563
Dry Volumetric Flow Rate, dry scfm	0	0	0	0.000
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	0	0	0	0.000
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP1 E3802 Outlet - Method 7E

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:46:00 PM	5:47:00 PM	7:25:00 PM	
Carbon Dioxide, %	5.2923	5.262	5.2461	5.267
Oxygen, %	11.5548	11.5539	11.5789	11.563
Dry Volumetric Flow Rate, dry scfm	6406	6279.3	6305.2	6,330.167
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.3	10.45	9.7	10.150
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP2 E3803 Outlet - CTM - 027

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:37:00 AM	11:26:00 AM	1:21:00 PM	
Net Run Time, minutes	60	60	60	
Dry Gas Meter Volume Sampled, dscf	50.301	53.830	52.432	52.188
Moisture Content of Stack Gas, %	10.18	9.88	10.18	10.080
Moisture Saturation at Stack Gas Temperature, %	100.00	100.00	100.00	100.000
Carbon Dioxide, %	5.1739	5.1771	5.2016	5.184
Oxygen, %	11.7369	11.7165	11.7061	11.720
Average Stack Gas Temperature, °F	689.25	699.50	701.25	696.667
Dry Volumetric Flow Rate, dry scfm	6,789.1	7,208.7	6,415.1	6,804.300
Actual Wet Volumetric Flue Gas Flow Rate, acfm	16,067.8	17,155.8	15,341.2	16,188.267
Percent Isokinetic of Sampling Rate, %	92.6	93.3	102.1	96.000
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP2 E3803 Outlet - Method 10

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:37:00 AM	11:26:00 AM	1:21:00 PM	
Carbon Dioxide, %	5.1739	5.1771	5.2016	5.184
Oxygen, %	11.7369	11.7165	11.7061	11.720
Dry Volumetric Flow Rate, dry scfm	6789.1	7208.7	6415.1	6,804.300
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.18	9.88	10.18	10.080
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP2 E3803 Outlet - Method 3A CO2

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:37:00 AM	11:26:00 AM	1:21:00 PM	
Carbon Dioxide, %	5.1739	5.1771	5.2016	5.184
Oxygen, %	11.7369	11.7165	11.7061	11.720
Dry Volumetric Flow Rate, dry scfm	6789.1	7208.7	6415.1	6,804.300
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.18	9.88	10.18	10.080
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP2 E3803 Outlet - Method 3A O2

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:37:00 AM	11:26:00 AM	1:21:00 PM	
Carbon Dioxide, %	0	0	0	0.000
Oxygen, %	11.7369	11.7165	11.7061	11.720
Dry Volumetric Flow Rate, dry scfm	0	0	0	0.000
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	0	0	0	0.000
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP2 E3803 Outlet - Method 7E

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:20:00 AM	11:26:00 AM	1:21:00 PM	
Carbon Dioxide, %	5.1739	5.1771	5.2016	5.184
Oxygen, %	11.7369	11.7165	11.7061	11.720
Dry Volumetric Flow Rate, dry scfm	6789.1	7208.7	6415.1	6,804.300
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.18	9.88	10.18	10.080
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Emissions Summary

Location: **CHP1 E3802 Outlet - CTM - 027**

Compound: Ammonia

				Average	Reg Limit
RunNumber	1	2	3		
Mass_mg	6.0794	0.1425	0.0198	2.08E+00	
lb/hr	1.09E-01	2.52E-03	3.45E-04	3.73E-02	0.12
ppm	6.40E+00	1.51E-01	2.06E-02	2.19E+00	

Location: **CHP1 E3802 Outlet - Method 10**

Compound: Carbon Monoxide

				Average	Reg Limit
Run	1	2	3		
g / Brake Horsepower of Energy Generated	7.18E-03	7.37E-03	7.44E-03	7.33E-03	
g/hr	1.91E+01	1.96E+01	1.98E+01	1.95E+01	
lb/hr	4.21E-02	4.31E-02	4.36E-02	4.29E-02	2.92
ppm	1.51E+00	1.57E+00	1.58E+00	1.55E+00	
ppm@15%O2	9.53E-01	9.91E-01	1.00E+00	9.81E-01	500

Location: **CHP1 E3802 Outlet - Method 3A CO2**

Compound: Carbon Dioxide

				Average	Reg Limit
Run	1	2	3		
Percent(%)	5.29E+00	5.26E+00	5.25E+00	5.27E+00	

Location: **CHP1 E3802 Outlet - Method 3A O2**

Compound: Oxygen

				Average	Reg Limit
Run	1	2	3		
Percent(%)	1.16E+01	1.16E+01	1.16E+01	1.16E+01	

Location: **CHP1 E3802 Outlet - Method 7E**

Compound: Nitrogen oxides (NOx)

				Average	Reg Limit
Run	1	2	3		
g / Brake Horsepower of Energy Generated	1.07E-01	9.96E-02	9.62E-02	1.01E-01	
g/hr	2.84E+02	2.65E+02	2.56E+02	2.68E+02	
lb/hr	6.26E-01	5.84E-01	5.65E-01	5.92E-01	0.88
ppm	1.37E+01	1.30E+01	1.25E+01	1.31E+01	
ppm@15%O2	8.65E+00	8.21E+00	7.91E+00	8.26E+00	82

Location: **CHP2 E3803 Outlet - CTM - 027**

Compound: Ammonia

				Average	Reg Limit
RunNumber	1	2	3		
Mass_mg	0.034	0.0812	0.0472	5.41E-02	
lb/hr	6.07E-04	1.44E-03	7.64E-04	9.37E-04	0.12
ppm	3.37E-02	7.52E-02	4.49E-02	5.13E-02	

Location: **CHP2 E3803 Outlet - Method 10**

Compound: Carbon Monoxide

				Average	Reg Limit
Run	1	2	3		
g / Brake Horsepower of Energy Generated	8.65E-03	1.36E-02	1.27E-02	1.17E-02	
g/hr	2.30E+01	3.61E+01	3.38E+01	3.10E+01	
lb/hr	5.08E-02	7.97E-02	7.46E-02	6.84E-02	2.92
ppm	1.71E+00	2.53E+00	2.67E+00	2.30E+00	
ppm@15%O2	1.10E+00	1.63E+00	1.71E+00	1.48E+00	500

