

ORIGINAL

SOUTH COAST AQMD  
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PETITION FOR VARIANCE  
BEFORE THE HEARING BOARD OF THE  
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

SV  
11/12/24

PETITIONER: LOS ANGELES COUNTY SANITATION DISTRICTS

CASE NO: 3715-22

FACILITY ID: 800236

FACILITY ADDRESS: 24501 South Figueroa Street  
*[location of equipment/site of violation; specify business/corporate address, if different, under Item 2, below]*

City, State, Zip: Carson, CA 90745

1. TYPE OF VARIANCE REQUESTED (more than one box may be checked; see Attachment A, Item 1, before selecting)

INTERIM  SHORT  REGULAR  EMERGENCY  EX PARTE EMERGENCY

2. CONTACT: Name, title, company (if different than Petitioner), address, and phone number of persons authorized to receive notices regarding this Petition (no more than two authorized persons).

David Rothbart

Curtis L. Coleman

Los Angeles County Sanitation Districts

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3. RECLAIM Permit  Yes  No

Title V Permit  Yes  No

*Persons with disabilities may request this document in an alternative format by contacting the Clerk of the Board at 909-396-2500 or by e-mail at [clerkofboard@aqmd.gov](mailto:clerkofboard@aqmd.gov).*

*If you require disability-related accommodations to facilitate participating in the hearing, contact the Clerk of the Board at least five (5) calendar days prior to the hearing.*

**[ALL DOCUMENTS FILED WITH CLERK'S OFFICE BECOME PUBLIC RECORD]**

JAN 2011

4. **GOOD CAUSE:** Explain why your petition was not filed in sufficient time to issue the required public notice. (Required only for Emergency and Interim Variances; see Attachment A, Item 4)

[Empty response box for Item 4]

5. Briefly describe the type of business and processes at your facility.

The A.K. Warren Water Resources Facility (WWRF) is a wastewater treatment plant that currently provides primary and secondary treatment for a design capacity of 400 million gallons of wastewater per day, and serves over 4.8 million residents, businesses and industries. The WWRF is a vital component of a network of seven treatment facilities known as the Joint Outfall System (JOS). The JOS provides regional wastewater treatment for Los Angeles County, covering an extensive area including 73 cities and unincorporated county territory. The facility provides centralized processing of solids removed during wastewater treatment for all JOS facilities, producing renewable electricity and reusable biosolids. The treated water from the WWRF is sent to the Pacific Ocean through tunnels and outfall pipes extending approximately two miles off the coast of the Palos Verdes peninsula. The WWRF provides both primary and secondary treatment for approximately 260 million gallons of wastewater per day and operates 24 hours, 7 days per week, and 52 weeks per year.

6. List the equipment and/or activity(s) that are the subject of this petition (see Attachment A, Item 6, Example #1). **Attach copies of the Permit(s) to Construct and/or Permit(s) to Operate for the subject equipment. For RECLAIM or Title V facilities, attach *only* the relevant sections of the Facility Permit showing the equipment or process and conditions that are subject to this petition. You must bring the entire Facility Permit to the hearing.**

Equipment/Activity	Application/ Permit No.	RECLAIM Device No.	Date Application/Plan Denied (if relevant)*
Cogeneration System No. 1 (Exhibit 1)	A/N 467057 Permit No. R-G2781		
Cogeneration System No. 2 (Exhibit 2)	A/N 467059 Permit No. R-G2782		
Cogeneration System No. 3 (Exhibit 3)	A/N 467060 Permit No. R-G2783		
Continuous Emission Monitoring System (CEMS) servicing the three cogeneration systems			

\*Attach copy of denial letter

7. Briefly describe the activity or equipment, and why it is necessary to the operation of your business. A schematic or diagram may be attached, in addition to the descriptive text.

The cogeneration systems, otherwise known as the Total Energy Facility (TEF), combust digester gas in gas turbines that drive electrical generators, which supply a majority of the WWRP's power. The exhaust from the gas turbines is used to produce steam to power a steam turbine for additional power production, and the heat from the steam heats anaerobic digesters, which treat solids collected from the wastewater process. The cogeneration systems produce about 20 MW of electrical power and up to 60,000 lb/h of process steam (typically 2 turbines operate at one time). All three cogeneration systems share one continuous emission monitoring system (CEMS) used to measure and record air pollutant concentrations and emission rates as required by SCAQMD regulations and permit conditions.

