

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

Permit Being Modified

Permit Class: **Number:** 0

Description of Modifications: Emissions permit for turbine emergency generator installed JANUARY 1972. Generators were permitted using General Permit GP-005A on 5/22/2017 (0644-GEN 170001). The GP-005A line item exempts turbines.

This application will supersede the existing/terminated General Permit 06441-GEN 170001.

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

Facility Name (AIMS): VZ WAVERLY CO 17180

Facility ID (AIMS): 06441

Street 228 LYONS AVE
Address: NEWARK, NJ 07112

State Plane Coordinates:
X-Coordinate: 569,218
Y-Coordinate: 684,716
Units: Feet

Datum:
Source Org.:
Source Type:

Mailing VERIZON
Address: 2 HAMPSHIRE ST
FL 3
LAWRENCE, MA 01840

County: Essex
Location TELECOMMUNICATION CENTRAL
Description: OFFICE

Industry:
Primary SIC:
Secondary SIC:
NAICS: 517911

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

Contact Type: Air Permit Information Contact**Organization:** ENVIROTRAC LTD**Org. Type:** Corporation**Name:** MICHAEL CLARK**NJ EIN:** 11318093300**Title:** SENIOR PROJECT MANAGER**Phone:** (609) 387-5553 x**Mailing Address:** 6 TERRI LANE**Fax:** () - xSUITE 350
BURLINGTON, NJ 08016**Other:** () - x**Type:****Email:** MICHAELC@ENVIROTRAC.COM

Contact Type: Fees/Billing Contact**Organization:** Verizon Environment Health & Safety**Org. Type:** Commercial/Industry**Name:** Bill Irwin**NJ EIN:** 23225988400**Title:** Regional Manager**Phone:** (978) 688-3028 x**Mailing Address:** 2 HAMPSHIRE STREET**Fax:** () - xFLOOR 3
LAWRENCE, MA 01840**Other:** () - x**Type:****Email:** b.irwin@verizon.com

Contact Type: General Contact**Organization:** Verizon Environment Health & Safety**Org. Type:** Commercial/Industry**Name:** Bill Irwin**NJ EIN:** 23225988400**Title:** Regional Manager**Phone:** (978) 688-3028 x**Mailing Address:** 2 HAMPSHIRE STREET**Fax:** () - xFLOOR 3
LAWRENCE, MA 01840**Other:** () - x**Type:****Email:** b.irwin@verizon.com

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

Contact Type: Responsible Official

Organization: Verizon Environment Health & Safety

Org. Type: Commercial/Industry

Name: Bill Irwin

NJ EIN: 23225988400

Title: Regional Manager

Phone: (978) 688-3028 x

Mailing Address: 2 HAMPSHIRE STREET
FLOOR 3
LAWRENCE, MA 01840

Fax: () - x

Other: () - x

Type:

Email: b.irwin@verizon.com

**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? | No |
| 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? | Yes |
| 6. Are you claiming any portion of this application to be confidential? | No |
| 7. Is the facility an existing major facility? | No |
| 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 |

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

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

New Jersey Department of Environmental Protection
Insignificant Source Emissions

IS NJID	Source/Group Description	Equipment Type	Location Description	Estimate of Emissions (tpy)								
				VOC (Total)	NOx	CO	SO	TSP	PM-10	Pb	HAPS (Total)	Other (Total)
IS1												
Total												

**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
E4	17180 GEN #1	EMERG GEN	Combustion Turbine	GEN 170001	1/1/1972	No		

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.		
PT3	Turb Stack	Turbine Generator Stack	Round	18	50	14	963.0	0.0	1,200.0	17,051.0	0.0	20,000.0	Up	

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

U 4 17180 GEN#1 SOLAR TURBINE EMERG GEN #1

UOS NJID	Facility's Designation	UOS Description	Operation Type	Signif. Equip.	Control Device(s)	Emission Point(s)	SCC(s)	Annual Oper. Hours		VOC Range	Flow (acfm)		Temp. (deg F)	
								Min.	Max.		Min.	Max.	Min.	Max.
OS1	SOLAR EMGEN	TURBINE EMERG GENERATORS	Normal - Steady State	E4			2-02-001-01	0.0	60.0		0.0	20,000.0	0.0	1,200.0

**New Jersey Department of Environmental Protection
Potential to Emit**

Subject Item: U4 17180 GEN#1

Operating Scenario: OS1

Step:

Air Contaminant Category (HAPS)	Fugitive Emissions	Emissions Before Controls	Emissions After Controls	Total Emissions	Units	Alt. Em. Limit
CO		0.00013101	0.00013101	0.00013101	lb/hr	No
HAPs (Total)					lb/hr	No
NOx (Total)		0.03493479	0.03493479	0.03493479	lb/hr	No
Pb		0.00000056	0.00000056	0.00000056	lb/hr	No
PM-10 (Total)		0.00043668	0.00043668	0.00043668	lb/hr	No
SO2		0.00000060	0.00000060	0.00000060	lb/hr	No
TSP		0.00047638	0.00047638	0.00047638	lb/hr	No
VOC (Total)		0.00001628	0.00001628	0.00001628	lb/hr	No

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

Emission Unit: U4 SOLAR TURBINE EMERG GEN #1
E4 EMERG GEN

Subject Item:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Total Hours of Operation <=_ hr/yr. [N.J.A.C. 7:27- 8.13(h)]	Total Hours of Operation: 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]	Total Hours of Operation: Recordkeeping by manual logging of parameter annually. [N.J.A.C. 7:27- 8.13(d)3]	
	DELETED BY APPLICANT Maximum Gross Heat Input <=_ MMBTU/hr. [N.J.A.C. 7:27- 8.13(h)]			
2	The duration of the exemption from concentration limits during start-up shall not exceed Start-up Period <=_ minutes. [N.J.A.C. 7:27- 8.13(h)]			
3	The duration of the exemption from concentration limits during shutdown shall not exceed Shutdown Period <=_ minutes. [N.J.A.C. 7:27- 8.13(h)]			
4	The duration of the exemption from concentration limits during fuel transfer shall not exceed Fuel Transfer Period <=_ minutes. [N.J.A.C. 7:27- 8.13(h)]			

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

Emission Unit: U4 SOLAR TURBINE EMERG GEN #1

OS Summary

Operating Scenario:

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
1	Opacity <= 20 % , exclusive of visible condensed water vapor, except for a period of not longer than 10 consecutive seconds. [N.J.A.C. 7:27- 3.5]	Opacity: Monitored by visual determination each month during operation, based on any consecutive 30-minute period. 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]	Opacity: Recordkeeping by manual logging of parameter each month 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 <=_ lb/hr. [N.J.A.C. 7:27- 4.2(a)]			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]
3	TSP <=_ lb/hr. [N.J.A.C. 7:27- 8.13(h)]	TSP: 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]	TSP: 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]
4	PM-10 (Total) <=_ lb/hr. [N.J.A.C. 7:27- 8.13(h)]	PM-10 (Total): 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]	PM-10 (Total): 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]
5	VOC (Total) <=_ lb/hr. [N.J.A.C. 7:27- 8.13(h)]	VOC (Total): 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]	VOC (Total): 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]

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
6	VOC (Total) <= _ ppm _{dv} @ 15% O ₂ . [N.J.A.C. 7:27- 8.13(h)]	VOC (Total): 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]	VOC (Total): 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	CO <= _ lb/hr. [N.J.A.C. 7:27- 8.13(h)]	CO: 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]	CO: 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]
8	CO <= _ ppm _{dv} @ 15% O ₂ except for periods of start-up, shutdown and fuel transfer as defined in this permit. [N.J.A.C. 7:27- 8.13(h)]	CO: Monitored by continuous emission monitor continuously, based on a 3 hour rolling average based on a 1 hour block average. [N.J.A.C. 7:27- 8.13(d)2]	CO: 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]	CEM/COM - Submit equipment protocol, conduct PST test and submit results: As per the approved schedule. Refer to CEM requirements specified in this permit. [N.J.A.C. 7:27- 8.13(d)2]
9	CO <= _ ppm _{dv} @ 15% O ₂ except for periods of start-up, shutdown and fuel transfer as defined in this permit. [N.J.A.C. 7:27- 8.13(h)]	CO: 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]	CO: 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]
10	CO <= _ lb/MW-hr except for periods of start-up, shutdown and fuel transfer as defined in this permit. [N.J.A.C. 7:27- 8.13(h)]	CO: 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]	CO: 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]
11	NO _x (Total) <= _ lb/hr. [N.J.A.C. 7:27- 8.13(h)]	NO _x (Total): 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]	NO _x (Total): 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]
12	NO _x (Total) <= _ ppm _{dv} @ 15% O ₂ except for periods of start-up, shutdown and fuel transfer as defined in this permit. [N.J.A.C. 7:27- 8.13(h)]	NO _x (Total): Monitored by continuous emission monitor continuously, based on a 3 hour rolling average based on a 1 hour block average. [N.J.A.C. 7:27- 8.13(d)2]	NO _x (Total): 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]	CEM/COM - Submit equipment protocol, conduct PST test and submit results: As per the approved schedule. Refer to CEM requirements specified in this permit. [N.J.A.C. 7:27- 8.13(d)2]
13	NO _x (Total) <= _ ppm _{dv} @ 15% O ₂ except for periods of start-up, shutdown and fuel transfer as defined in this permit. [N.J.A.C. 7:27- 8.13(h)]	NO _x (Total): 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]	NO _x (Total): 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]