Location: CHP2 E3803 Outlet - Method 3A CO2

Compound: Carbon Dioxide

				Average	Reg Limit
Run	1	2	3		
Percent(%)	5.17E+00	5.18E+00	5.20E+00	5.18E+00	

Location: CHP2 E3803 Outlet - Method 3A O2

Compound: Oxygen

				Average	Reg Limit
Run	1	2	3		
Percent(%)	1.17E+01	1.17E+01	1.17E+01	1.17E+01	

Location: CHP2 E3803 Outlet - Method 7E

Compound: Nitrogen oxides (NOx)

				Average	Reg Limit
Run	1	2	3		
g / Brake Horsepower of Energy Generated	1.04E-01	1.23E-01	1.10E-01	1.12E-01	
g/hr	2.76E+02	3.27E+02	2.93E+02	2.99E+02	
lb/hr	6.09E-01	7.21E-01	6.45E-01	6.58E-01	0.88
ppm	1.25E+01	1.40E+01	1.40E+01	1.35E+01	
ppm@15%O2	8.05E+00	8.99E+00	8.98E+00	8.67E+00	82

Process Run Data

Process: Natural Gas Burned SCC: 20200204
Comment:

Run	Value	Unit of Measure	Target Low	Target High	Comment
1	0	Million Cubic Feet/hr	0	0	CHP1 R1
2	0	Million Cubic Feet/hr	0	0	CHP1 R2
3	0	Million Cubic Feet/hr	0	0	CHP1 R3
4	0	Million Cubic Feet/hr	0	0	CHP2 R1
5	0	Million Cubic Feet/hr	0	0	CHP2 R2
6	0	Million Cubic Feet/hr	0	0	CHP2 R3

Process: Energy Generated SCC:
Comment: ENERGY GENERATED BY GENERATOR IN KW

Run	Value	Unit of Measure	Target Low	Target High	Comment
1	1900	Kilowatt/hr	1710	2090	CHP1 R1
2	1900	Kilowatt/hr	1710	2090	CHP1 R2
3	1900	Kilowatt/hr	1710	2090	CHP1 R3
4	1900	Kilowatt/hr	1710	2090	CHP2 R1
5	1900	Kilowatt/hr	1710	2090	CHP2 R2
6	1900	Kilowatt/hr	1710	2090	CHP2 R3

Process: Energy Generated SCC:
Comment: ENERGY GENERATED BY GENERATOR IN HP = ENERGY MADE BY GENERATOR IN KW * 1.341

Run	Value	Unit of Measure	Target Low	Target High	Comment
1	2548	Horsepower/hr	0	0	CHP1 R1
2	2548	Horsepower/hr	0	0	CHP1 R2
3	2548	Horsepower/hr	0	0	CHP1 R3
4	2548	Horsepower/hr	0	0	CHP2 R1
5	2548	Horsepower/hr	0	0	CHP2 R2
6	2548	Horsepower/hr	0	0	CHP2 R3

Process: Energy Generated SCC:
Comment: ENERGY GENERATED BY ENGINE IN HP = ENERGY GENERATED BY GENERATOR IN HP/95.8% GENERATOR EFFICIENCY

Run	Value	Unit of Measure	Target Low	Target High	Comment
1	2660	Brake Horsepower/hr	0	0	CHP1 R1
2	2660	Brake Horsepower/hr	0	0	CHP1 R2
3	2660	Brake Horsepower/hr	0	0	CHP1 R3
4	2660	Brake Horsepower/hr	0	0	CHP2 R1
5	2659	Brake Horsepower/hr	0	0	CHP2 R2
6	2660	Brake Horsepower/hr	0	0	CHP2 R3

Process: Temperature Downstream of SCR SCC:
Comment:

Run	Value	Unit of Measure	Target Low	Target High	Comment
1	718.8	Degrees Fahrenheit/hr	510	932	CHP1 R1
2	719	Degrees Fahrenheit/hr	510	932	CHP1 R2
3	719.5	Degrees Fahrenheit/hr	510	932	CHP1 R3
4	694.2	Degrees Fahrenheit/hr	510	932	CHP2 R1

5	702.5	Degrees Fahrenheit/hr	510	932	CHP2 R2
6	703.8	Degrees Fahrenheit/hr	510	932	CHP2 R3

Process: Temperature at Catalyst Bed SCC:
Comment:

Run	Value	Unit of Measure	Target Low	Target High	Comment
1	716.2	Degrees Fahrenheit/hr	660	1010	CHP1 R1
2	716.9	Degrees Fahrenheit/hr	660	1010	CHP1 R2
3	714.6	Degrees Fahrenheit/hr	660	1010	CHP1 R3
4	706.9	Degrees Fahrenheit/hr	660	1010	CHP2 R1
5	711.2	Degrees Fahrenheit/hr	660	1010	CHP2 R2
6	713.7	Degrees Fahrenheit/hr	660	1010	CHP2 R3

APCD Run Data

APCD: Oxidation Catalyst
Comment:

Run	Value	Unit of Measure	Target Value	Comment
1	0		0	
1	0		0	

APCD: SCR (SELECTIVE CATALYTIC REDUCTION)
Comment:

Run	Value	Unit of Measure	Target Value	Comment
1	0		0	
1	0		0	

Process Lab Run Data

Sampling / Stack Data Results Detail

Location CHP1 E3802 Outlet - CTM - 027

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:46:00 PM	5:47:00 PM	7:26:00 PM	
Net Traversing Points	8	8	8	
Net Run Time, minutes	60	60	60	
Nozzle Diameter, inches	0.231	0.231	0.231	0.231
Pitot Tube Coefficient	0.84	0.84	0.84	0.840
Dry Gas Meter Calibration Factor	1.01	1.01	1.01	1.010
Barometric Pressure, inches of Mercury	30.2	30.2	30.2	30.200
Average Orifice Meter Differential, inches H2O	2.40	2.31	2.30	2.337
Dry Gas Meter Volume Sampled, cubic feet	49.345	48.925	49.555	49.275
Average Dry Gas Meter Temperature, °F	105.88	106.19	102.56	104.877
Dry Gas Meter Volume Sampled, dscf	47.391	46.951	47.862	47.401
Total Moisture Liquid collected, g	115.2	116	108.8	113.333
Volume of Water Vapor, standard cubic feet	5.44	5.48	5.14	5.353
Moisture Content of Stack Gas, %	10.30	10.45	9.70	10.150
Moisture Saturation at Stack Gas Temperature, %	100.00	100.00	100.00	100.000
Dry Mole Fraction	0.897	0.8955	0.903	0.899
Carbon Dioxide, %	5.2923	5.262	5.2461	5.267
Oxygen, %	11.5548	11.5539	11.5789	11.563
Carbon Monoxide & Nitrogen, %	83.1529	83.1841	83.175	83.171
Fuel Factor	1.77	1.78	1.78	
Dry Molecular Weight, lb/lb-Mole	29.31	29.30	29.30	29.303
Wet Molecular weight, lb/lb-Mole	28.15	28.12	28.20	28.157
Flue Gas Static Pressure, inches of H2O	3	3	3	3.000
Absolute Flue Gas Pressure, inches of Mercury	30.42	30.42	30.42	30.420
Average Stack Gas Temperature, °F	711.38	711.88	712.00	711.753
Average Velocity Head, inches of H2O	1.99315536274166	1.92044981412846	1.90983771872588	1.941
Average Stack Gas Velocity, feet/second	118.58	116.48	116.00	117.020
Stack Cross-Sectional Area, square feet	2.182	2.182	2.182	2.182
Dry Volumetric Flow Rate, dry scfm	6,406.0	6,279.3	6,305.2	6,330.167
Actual Wet Volumetric Flue Gas Flow Rate, acfm	15,524.5	15,249.6	15,186.7	15,320.267
Percent Isokinetic of Sampling Rate, %	92.4	93.4	94.9	93.567
Percent Excess Air, %	111.1	111.0	111.6	111.233
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Round Duct Diameter, inches	20	20	20	
Rectangular Duct Width, inches				

Rectangular Duct Length, inches				
Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP1 E3802 Outlet - Method 10

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:36:00 PM	5:47:00 PM	7:25:00 PM	
Carbon Dioxide, %	5.2923	5.262	5.2461	5.267
Oxygen, %	11.5548	11.5539	11.5789	11.563
Fuel Factor	0	0	0	
Dry Volumetric Flow Rate, dry scfm	6406	6279.3	6305.2	6,330.167
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.3	10.45	9.7	10.150
Analyzer Make	TECO	TECO	TECO	
Analyzer Model	48I	48I	48I	
Analyzer Serial Number	0800326688	0800326688	0800326688	800,326,688 .000
Operating Range	50.06	50.06	50.06	50.060
Operating Units	PPM	PPM	PPM	
No. Readings/Avg.	12	12	12	12.000
Calibration Set	3	3	3	3.000
Calibration Pre Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Pre Zero Cylinder Instrument Response	-0.08	-0.24	-0.25	-0.190
Calibration Pre Zero Cylinder Bias	0	0	0	0.000
Calibration Pre Zero Cylinder Drift	0.14	-0.18	-0.2	-0.080
Calibration Pre High Cylinder ID	CC211056	CC211056	CC211056	
Calibration Pre High Cylinder Instrument Response	29.13	28.68	28.76	28.857
Calibration Pre High Cylinder Bias	-0.04	-0.94	-0.78	-0.587
Calibration Pre High Cylinder Drift	0	0	0	0.000
Calibration Post Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Post Zero Cylinder Instrument Response	-0.24	-0.25	-0.21	-0.233
Calibration Post Zero Cylinder Bias	-0.18	-0.2	-0.12	-0.167
Calibration Post Zero Cylinder Drift	0.32	0.02	0.08	0.140
Calibration Post High Cylinder ID	CC211056	CC211056	CC211056	
Calibration Post High Cylinder Instrument Response	28.68	28.76	28.87	28.770
Calibration Post High Cylinder Bias	-0.94	-0.78	-0.56	-0.760
Calibration Post High Cylinder Drift	0.9	0.16	0.22	0.427
Cavg	1.39	1.37	1.4	1.387
Cavg Units	ppmvd	ppmvd	ppmvd	
Cgas	1.5055	1.574	1.5843	1.555
Cgas Units	ppmvd	ppmvd	ppmvd	
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000

Fc	1040	1040	1040	1,040.000
Cgasw	0	0	0	0.000
Cgasw Units				

Location CHP1 E3802 Outlet - Method 3A CO2

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:45:00 PM	5:47:00 PM	7:25:00 PM	
Carbon Dioxide, %	5.2923	5.262	5.2461	5.267
Oxygen, %	11.5548	11.5539	11.5789	11.563
Fuel Factor	0	0	0	
Dry Volumetric Flow Rate, dry scfm	6406	6279.3	6305.2	6,330.167
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.3	10.45	9.7	10.150
Analyzer Make	CAI	CAI	CAI	
Analyzer Model	ZRE	ZRE	ZRE	
Analyzer Serial Number	N5E1277	N5E1277	N5E1277	
Operating Range	19	19	19	19.000
Operating Units	%	%	%	
No. Readings/Avg.	12	12	12	12.000
Calibration Set	2	2	2	2.000
Calibration Pre Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Pre Zero Cylinder Instrument Response	-0.03	-0.04	0.07	0.000
Calibration Pre Zero Cylinder Bias	0	0	0	0.000
Calibration Pre Zero Cylinder Drift	0.05	0	0.58	0.210
Calibration Pre High Cylinder ID	ALM004456-CO2	ALM004456-CO2	ALM004456-CO2	
Calibration Pre High Cylinder Instrument Response	8.97	8.85	8.97	8.930
Calibration Pre High Cylinder Bias	0	-0.63	0	-0.210
Calibration Pre High Cylinder Drift	0	0	0	0.000
Calibration Post Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Post Zero Cylinder Instrument Response	-0.04	0.07	-0.06	-0.010
Calibration Post Zero Cylinder Bias	0	0.58	-0.11	0.157
Calibration Post Zero Cylinder Drift	0.05	0.58	0.69	0.440
Calibration Post High Cylinder ID	ALM004456-CO2	ALM004456-CO2	ALM004456-CO2	
Calibration Post High Cylinder Instrument Response	8.85	8.97	8.85	8.890
Calibration Post High Cylinder Bias	-0.63	0	-0.63	-0.420
Calibration Post High Cylinder Drift	0.63	0.63	0.63	0.630
Cavg	5.29	5.28	5.26	5.277
Cavg Units	%vd	%vd	%vd	
Cgas	5.2923	5.262	5.2461	5.267
Cgas Units	%vd	%vd	%vd	
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000