TEF allows WWRP to become largely self-sufficient in energy needs by converting waste into usable power, thus reducing reliance on the electrical grid. TEF also allows the facility to operate in the event of a power outage.

8. Is there a regular maintenance and/or inspection schedule for this equipment? Yes  No   
 If yes, how often: \_\_\_\_\_ Date of last maintenance and/or inspection \_\_\_\_\_  
 Describe the maintenance and/or inspection that was performed.

For CEMS units:

Daily: Check all parameters and perform manual calibration as needed.

Monthly: Clean CEMS and PLC cabinet. Check audit bottles remove and replace as needed, also calibration as needed. clean CEMS and PLC cabinet. Date of last maintenance was October 1, 2024.

Annual: Remove, clean & inspect gas turbine stinger sample probes. Date of last maintenance was November 30, 2024.

For the gas turbine:

Quarterly: Gas turbine water wash. Clean & test fire detection system. The last quarterly maintenance for cogeneration systems 1, 2, and 3 was on October 22, 2024, October 1, 2024, and August 1, 2024, respectively.

Semiannual: Replace fuel injection nozzle. Grease VFD lube pump motors. Grease liquid fuel pump motor bearing. The last semiannual maintenance for cogeneration systems 1, 2, and 3 was on October 23, 2024, October 1, 2024, and August 1, 2024, respectively.

Annual: Check, clean, calibrate exhaust gas temperature transmitter. Clean gas strainer located before the main gas filter. Change lube oil expansion joints, change oil filters, grease lube oil pump/motor assembly couplings. Clean & inspect station batteries & room. The last annual maintenance for cogeneration systems 1, 2, and 3 was on May 23, 2024, July 1, 2024, and July 23, 2024, respectively.

9. List all District rules, and/or permit conditions [indicating the specific section(s) and subsection(s)] from which you are seeking variance relief (if requesting variance from Rule 401 or permit condition, see Attachment A). Briefly explain how you are or will be in violation of each rule or condition (see Attachment A, Item 9, Example #2).

Rule	Explanation
218(b)(2) and (3) (see note below)	Requires a CEMS to be operating at all times that the cogeneration systems are operating
203(b)	Conditions 1, 2 and 9 in permits for the cogeneration systems require the CEMS to be operating at all times that the cogeneration systems are operating
3002(c)	Conditions 1, 2 and 9 in permits for the cogeneration systems require the CEMS to be operating at all times that the cogeneration systems are operating
NOTE: Rule 218(f)(3)(B) allows a period of up to 96 hours for a CEMS to be not operating while the equipment it is monitoring is operating if it is offline for maintenance or repair. Petitioner believes that it is likely that the work described in the response to No. 14 will result in the CEMS being not operational for more than 96 hours. It is not clear whether the 96-hour non-operating period for maintenance also applies to the permit conditions specified above.	

10. Are the equipment or activities subject to this request currently under variance coverage? Yes  No

Case No.	Date of Action	Final Compliance Date	Explanation

11. Are any other equipment or activities at this location currently (or within the last six months) under variance coverage? Yes  No

Case No.	Date of Action	Final Compliance Date	Explanation

12. Were you issued any Notice(s) of Violation or Notice(s) to Comply concerning this equipment or activity within the past year? Yes  No

If yes, you must attach a copy of each notice.

13. Have you received any complaints from the public regarding the operation of the subject equipment or activity within the last six months? Yes  No

If yes, you should be prepared to present details at the hearing.

14. Explain why it is beyond your reasonable control to comply with the rule(s) and/or permit condition(s). Provide specific event(s) and date(s) of occurrence(s), if applicable.

Petitioner needs to make equipment and software upgrades to the CEMS servicing the cogeneration systems at the facility to comply with District Rules 218.2 and 218.3. These upgrades will require the CEMS to be taken off-line.