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
14	NOx (Total) <= _ lb/MW-hr except for periods of start-up, shutdown and fuel transfer as defined in this permit. [N.J.A.C. 7:27- 8.13(h)]	NOx (Total): 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]	NOx (Total): 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]
15	SO2 <= _ 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]
16	Hours of Operation While Firing Fuel Oil <= _ hr/yr. [N.J.A.C. 7:27- 8.13(h)]	Hours of Operation While Firing 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 Fuel Oil: Recordkeeping by manual logging of parameter annually. [N.J.A.C. 7:27- 8.13(d)3]	
17	Fuel Oil Usage <= _ gal/yr. [N.J.A.C. 7:27- 8.13(h)]	Fuel Oil Usage: Monitored by fuel flow/firing rate instrument continuously, 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]	Fuel Oil Usage: Recordkeeping by manual logging of parameter annually. The gallons per any consecutive 12-month period shall be calculated by the sum of the gallons consumed during any one month added to the sum of the gallons consumed during the preceeding 11 months. The permittee shall select the time period for accounting, such as fiscal month, calendar month or production month. Once selected, the period must not be changed without prior approval from the Department. [N.J.A.C. 7:27- 8.13(d)3]	
18	Sulfur Content in Fuel <= _ weight %. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Monitored by fuel sampling (e.g. oil) once per bulk fuel shipment, based on no averaging period. [N.J.A.C. 7:27- 9.2(b)]	Sulfur Content in Fuel: Recordkeeping by certified lab analysis results once per bulk fuel shipment. Records of all fuel sulfur analyses shall be maintained. [N.J.A.C. 7:27- 9.2(b)]	
19	Sulfur Content in Fuel <= _ 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- 9.2(b)]	Sulfur Content in Fuel: Recordkeeping by fuel certification receipts once per bulk fuel shipment. [N.J.A.C. 7:27- 9.2(b)]	

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

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
20	SO2 ≤ 1b/MMBTU. [N.J.A.C. 7:27-9.2(c)]	SO2: Monitored by fuel sampling (e.g. oil) once per bulk fuel shipment, based on no averaging period. [N.J.A.C. 7:27-9.2(b)]	SO2: Recordkeeping by certified lab analysis results once per bulk fuel shipment. Records of all fuel sulfur analyses shall be maintained. [N.J.A.C. 7:27-9.2(b)]	
21	SO2 ≤ 1b/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. 7:27-9.2(b)]	SO2: Recordkeeping by fuel certification receipts once per bulk fuel shipment. [N.J.A.C. 7:27-9.2(b)]	

000000 E4 (Combustion Turbine)
Print Date: 3/11/2021

Make: SOLAR TURBINE
Manufacturer: SOLAR
Model: KS20542

Maximum rated Gross Heat Input (MMBtu/hr-HHV): 5.76
Type of Turbine: [dropdown]
Type of Cycle: [dropdown] Description: [text]
Industrial Application: [dropdown] Description: [text]
Power Output: 200.00 Units: Kilowatts [dropdown]

Is the combustion turbine using (check all that apply):
A Dry Low NOx Combustor:
Steam Injection: Steam to Fuel Ratio: [text]
Water Injection: Water to Fuel Ratio: [text]
Other: Description: [text]

Is the turbine Equipped with a Duct Burner?
 Yes
 No

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

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

Comments: Attached is a photo of the name plate for the engine and emissions calculations based on EPA AP-42 emissions factors.