Fc	1040	1040	1040	1,040.000
Cgasw	0	0	0	0.000
Cgasw Units				

Location CHP1 E3802 Outlet - Method 3A O2

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:46:00 PM	5:47:00 PM	7:25:00 PM	
Carbon Dioxide, %	0	0	0	0.000
Oxygen, %	11.5548	11.5539	11.5789	11.563
Fuel Factor	0	0	0	
Dry Volumetric Flow Rate, dry scfm	0	0	0	0.000
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	0	0	0	0.000
Analyzer Make	CAI	CAI	CAI	
Analyzer Model	ZRE	ZRE	ZRE	
Analyzer Serial Number	N5E1277	N5E1277	N5E1277	
Operating Range	23.74	23.74	23.74	23.740
Operating Units	%	%	%	
No. Readings/Avg.	12	12	12	12.000
Calibration Set	1	1	1	1.000
Calibration Pre Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Pre Zero Cylinder Instrument Response	0	0.04	0.04	0.027
Calibration Pre Zero Cylinder Bias	0	0	0	0.000
Calibration Pre Zero Cylinder Drift	0	0.17	0.17	0.113
Calibration Pre High Cylinder ID	ALM004456-O2	ALM004456-O2	ALM004456-O2	
Calibration Pre High Cylinder Instrument Response	11.93	11.93	11.93	11.930
Calibration Pre High Cylinder Bias	-0.13	-0.13	-0.13	-0.130
Calibration Pre High Cylinder Drift	0	0	0	0.000
Calibration Post Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Post Zero Cylinder Instrument Response	0.04	0.04	0.03	0.037
Calibration Post Zero Cylinder Bias	0.17	0.17	0.13	0.157
Calibration Post Zero Cylinder Drift	0.17	0	0.04	0.070
Calibration Post High Cylinder ID	ALM004456-O2	ALM004456-O2	ALM004456-O2	
Calibration Post High Cylinder Instrument Response	11.93	11.93	11.9	11.920
Calibration Post High Cylinder Bias	-0.13	-0.13	-0.25	-0.170
Calibration Post High Cylinder Drift	0	0	0.12	0.040
Cavg	11.45	11.45	11.46	11.453
Cavg Units	%vd	%vd	%vd	
Cgas	11.5548	11.5539	11.5789	11.563
Cgas Units	%vd	%vd	%vd	
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000

Fc	1040	1040	1040	1,040.000
Cgasw	0	0	0	0.000
Cgasw Units				

Location CHP1 E3802 Outlet - Method 7E

				Average
Run Number	1	2	3	
Test Date	9/18/2019	9/18/2019	9/18/2019	
Run Start Time	2:35:00 PM	4:35:00 PM	6:15:00 PM	
Run Finish Time	3:46:00 PM	5:47:00 PM	7:25:00 PM	
Carbon Dioxide, %	5.2923	5.262	5.2461	5.267
Oxygen, %	11.5548	11.5539	11.5789	11.563
Fuel Factor	0	0	0	
Dry Volumetric Flow Rate, dry scfm	6406	6279.3	6305.2	6,330.167
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.3	10.45	9.7	10.150
Analyzer Make	CAI	CAI	CAI	
Analyzer Model	ZRE	ZRE	ZRE	
Analyzer Serial Number	N5E1277	N5E1277	N5E1277	
Operating Range	52.91	52.91	52.91	52.910
Operating Units	PPM	PPM	PPM	
No. Readings/Avg.	12	12	12	12.000
Calibration Set	11	11	11	11.000
Calibration Pre Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Pre Zero Cylinder Instrument Response	-0.15	0.62	0.55	0.340
Calibration Pre Zero Cylinder Bias	0	0	0	0.000
Calibration Pre Zero Cylinder Drift	1.34	2.8	2.66	2.267
Calibration Pre High Cylinder ID	CC111164	CC111164	CC111164	
Calibration Pre High Cylinder Instrument Response	28.34	27.18	27.97	27.830
Calibration Pre High Cylinder Bias	2.15	-0.04	1.46	1.190
Calibration Pre High Cylinder Drift	0	0	0	0.000
Calibration Post Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Post Zero Cylinder Instrument Response	0.62	0.55	0.34	0.503
Calibration Post Zero Cylinder Bias	2.8	2.66	2.27	2.577
Calibration Post Zero Cylinder Drift	1.46	0.14	0.39	0.663
Calibration Post High Cylinder ID	CC111164	CC111164	CC111164	
Calibration Post High Cylinder Instrument Response	27.18	27.97	27.5	27.550
Calibration Post High Cylinder Bias	-0.04	1.46	0.57	0.663
Calibration Post High Cylinder Drift	2.19	1.5	0.89	1.527
Cavg	14	13.42	12.94	13.453
Cavg Units	ppmvd	ppmvd	ppmvd	
Cgas	13.6525	12.9824	12.4996	13.045
Cgas Units	ppmvd	ppmvd	ppmvd	
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000