The cogeneration systems are used to combust waste digester gas in a beneficial manner to provide electrical power and steam. While Petitioner could shut down the cogeneration turbines the digester gas would still need to be combusted in flares at the facility. Burning the digester gas in flares would not generate electricity or steam needed by the facility to operate. Electricity would have to be purchased at an estimated cost of \$25,000 per day and steam would have to be provided by boilers. The State of California encourages beneficial use of resources such as digester gas for generating electricity and there will be no exceedances of the NOx emission limits set by SCAQMD for the combustion turbines during the variance period.

The impacts on Petitioner are described in the response to Paragraph 17, below.

15. When and how did you first become aware that you would not be in compliance with the rule(s) and/or permit condition(s)? Provide specific event(s) and date(s) of occurrence(s).

The upgrade process is scheduled to begin on November 15. While Petitioner will have a certified CEMS monitoring emissions while the main CEMS is off-line during the upgrade process SCAQMD staff advised Petitioner on October 23<sup>rd</sup> that the "substitute" CEMS would not avoid the need for a variance.

16. List date(s) and action(s) you have taken since that time to achieve compliance. That the Petition Form HB-V, and any related instructions, include requirement that the Petitioner include a timeline in suitable, chronological format to address the events, dates, and actions called for by Questions 15 and 16, including the dates of communication with the South Coast AQMD to notify them of the occurrence(s) giving rise to the requested variance.

Petitioner is currently in compliance with the requirements of Rule 218 and 218.1 as well as the permit conditions applicable to the operation of the three cogeneration systems at the facility. Petitioner does need to take steps to achieve compliance with the requirements of Rules 218.2 and 218.3 by January 1, 2025. To that end, Petitioner needs to upgrade the current CEMS at the facility. This will require the CEMS to be taken off-line for equipment and software upgrades. The upgrade is scheduled to begin on November 15, 2024. The Petitioner will rent a certified CEMS to continuously monitor emissions during the installation of the upgraded system. This will assure that there are no excess emissions during the upgrade process. However, SCAQMD staff has advised Petitioner even with the temporary CEMS, a variance will still be needed.

17. What would be the harm to your business during **and/or after** the period of the variance if the variance were not granted?

Economic losses: \$ 25,000 per day for purchase of electrical power, or imposition of civil penalties for violating SCAQMD rule and permit requirements

Number of employees laid off (if any): 0

Provide detailed information regarding economic losses, if any, (anticipated business closure, breach of contracts, hardship on customers, layoffs, and/or similar impacts).

Petitioner is an essential public service. Failure to grant the variance would result in an unreasonable burden as contemplated by Health and Safety Code Section 42352(a)(2). If Petitioner is required to cease operating the turbines that are part of the cogeneration facility, the digester gas would need to be combusted in flares at the facility. While that would result in marginally lower NOx emissions, it would also mean that the digester gas could not be used to generate electricity. Petitioner would have to purchase electricity to make up for the lost power from the cogeneration system. That would cost Petitioner (and its rate payers) an estimated \$25,000 per day. That is an unreasonable burden that is not warranted while Petitioner is taking necessary actions to allow it to comply with Rules 218.2 and 218.3 by the required compliance date.

18. Can you curtail or terminate operations in lieu of, or in addition to, obtaining a variance? Please explain.

Petitioner could shut down the cogeneration systems used to combust waste digester gas and provide electricity and steam to the facility. However, the digester gas would still need to be combusted in flares creating NOx emissions while not providing electrical power or steam.

Petitioner cannot curtail or terminate operations of the wastewater treatment facility as it must be in continuous operation to treat the incoming wastewater. Petitioner has no control over the quantity of the wastewater coming into the facility.

19. Estimate excess emissions, if any, on a daily basis, including, if applicable, excess opacity (the percentage of total opacity above 20% during the variance period). If the variance will result in no excess emissions, insert "N/A" here and skip to No. 20.

Pollutant	(A)	(B)	(C)*
	Total Estimated Excess Emissions (lbs/day)	Reduction Due to Mitigation (lbs/day)	Net Emissions After Mitigation (lbs/day)
NOx	0	0	0

\* Column A minus Column B = Column C

Excess Opacity: NA %

20. Show calculations used to estimate quantities in No. 19, or explain why there will be no excess emissions.

Emissions will be monitored by a rental CEMS that will assure that no excess emissions occur from the cogeneration systems during the variance.

21. Explain how you plan to reduce (mitigate) excess emissions during the variance period to the maximum extent feasible, or why reductions are not feasible.