06441 VZ WAVERLY CO 17180 PCP000000 U4 OS1 (Fuel Information Table)
Print Date: 3/11/2021

Is this fuel a blend?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Fuel Category:	Commercial
Fuel Type:	Diesel fuel
Description (if other):	
Amount of Sulfur in Fuel (%):	0.0015
Amount of Ash in Fuel (%):	
Fuel Heating Value:	138,000.00
Units:	BTU/gal
Estimated Maximum Amount of Fuel Burned Annually:	2,520.00
Units:	gal/yr
Estimated Actual Amount of Fuel Burned Annually:	2520.00
Units:	gal/yr
Amount of Oxygen in Flue Gas (%):	
Amount of Moisture in Flue Gas (%):	
Comments:	Ultra Low Sulfur Diesel used for turbine

MANUFACTURED BY

HH SOLAR

DIVISION OF INTERNATIONAL HARVESTER COMPANY
SAN DIEGO CALIFORNIA

**GAS TURBINE GENERATOR SET
FOR WESTERN ELECTRIC
COMPANY INC**

KS20542LIST

2

ASSY NUMBER

907616095

MODEL NUMBER

KS-350

SERIAL NUMBER

S-412416

910437C1

MADE IN U.S.A.

DATE: 11 MAR 2021

Source name: Verizon Waverly CO	Physical Address: 228 Lyons Avenue, Newark, NJ 07102
Facility ID (AIMS): 06441	Permit No: GEN 170001 (previous permit no.)
Source Classification Code (SCC): 2-02-001-01 - Internal Combustion Engines;Industrial;Distillate Oil (Diesel);Turbine	

Hours of Operation: 60 hours per year

	Quantity	(units)	Emission Factor (EMF)*		Quantity emitted		Reporting Threshold (lbs/yr)**	SOTA Threshold (lbs/yr)**
			EMF	(units)	Pound Per Hour (lbs/hr)	Ton Per Year (TPY) (based on 100 hrs operation)		
Nitrogen Oxides (NOx)	5.76	MMBTU/Hr	8.80E-01	lbs/MMBTU	5.069	0.152	0.05	5.0
Carbon Monoxide (CO)	5.76	MMBTU/Hr	3.30E-03	lbs/MMBTU	0.019	0.001	0.05	5.0
Particulate Matter (Total)	5.76	MMBTU/Hr	1.20E-02	lbs/MMBTU	0.069	0.002	0.05	5.0
Particulate Matter - (filterable)	5.76	MMBTU/Hr	4.30E-03	lbs/MMBTU	0.025	0.001	0.05	5.0
Volatile Organic Compounds	5.76	MMBTU/Hr	4.10E-04	lbs/MMBTU	0.002	0.0001	0.05	5.0
Sulfur Dioxide (SO2) from diesel fuel	42.00	GAL/HR	15.00	PPM	0.005	0.0002	0.05	5.0

Hazardous Air Pollutants (HAPs)* NOTE: All HAP emisisions are deminimus

	Quantity	(units)	Emission Factor (EMF)*		Pound Per Hour (lbs/hr)	Pound Per Year (lbs/yr) (based on 100 hrs operation)	Reporting Threshold (lbs/yr)***	SOTA Threshold (lbs/yr)***
Benzene (CAS 71-43-2)	5.76	MMBTU/Hr	5.50E-05	lbs/MMBTU	0.00032	0.0190	6	4,000
Chromium (CAS 7440-47-3)	5.76	MMBTU/Hr	1.10E-05	lbs/MMBTU	0.00006	0.0038	3.5	4,000
Formaldehyde (CAS 50-00-0)	5.76	MMBTU/Hr	2.80E-04	lbs/MMBTU	0.00161	0.0968	4	4,000
Lead (CAS 7439-92-1)	5.76	MMBTU/Hr	1.40E-05	lbs/MMBTU	0.00008	0.0048	2	20
Mercury (CAS 7439-97-6)	5.76	MMBTU/Hr	1.20E-06	lbs/MMBTU	0.00001	0.0004	2	20
Naphthalene (CAS 91-20-3)	5.76	MMBTU/Hr	3.50E-05	lbs/MMBTU	0.00020	0.0121	1.4	10,000

* Emission Factors per EPA AP-42 Chapter 3.1 Stationary Gas Turbines
 ** N.J.A.C. 7:27-8 Table A Reporting and SOTA Thresholds (Potential To Emit)
 *** N.J.A.C. 7:27-17 Table 2 Reporting Threshold (Potential To Emit)

SOLAR-Turbine: Installed April 1971, Make: SOLAR, Model: KS-350, Serial: S-412272, 42 GPH (at full load), 5.76 MMBTU/Hr, 200kW

Limit of use: 100hr/yr @ 42GPH = 4,200 gallons per year
 138000 BTUs/Gal (diesel fuel)
 15 PPM Ultra Low Sulfur Diesel (0.000125lbs/gal)