Fc	1040	1040	1040	1,040.000
Cgasw	0	0	0	0.000
Cgasw Units				

Location CHP2 E3803 Outlet - CTM - 027

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:37:00 AM	11:26:00 AM	1:21:00 PM	
Net Traversing Points	8	8	8	
Net Run Time, minutes	60	60	60	
Nozzle Diameter, inches	0.231	0.231	0.231	0.231
Pitot Tube Coefficient	0.84	0.84	0.84	0.840
Dry Gas Meter Calibration Factor	1.01	1.01	1.01	1.010
Barometric Pressure, inches of Mercury	30.3	30.3	30.3	30.300
Average Orifice Meter Differential, inches H2O	2.63	2.97	2.77	2.790
Dry Gas Meter Volume Sampled, cubic feet	50.590	55.185	54.030	53.268
Average Dry Gas Meter Temperature, °F	88.69	99.75	102.38	96.940
Dry Gas Meter Volume Sampled, dscf	50.301	53.830	52.432	52.188
Total Moisture Liquid collected, g	120.6	124.8	125.7	123.700
Volume of Water Vapor, standard cubic feet	5.70	5.90	5.94	5.847
Moisture Content of Stack Gas, %	10.18	9.88	10.18	10.080
Moisture Saturation at Stack Gas Temperature, %	100.00	100.00	100.00	100.000
Dry Mole Fraction	0.8982	0.9012	0.8982	0.899
Carbon Dioxide, %	5.1739	5.1771	5.2016	5.184
Oxygen, %	11.7369	11.7165	11.7061	11.720
Carbon Monoxide & Nitrogen, %	83.0892	83.1064	83.0923	83.096
Fuel Factor	1.77	1.77	1.77	
Dry Molecular Weight, lb/lb-Mole	29.30	29.30	29.30	29.300
Wet Molecular weight, lb/lb-Mole	28.15	28.18	28.15	28.160
Flue Gas Static Pressure, inches of H2O	3	3	3	3.000
Absolute Flue Gas Pressure, inches of Mercury	30.52	30.52	30.52	30.520
Average Stack Gas Temperature, °F	689.25	699.50	701.25	696.667
Average Velocity Head, inches of H2O	2.18339069085874	2.4697533979004	1.96991402437328	2.208
Average Stack Gas Velocity, feet/second	122.73	131.04	117.18	123.650
Stack Cross-Sectional Area, square feet	2.182	2.182	2.182	2.182
Dry Volumetric Flow Rate, dry scfm	6,789.1	7,208.7	6,415.1	6,804.300
Actual Wet Volumetric Flue Gas Flow Rate, acfm	16,067.8	17,155.8	15,341.2	16,188.267
Percent Isokinetic of Sampling Rate, %	92.6	93.3	102.1	96.000
Percent Excess Air, %	115.1	114.6	114.4	114.700
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Round Duct Diameter, inches	20	20	20	
Rectangular Duct Width, inches				
Rectangular Duct Length, inches				

Fw	10610	10610	10610	10,610.000
Fc	1040	1040	1040	1,040.000

Location CHP2 E3803 Outlet - Method 10

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:37:00 AM	11:26:00 AM	1:21:00 PM	
Carbon Dioxide, %	5.1739	5.1771	5.2016	5.184
Oxygen, %	11.7369	11.7165	11.7061	11.720
Fuel Factor	0	0	0	
Dry Volumetric Flow Rate, dry scfm	6789.1	7208.7	6415.1	6,804.300
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.18	9.88	10.18	10.080
Analyzer Make	TECO	TECO	TECO	
Analyzer Model	48I	48I	48I	
Analyzer Serial Number	0800326688	0800326688	0800326688	800,326,688 .000
Operating Range	50.06	50.06	50.06	50.060
Operating Units	PPM	PPM	PPM	
No. Readings/Avg.	12	12	12	12.000
Calibration Set	7	7	7	7.000
Calibration Pre Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Pre Zero Cylinder Instrument Response	0.14	0.12	0.11	0.123
Calibration Pre Zero Cylinder Bias	0	0	0	0.000
Calibration Pre Zero Cylinder Drift	0.18	0.14	0.12	0.147
Calibration Pre High Cylinder ID	CC211056	CC211056	CC211056	
Calibration Pre High Cylinder Instrument Response	29.16	29.06	28.99	29.070
Calibration Pre High Cylinder Bias	0.1	-0.1	-0.24	-0.080
Calibration Pre High Cylinder Drift	0	0	0	0.000
Calibration Post Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Post Zero Cylinder Instrument Response	0.12	0.11	0.07	0.100
Calibration Post Zero Cylinder Bias	0.14	0.12	0.04	0.100
Calibration Post Zero Cylinder Drift	0.04	0.02	0.08	0.047
Calibration Post High Cylinder ID	CC211056	CC211056	CC211056	
Calibration Post High Cylinder Instrument Response	29.06	28.99	28.17	28.740
Calibration Post High Cylinder Bias	-0.1	-0.24	-1.88	-0.740
Calibration Post High Cylinder Drift	0.2	0.14	1.64	0.660
Cavg	1.89	2.71	2.78	2.460
Cavg Units	ppmvd	ppmvd	ppmvd	
Cgas	1.7145	2.534	2.6655	2.305
Cgas Units	ppmvd	ppmvd	ppmvd	
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000

Fc	1040	1040	1040	1,040.000
Cgasw	0	0	0	0.000
Cgasw Units				

Location CHP2 E3803 Outlet - Method 3A CO2

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:37:00 AM	11:26:00 AM	1:21:00 PM	
Carbon Dioxide, %	5.1739	5.1771	5.2016	5.184
Oxygen, %	11.7369	11.7165	11.7061	11.720
Fuel Factor	0	0	0	
Dry Volumetric Flow Rate, dry scfm	6789.1	7208.7	6415.1	6,804.300
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.18	9.88	10.18	10.080
Analyzer Make	CAI	CAI	CAI	
Analyzer Model	ZRE	ZRE	ZRE	
Analyzer Serial Number	N5E1277	N5E1277	N5E1277	
Operating Range	19	19	19	19.000
Operating Units	%	%	%	
No. Readings/Avg.	12	12	12	12.000
Calibration Set	6	6	6	6.000
Calibration Pre Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Pre Zero Cylinder Instrument Response	-0.03	0.16	0.15	0.093
Calibration Pre Zero Cylinder Bias	0	0	0	0.000
Calibration Pre Zero Cylinder Drift	-0.05	0.95	0.89	0.597
Calibration Pre High Cylinder ID	ALM004456-CO2	ALM004456-CO2	ALM004456-CO2	
Calibration Pre High Cylinder Instrument Response	8.99	9.13	9.09	9.070
Calibration Pre High Cylinder Bias	0	0.74	0.53	0.423
Calibration Pre High Cylinder Drift	0	0	0	0.000
Calibration Post Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Post Zero Cylinder Instrument Response	0.16	0.15	0.14	0.150
Calibration Post Zero Cylinder Bias	0.95	0.89	0.84	0.893
Calibration Post Zero Cylinder Drift	1	5.99999999999999 E-02	0.05	0.370
Calibration Post High Cylinder ID	ALM004456-CO2	ALM004456-CO2	ALM004456-CO2	
Calibration Post High Cylinder Instrument Response	9.13	9.09	9.06	9.093
Calibration Post High Cylinder Bias	0.74	0.53	0.37	0.547
Calibration Post High Cylinder Drift	0.74	0.21	0.16	0.370
Cavg	5.3	5.37	5.37	5.347
Cavg Units	%vd	%vd	%vd	
Cgas	5.1739	5.1771	5.2016	5.184
Cgas Units	%vd	%vd	%vd	
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000