There will be no excess emissions.

22. How do you plan to monitor or quantify emission levels from the equipment or activity(s) during the variance period, and to make such records available to the District? **Any proposed monitoring does not relieve RECLAIM facilities from applicable missing data requirements.**

Emissions will be monitored by a certified CEMS obtained temporarily by Petitioner to assure that there will be no excess emissions.



23. How do you intend to achieve compliance with the rule(s) and/or permit condition(s)? Include a detailed description of any equipment to be installed, modifications or process changes to be made, permit conditions to be amended, etc., dates by which the actions will be completed, and an estimate of total costs.

Once the CEMS upgrade is complete, the CEMS will be brought back online and Petitioner will be in compliance.

24. State the date you are requesting the variance to begin: November 15, 2024; and the date by which you expect to achieve final compliance: no later than November 28, 2024 Petitioner will have more information at the time of the hearing, \_\_\_\_\_.

If the regular variance is to extend beyond one year, you **must** include a **Schedule of Increments of Progress**, specifying dates or time increments for steps needed to achieve compliance. See District Rule 102 for definition of Increments of Progress (see Attachment A, Item 24, Example #3).

NA

25. List the names of any District personnel with whom facility representatives have had contact concerning this variance petition or any related Notice of Violation or Notice to Comply.

\_\_\_\_\_ Ext. \_\_\_\_\_  
\_\_\_\_\_ Ext. \_\_\_\_\_

If the petition was completed by someone other than the petitioner, please provide their name and title below.

Name \_\_\_\_\_ Company \_\_\_\_\_ Title \_\_\_\_\_

The undersigned, under penalty of perjury, states that the above petition, including attachments and the items therein set forth, is true and correct.

Executed on October 29, 2024, at Whittier, California

David Rothbart \_\_\_\_\_ David L. Rothbart \_\_\_\_\_  
Signature Print Name

Title: Division Engineer

26. **SMALL BUSINESS and TABLE III SCHEDULE A FEES:** To be eligible for reduced fees for small businesses, individuals, or entities meeting small business gross receipts criterion [see District Rule 303(h)], you must complete the following:

***Declaration Re Reduced Fee Eligibility***

1. The petitioner is  
a)  an individual, or  
b)  an officer, partner or owner of the petitioner herein, or a duly authorized agent of the petitioner authorized to make the representations set forth herein.

***If you selected 1a, above, skip item 2.***

2. The petitioner is  
a)  a business that meets the following definition of Small Business as set forth in District Rule 102:  
**SMALL BUSINESS** means a business which is independently owned and operated and meets the following criteria, or if affiliated with another concern, the combined activities of both concerns shall meet these criteria:  
(a) the number of employees is 10 or less; **AND**  
(b) the total gross annual receipts are \$500,000 or less or  
(iii) the facility is a not-for-profit training center.

**-OR-**

- b)  an entity with total gross annual receipts of \$500,000 or less.  
3. Therefore, I believe the petitioner qualifies for reduced fees for purpose of filing fees and excess emission fee calculations, in accordance with Rule 303(h).

I declare under penalty of perjury that the foregoing is true and correct.

Executed on \_\_\_\_\_, at \_\_\_\_\_, California

Signature \_\_\_\_\_ Print Name \_\_\_\_\_

Title \_\_\_\_\_

**ATTACHMENT A**

**ITEM 1**

Type of Variance Requested:

[YOU MAY ATTACH ADDITIONAL PAGES IF NECESSARY]