Fc	1040	1040	1040	1,040.000
Cgasw	0	0	0	0.000
Cgasw Units				

Location CHP2 E3803 Outlet - Method 3A O2

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:37:00 AM	11:26:00 AM	1:21:00 PM	
Carbon Dioxide, %	0	0	0	0.000
Oxygen, %	11.7369	11.7165	11.7061	11.720
Fuel Factor	0	0	0	
Dry Volumetric Flow Rate, dry scfm	0	0	0	0.000
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	0	0	0	0.000
Analyzer Make	CAI	CAI	CAI	
Analyzer Model	ZRE	ZRE	ZRE	
Analyzer Serial Number	N5E1277	N5E1277	N5E1277	
Operating Range	23.74	23.74	23.74	23.740
Operating Units	%	%	%	
No. Readings/Avg.	12	12	12	12.000
Calibration Set	5	5	5	5.000
Calibration Pre Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Pre Zero Cylinder Instrument Response	-0.01	0	0	-0.003
Calibration Pre Zero Cylinder Bias	0	0	0	0.000
Calibration Pre Zero Cylinder Drift	-0.04	0	0	-0.013
Calibration Pre High Cylinder ID	ALM004456-O2	ALM004456-O2	ALM004456-O2	
Calibration Pre High Cylinder Instrument Response	11.91	11.91	11.91	11.910
Calibration Pre High Cylinder Bias	-0.29	-0.29	-0.29	-0.290
Calibration Pre High Cylinder Drift	0	0	0	0.000
Calibration Post Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Post Zero Cylinder Instrument Response	0	0	0.02	0.007
Calibration Post Zero Cylinder Bias	0	0	0.08	0.027
Calibration Post Zero Cylinder Drift	0.04	0	0.08	0.040
Calibration Post High Cylinder ID	ALM004456-O2	ALM004456-O2	ALM004456-O2	
Calibration Post High Cylinder Instrument Response	11.91	11.91	11.91	11.910
Calibration Post High Cylinder Bias	-0.29	-0.29	-0.29	-0.290
Calibration Post High Cylinder Drift	0	0	0	0.000
Cavg	11.61	11.59	11.58	11.593
Cavg Units	%vd	%vd	%vd	
Cgas	11.7369	11.7165	11.7061	11.720
Cgas Units	%vd	%vd	%vd	
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000

Fc	1040	1040	1040	1,040.000
Cgasw	0	0	0	0.000
Cgasw Units				

Location CHP2 E3803 Outlet - Method 7E

				Average
Run Number	1	2	3	
Test Date	9/19/2019	9/19/2019	9/19/2019	
Run Start Time	8:20:00 AM	10:12:00 AM	12:05:00 PM	
Run Finish Time	9:20:00 AM	11:26:00 AM	1:21:00 PM	
Carbon Dioxide, %	5.1739	5.1771	5.2016	5.184
Oxygen, %	11.7369	11.7165	11.7061	11.720
Fuel Factor	0	0	0	
Dry Volumetric Flow Rate, dry scfm	6789.1	7208.7	6415.1	6,804.300
F-Factor, dscfm/MMBtu @ %O2	8710	8710	8710	8,710.000
Moisture, %	10.18	9.88	10.18	10.080
Analyzer Make	CAI	CAI	CAI	
Analyzer Model	ZRE	ZRE	ZRE	
Analyzer Serial Number	N5E1277	N5E1277	N5E1277	
Operating Range	52.91	52.91	52.91	52.910
Operating Units	PPM	PPM	PPM	
No. Readings/Avg.	12	12	12	12.000
Calibration Set	10	10	10	10.000
Calibration Pre Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Pre Zero Cylinder Instrument Response	0.13	0.44	0.18	0.250
Calibration Pre Zero Cylinder Bias	0	0	0	0.000
Calibration Pre Zero Cylinder Drift	-0.15	0.43	-0.06	0.073
Calibration Pre High Cylinder ID	CC111164	CC111164	CC111164	
Calibration Pre High Cylinder Instrument Response	28.43	27.65	27.61	27.897
Calibration Pre High Cylinder Bias	2.66	1.19	1.12	1.657
Calibration Pre High Cylinder Drift	0	0	0	0.000
Calibration Post Zero Cylinder ID	EB0112435	EB0112435	EB0112435	
Calibration Post Zero Cylinder Instrument Response	0.44	0.18	-0.56	0.020
Calibration Post Zero Cylinder Bias	0.43	-0.06	-1.46	-0.363
Calibration Post Zero Cylinder Drift	0.58	0.49	1.4	0.823
Calibration Post High Cylinder ID	CC111164	CC111164	CC111164	
Calibration Post High Cylinder Instrument Response	27.65	27.61	28.05	27.770
Calibration Post High Cylinder Bias	1.19	1.12	1.95	1.420
Calibration Post High Cylinder Drift	1.47	6.99999999999998 E-02	0.83	0.790
Cavg	13.02	14.29	14.22	13.843
Cavg Units	ppmvd	ppmvd	ppmvd	
Cgas	12.5262	13.9698	14.0397	13.512
Cgas Units	ppmvd	ppmvd	ppmvd	
Fuel Type	Gas - Natural	Gas - Natural	Gas - Natural	
Fw	10610	10610	10610	10,610.000

Fc	1040	1040	1040	1,040.000
Cgasw	0	0	0	0.000
Cgasw Units				

Included Attachments:

Attachments	
EPA Method 1Location Supporting Documentation (Item 9) (optional)	STACK DIAGRAM.pdf
Cyclonic Flow Absence Supporting Documentation (Item 10)	CYCLONIC FIELD SHEET-min.pdf
Pre-Test Meter Boxes/DGMs Calibrations	12-21-18 5 POINT CAL ANNUAL MB03-m
Post-Test Meter Boxes/DGMs Calibrations	09-20-2019_3-POINT CAL MB03-min.pdf
Nozzles Calibrations	GLASS NOZZLE CAL.pdf
Pitots Calibrations	4-3 Pitot Inspection-min.pdf
Sampling Locations Dimensions and Point Locations	DIAGRAM-min.pdf
Run Field Data Sheets (raw data sheets for field sampling)	CALIBRATION FIELD SHEETS-min.pdf
Run Field Data Sheets (raw data sheets for field sampling)	ISO FIELD SHEETS-min.pdf
Run Field Data Sheets (raw data sheets for field sampling)	M323 FIELD SHEETS-min.pdf
Lab Data (raw data sheets for field and laboratory analysis)	B9Q6104V1-R2019-10-08_13-04-44_R0
Chain-of-Custody	COCs-min.pdf
Interference/Response Time/Converter Efficiency/Stratification Tests	CHP1 NOX CONVERTER-min.pdf
Interference/Response Time/Converter Efficiency/Stratification Tests	CHP2 NOX CONVERTER-min.pdf
Interference/Response Time/Converter Efficiency/Stratification Tests	RESPONSE FIELD SHEET-min.pdf
Calibration Gas Certificates (Item 16)	Bottle Sheet-min.pdf
Calibration Gas Certificates (Item 16)	GAS CERTS-min.pdf
Stratification Test	CHP1 STRAT-min.pdf
Stratification Test	CHP2 STRAT-min.pdf
Method Templates and Procedures	ALT106.pdf
Method Templates and Procedures	CTM027.pdf
Method Templates and Procedures	M1.pdf
Method Templates and Procedures	M2.pdf
Method Templates and Procedures	M3A.pdf
Method Templates and Procedures	M4.pdf
Method Templates and Procedures	M7E.pdf

Method Templates and Procedures	M10.pdf
Method Templates and Procedures	M323.pdf
Permit	15708_PCP180001_27319882.pdf
Generator Efficiency Specifications	GENERATOR EFFICIENCY.pdf
Protocol Conditional Approval and Correspondence	TST 190001 Protocol Conditional Approv
Protocol Conditional Approval and Correspondence	Re_ PI 50163 TST 190001 Protocol Condi Approval-min.pdf
Analyzer Data	CHP1 ANALYZER DATA 9-18-19-min.pdf
Analyzer Data	CHP2 ANALYZER DATA 9-19-19-min.pdf
Formaldehyde Calculations	CHP1 M323-min.pdf
Formaldehyde Calculations	CHP2 M323-min.pdf
Ammonia Calculations	CHP1 NH3-min.pdf
Ammonia Calculations	CHP2 NH3-min.pdf
VOC Calculations	CHP1 VOC-min.pdf
VOC Calculations	CHP2 VOC-min.pdf
Signature Pages/Certifications	PACE SIGNATURE PAGE-min.pdf
Signature Pages/Certifications	PE CERT-min.pdf
Signature Pages/Certifications	Stack Test Sig,-min.pdf
Executive Summary	Executive Summary-min.pdf
Process Data	PROCESS DATA DETAIL CHP1-min.pdf
Process Data	PROCESS DATA DETAIL CHP2-min.pdf
Process Data	PROCESS DATA SUMMARY-min.pdf

Completeness Questions:

Completeness Quality Assessment Questions		
As described in ASTM D7036-12 Standard Practice for Competence of Air Emission Testing Bodies, does the testing firm meet the criteria as an AETB or is the person in charge of the field team a QI for the type of testing conducted? A certificate from an independent organization (e.g., Stack Testing Accreditation council (STAC), California Air Resources Board (CARB), National Environmental Laboratory Accreditation Program (NELAP) or self declaration provides documentation of competence as an AETB.	No	

Is a description and drawing of test location provided?	Yes	
Has a description of deviations from published test methods been provided, or is there a statement that deviations were not required to obtain data representative of typical facility operation?	Yes	
Is a full description of the process and the unit being tested (including installed controls) provided?	Yes	
Has a detailed discussion of source operating conditions, air pollution control device operations and the representativeness of measurements made during the test been provided?	Yes	
Were the operating parameters for the tested process unit and associated controls described and reported?	No	YES
Is there an assessment of the validity, representativeness, achievement of DQO's and usability of the data?	Yes	
Have field notes addressing issues that may influence data quality been provided?	No	N/A
Have the following been included in the report: Dry Gas Meter (DGM) calibrations, pitot tuve and nozzle inspections?	No	YES
Was the Method 1 sample point evaluation included in the report?	Yes	
Were the cyclonic flow checks included in the report?	Yes	
Were the raw sampling data and test sheets included in the report?	Yes	
Did the report include a description and flow diagram of the recovery procedures?	Yes	
Was the laboratory certied/accredited to perform these analyses?	No	YES
Did the report include a complete laboratory report and flow diagram of sample analysis?	Yes	
Were the chain-of-custody forms included in the report?	Yes	
Did the report include a complete description of the intrumental method sampling system?	Yes	
Did the report include calibration gas certifications?	Yes	
Did the report include interference tests?	Yes	
Were the response time tests included in the report?	Yes	
Were the calibration error tests included in the report?	Yes	

Did the report include drift tests?	Yes	
Did the report include system bias tests?	Yes	
Were the converter efficiency tests included in the report?	Yes	
Did the report include statification checks?	Yes	
Did the report include the raw data for the instrumental method?	Yes	

Regulatory Review Questions:

Regulatory Review Quality Assessment Questions		
As described in ASTM D7036-12 Standard Practice for Competence of Air Emission Testing Bodies, does the testing firm meet the criteria as an AETB or is the person in charge of the field team a QI for the type of testing conducted? A certificate from an independent organization (e.g., STAC, CARB, NELAP) or self declaration provides documentation of competence as an AETB.		
Was a representative of the regulatory agency on site during the test?		
Is a description and drawing of test location provided?		
Is there documentation that the source or the test company sought and obtained approval for deviations from the published test method prior to conducting the test or that the tester's assertion that deviations were not required to obtain data representative of operations that are typical for the facility?		
Were all test method deviations acceptable?		
Is a full description of the process and the unit being tested (including installed controls) provided?		
Has a detailed discussion of source operating conditions, air pollution control device operations and the representativeness of measurements made during the test been provided?		
Is there documentation that the required process monitors have been calibrated and that the calibration is acceptable?		
Was the process capacity documented?		
Was the process operating within an appropriate range for the test program objective?		
Were process data concurrent with testing?		
Were data included in the report for all parameters for which limits will be set?		