- (a) **SHORT:** If compliance with District rule(s) can be achieved in **90 days or less**, request a short variance. *(Hearing will be held approximately 21 days from date of filing--10-day posted notice required.)*
- (b) **REGULAR:** If compliance with District rule(s) will take **more than 90 days**, request a regular variance. If the variance request will extend beyond one year, you **must** include a specific detailed schedule of increments of progress [see Page 8, No. 24] under which you will achieve final compliance. *(Hearing will be held approximately 45 days from date of filing--30-day published notice required.)*
- (c) **EMERGENCY:** If non-compliance is the result of an unforeseen emergency, such as a sudden equipment breakdown, power failure, or accidental fire, you may request an emergency variance. You may request an *ex parte* emergency variance in addition to an emergency variance. **An emergency variance cannot be granted for more than 30 days.** *(Hearing will be held within 2 working days from the date of filing, whenever possible, excluding Mondays, weekends, and holidays.)* **If you request an emergency variance, you must answer No. 4 on page 1.**
- (d) **EX PARTE EMERGENCY:** If variance coverage is required on a weekend or when the Board is not in session, and you cannot wait until an emergency variance hearing can be held, you may request an *ex parte* emergency variance. An *ex parte* emergency variance will be granted or denied solely on the information contained in the petition and the District's response to the petition. Under most circumstances, an *ex parte* emergency variance will remain in effect only until a hearing can be held. **If you request an *ex parte* variance, you must answer No. 4 on page 1.**
- (e) **INTERIM:** If you require immediate relief (other than for emergencies) to cover the time until a short or regular variance hearing can be held, request an interim variance. If you request an interim variance, you must also request a short or a regular variance on the same petition. *(Hearing will be held approximately 2 working days from date of filing, whenever possible, excluding Mondays, weekends and holidays.)* **If you request an interim variance, you must answer No. 4 on page 1.**

**ITEM 4**

**GOOD CAUSE:** The Hearing Board is required to provide public notice of variance hearings, as the public has a right to attend and testify at such hearings. In order for the Hearing Board to hold an Interim, *Ex Parte* Emergency or Emergency Variance hearing without the required public notice, a petitioner must present facts which will support a determination by the Board that "good cause" exists to hear a variance without notifying the public about the variance and providing the public with an opportunity to present evidence concerning the variance.

**ITEM 6**

Example #1:

Equipment/Activity	Application/ Permit No.	RECLAIM Device No.	Date Application/Plan Denied (if relevant)*
Tenter frame		D32	
Chrome-plating tank	M99999		
Bake oven	123456		
Create special effects (fog)	N/A	N/A	N/A
Mfg., sale, distribution, use of non-compliant coating	N/A	N/A	12/10/95

**ITEM 9**

a) If you are requesting relief from Rule 401 and the excess opacity during the variance period will reach or exceed 40%, you should also request relief from California Health and Safety Code Section 41701.

b) If you are requesting relief from a permit condition(s), you should also request relief from the rule requiring compliance with conditions of the permit: 202(a), (b) or (c) - Temporary Permit to Operate; 203(b) - Permit to Operate; 2004(f)(1) – RECLAIM Permit; 3002(c) – Title V Permit.

**Example #2:**

Rule	Explanation
404(a)	tenter frame is vented to damaged air pollution control equipment
2004 (f)(1) [Condition No. 28-2 of Facility P/O No. 0999999]	source test cannot be conducted as required until new ESP is installed
1113(c)(2)	petitioner manufactures and sells clear wood finishes with VOCs in excess of 350 grams per liter
401(a) & California H&S Code Section 41701	Opacity will exceed 45%.

**ITEM 24**

**Example #3:**

**Sample Schedule of Increments of Progress**

- Permit application(s) will be submitted to the District by [date].
- Contracts for the purchase of emission control systems will be awarded by [date].
- On-site construction will be completed by [date].

(Petition for Variance: Revised February 22, 2011)



## FACILITY PERMIT TO OPERATE LA CO. SANITATION DIST

### PERMIT TO OPERATE

Permit No. R-G2781  
A/N 467057

#### Equipment Description:

Cogeneration system No.1 consisting of:

1. Three (3) fuel gas compressors, 1000 HP each, with a gas chiller, knockout drum, and re-heater, common to gas turbines 2 and 3.
2. Gas turbine No.1, Solar. Model Mars 90-13000, 113 mmBTU/hour, digester gas and natural gas fired, with water injection system, driving a 9.9 megawatt electric generator.
3. Waste heat recovery boiler No. 1, Express Integrated Technologies, unfired, water-tube type, 33,744 pounds/hour of 460 psi steam output.
4. Steam turbine generator, Shin-Nippon, 8700 kilowatt, with associated pumps, feed water heaters, and condenser, common to cogeneration systems No. 2 and 3.

#### Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.  
[Rule 204]
2. This equipment shall be properly maintained and kept in good operating condition at all times.  
[Rule 204]
3. This equipment shall not be operated unless the water injection system is installed and operating, except during startup and shutdown periods.  
[Rule 1303(a)(1)-BACT]
4. The owner or operator of this equipment shall conduct annual performance tests in accordance with the South Coast AQMD approved test procedures and furnish the South Coast AQMD with the written results of such performance tests within 60 days after testing. The tests shall include, but may not be limited to:
  - A. Heat input rate (calculated)
  - B. Power output (measured)
  - C. Exhaust flow rate (calculated)
  - D. Carbon monoxide (exhaust only)
  - E. Oxides of nitrogen (exhaust only)
  - F. Oxygen (exhaust only)

The report shall present the emission data in parts per million volume on dry basis at 15% oxygen, and in pounds per hour.

[Rule 204, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets]



## FACILITY PERMIT TO OPERATE LA CO. SANITATION DIST

5. The digester gas and natural gas flow rates to the turbine shall be continuously monitored and recorded on a daily basis.  
[Rule 204, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets]

6. The gaseous fuel supplied to this turbine shall contain, at minimum, 60% digester gas by volume averaged over 24 hours period.  
[Rule 204, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets]

7. The total heat input to this turbine shall not exceed 113 mmBTU/hour.  
[Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offsets]

8. The emissions of criteria pollutants from this turbine shall not exceed the following:

Pollutant	lbs/hour
ROG (as carbon)	4.5
NOx (as NO <sub>2</sub> )	12.0
SOx (as SO <sub>2</sub> )	1.3
CO	16.3
PM	5.7

[Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offsets]

9. A Continuous Emission Monitoring System (CEMS) shall be maintained to measure the exhaust for NO<sub>x</sub> and O<sub>2</sub> concentrations. The CEMS shall continuously correct and record the NO<sub>x</sub> concentrations to 15% oxygen on dry basis.  
[Rule 204, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets, 40 CFR 60 Subpart GG]

10. The operator shall keep records of to demonstrate compliance with requirements of the conditions of this permit and such records shall be kept for at least five (5) years and made available to the South Coast AQMD personnel upon request.  
[Rule 204]

11. A continuous exhaust temperature monitoring and recording system shall be operated and maintained in the entrance to the heat recovery/steam generator unit pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. Such a system shall have an accuracy of within  $\pm 1\%$  of the temperature being monitored and shall be inspected, maintained, and calibrated at least annually in accordance with the manufacturer's specifications.  
[40 CFR 64]

12. For the purpose of this condition, a deviation shall be defined as when the exhaust temperature in the entrance to the heat recovery/steam generator unit less than 700 degrees Fahrenheit, averaged over one hour, occurs during normal operation except during startups and shutdowns not to exceed one hour. The operator shall review the records of exhaust temperature each day the heat recovery/steam generator is operated to determine if a deviation occurs or shall install an alarm system to alert the operator when a deviation occurs.  
[40 CFR 64]

13. All deviations shall be reported to the South Coast AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit.  
[40 CFR 64]



## FACILITY PERMIT TO OPERATE LA CO. SANITATION DIST

14. For each semi-annual reporting period specified in Condition No. 23 in Section K, whenever a deviation occurs from the exhaust temperature, the operator shall take immediate corrective action upon detection, and keep records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective action taken.  
[40 CFR 64]
15. A semi-annual monitoring report shall be submitted to South Coast AQMD, which shall include but may not be limited to the total operating time of this equipment and the total accumulated duration of all deviations for each semi-annual reporting period.  
[40 CFR 64]
16. The owner or operator shall submit an application with a Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to South Coast AQMD if an accumulation of deviations for parameters monitored exceeds 5% duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required QIP shall be submitted to the South Coast AQMD within 90 calendar days after the due date of the semi-annual monitoring report.  
[40 CFR 64]
17. All records shall be kept for a period of at least five years in a format acceptable to South Coast AQMD and in compliance with 40 CFR Part 64.9 and shall be made available to South Coast AQMD personnel upon request.  
[Rule 1303(b)(2)-Offset, 40 CFR 64]