Did the report discuss the representativeness of the facility operations, control device operation, and the measurements of the target pollutants, and were any changes from published test methods or process and control device monitoring protocols identified?		
Were all sampling issues handled such that data quality was not adversely affected?		
Was the DGM pre-test calibration within the criteria specified by the test method?		
Was the DGM post-test calibration within the criteria specified by the test method?		
Were thermocouple calibrations within method criteria?		
Was the pitot tube inspection acceptable?		
Were nozzle inspections acceptable?		
Were flow meter calibrations acceptable?		
Were the appropriate number and location of sampling points used?		
Did the cyclonic flow evaluation show the presence of an acceptable average gas flow angle?		
Were all data required by the method recorded?		
Were required leak checks performed and did the checks meet method requirements?		
Was the required minimum sample volume collected?		
Did probe, filter, and impinger exit temperatures meet method criteria (as applicable)?		
Did isokinetic sampling rates meet method criteria?		
Was the sampling time at each point greater than 2 minutes and the same for each point?		
Was the recovery process consistent with the method?		
Were all required blanks collected in the field?		
Where performed, were blank corrections handled per method requirements?		
Were sample volumes clearly marked on the jar or measured and recorded?		
Was the laboratory cerified/accredited to perform these analyses?		
Did the laboratory note the sample volume upon receipt?		
If sample loss occurred, was the compensation method used, documented, and approved for the method?		

Were the physical characteristics of the samples (e.g., color, volume, integrity, pH, temperature) recorded and consistent with the method?		
Were sample hold times within method requirements?		
Does the laboratory report document the analytical procedures and techniques?		
Were all laboratory QA requirements documented?		
Were analytical standards required by the method documented?		
Were required laboratory duplicates within acceptable limits?		
Were required spike recoveries within method requirements?		
Were method-specific analytical blanks analyzed?		
If problems occurred during analysis, is there sufficient documentation to conclude that the problems did not adversely affect the sample results?		
Was the analytical detection limit specified in the test report?		
Is the reported detection limit adequate fort he purposes of the test program?		
Do the chain-of-custody forms indicate acceptable management of collected samples between collection and analysis?		
Was a complete description of the sampling system provided?		
Were calibration standards used prior to the end of the expiration date?		
Did calibration standards meet method criteria?		
Did interference checks meet method requirements?		
Was a response time test performed?		
Did calibration error tests meet method requirements?		
Were drift tests performed after each run and did they meet method requirements?		
Did system bias checks meet method requirements?		
Was the NOX converter test acceptable?		
Was a statification assessment performed?		
Was the duration of each sample run within method criteria?		
Was the appropriate traverse performed during sample collection, or was the probe placed at an appropriate center point (if allowed by the method)?		

Were sample times at each point uniform and did they meet method requirements?		
Were sample lines heated sufficiently to prevent potential adverse data quality issues?		
Was all data required by the method recorded?		

PACE ENVIRONMENTAL

5260 West Coplay Road
Whitehall, PA 18052
Tel: 610.262.3818 / Fax: 610.262.4445

November 1, 2019

Mr. Michael Klein
NJDEP – Compliance & Enforcement
Air Enforcement
Emission Measurement Section
Mail Code: 09-01
P.O. Box 420
Trenton, NJ 08625-0420

RE: Test Report Submission – Camden County Municipal Utilities Authority, Camden, NJ
PI #50163, Permit #180001, TST #190001, OS103 / OS104
Source: CHP Engines 1 & 2

Dear Mr. Klein,

PACE Environmental is submitting this ERT Test Report CD for the Compliance Emissions Testing for the above referenced project on behalf of Camden County Municipal Utilities Authority, Camden, NJ. Testing was performed on September 18-19, 2019.

If you have any questions or require additional information regarding the content of this test report, please contact me at 610.262.3818 or by email at brandon@paceenvironmental.com.

Sincerely,

Brandon Gallagher
PACE Environmental

BG/dam
Enclosures

CC:
Ms. Mary Toogood (Hard Copy)
NJDEP – SRO
2 Riverside Drive, Suite 201
Camden, NJ 08103

Director, Division of Enforcement and Compliance Assistance (CD)
US EPA Region 2
290 Broadway
New York, NY 10007-1866

COPLAY
918 CHESTNUT ST
COPLAY, PA 18037-9998
411652-0137
(800)275-8777
11/01/2019 03:37 PM

Product	Qty	Unit Price	Price
PM 2-Day Flat Rate Env (Domestic) (TRENTON, NJ 08625) (Flat Rate) (Expected Delivery Day) (Monday 11/04/2019) (USPS Tracking #) (9505 5106 9541 9305 2337 68)	1	$7.35	$7.35
Insurance (Up to $50.00 included)			$0.00
PM 1-Day Flat Rate Env (Domestic) (CAMDEN, NJ 08103) (Flat Rate) (Expected Delivery Day) (Saturday 11/02/2019) (USPS Tracking #) (9505 5106 9541 9305 2337 75)	1	$7.35	$7.35
Insurance (Up to $50.00 included)			$0.00
PM 2-Day Flat Rate Env (Domestic) (NEW YORK, NY 10007) (Flat Rate) (Expected Delivery Day) (Monday 11/04/2019) (USPS Tracking #) (9505 5106 9541 9305 2337 82)	1	$7.35	$7.35
Insurance (Up to $50.00 included)			$0.00
Total:			$22.05

Credit Card Remitd $22.05
(Card Name:VISA)
(Account #:XXXXXXXXXXXX8987)
(Approval #:001684)
(Transaction #:014)
(AID:A0000000031010 Chip)
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(PIN:Not Required)

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