### Periodic Monitoring:

18. The operator shall determine compliance with the ROG, PM, and SO<sub>x</sub> emission limits in condition No. 8 by conducting a source test at least once every 3 years using South Coast AQMD-approved test methods. The test shall be conducted when the equipment is operating under maximum attainable conditions to demonstrate compliance. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit. The tests conducted under condition No. 5 or any other tests required by South Coast AQMD rules, and their results, may be used to satisfy the applicable requirements of this condition.  
[Rule 3004(a)(4)]

### Emissions and Requirements:

19. This equipment is subject to the applicable requirements of the following rules and regulations:

CO: 2000 ppm, Rule 407  
CO: 130 ppmvd @15% O<sub>2</sub>, Rule 1303(a)(1)-BACT  
NO<sub>x</sub>: 25 ppmvd @ 15% O<sub>2</sub>, Rule 1303(a)(1)-BACT  
NO<sub>x</sub>: 89.8 ppmv, 40 CFR Part 60 Subpart GG  
PM: 0.1 grain/scf, Rule 409  
SO<sub>x</sub>: 500 ppmv, Rule 407  
SO<sub>x</sub>: Rule 431.1

**This Permit to Operate R-G2781 supersedes Permit to Operate R-G2781 issued on April 9, 2014.**



**FACILITY PERMIT TO OPERATE  
LA CO. SANITATION DIST**

**PERMIT TO OPERATE**

**Permit No. R-G2782  
A/N 467059**

**Equipment Description:**

Cogeneration system No.2 consisting of:

1. Three (3) fuel gas compressors, 1000 HP each, with a gas chiller, knockout drum, and re-heater, common to gas turbines 1 and 3.
2. Gas turbine No.1, Solar. Model Mars 90-13000, 113 mmBTU/hour, digester gas and natural gas fired, with water injection system, driving a 9.9 megawatt electric generator.
3. Waste heat recovery boiler No. 2 Express Integrated Technologies, unfired, water-tube type, 33,744 pounds/hour of 460 psi steam output.
4. Steam turbine generator, Shin-Nippon, 8700 kilowatt, with associated pumps, feed water heaters, and condenser, common to cogeneration systems No. 1 and 3.

**Conditions:**

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.  
[Rule 204]
2. This equipment shall be properly maintained and kept in good operating condition at all times.  
[Rule 204]
3. This equipment shall not be operated unless the water injection system is installed and operating, except during startup and shutdown periods.  
[Rule 1303(a)(1)-BACT]
4. The owner or operator of this equipment shall conduct annual performance tests in accordance with the South Coast AQMD approved test procedures and furnish the South Coast AQMD with the written results of such performance tests within 60 days after testing. The tests shall include, but may not be limited to:
  - A. Heat input rate (calculated)
  - B. Power output (measured)
  - C. Exhaust flow rate (calculated)
  - D. Carbon monoxide (exhaust only)
  - E. Oxides of nitrogen (exhaust only)
  - F. Oxygen (exhaust only)

The report shall present the emission data in parts per million volume on dry basis at 15% oxygen, and in pounds per hour.

[Rule 204, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets]





## FACILITY PERMIT TO OPERATE LA CO. SANITATION DIST

5. The digester gas and natural gas flow rates to the turbine shall be continuously monitored and recorded on a daily basis.  
[Rule 204, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets]

6. The gaseous fuel supplied to this turbine shall contain, at minimum, 60% digester gas by volume averaged over 24 hours period.  
[Rule 204, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets]

7. The total heat input to this turbine shall not exceed 113 mmBTU/hour.  
[Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offsets]

8. The emissions of criteria pollutants from this turbine shall not exceed the following:

Pollutant	lbs/hour
ROG (as carbon)	4.5
NOx (as NO <sub>2</sub> )	12.0
SOx (as SO <sub>2</sub> )	1.3
CO	16.3
PM	5.7

[Rule 1303(b)(1)-Modeling, Rule 1303(b)(2)-Offsets]

9. A Continuous Emission Monitoring System (CEMS) shall be maintained to measure the exhaust for NO<sub>x</sub> and O<sub>2</sub> concentrations. The CEMS shall continuously correct and record the NO<sub>x</sub> concentrations to 15% oxygen on dry basis.  
[Rule 204, Rule 1303(a)(1)-BACT, Rule 1303(b)(2)-Offsets, 40 CFR 60 Subpart GG]

10. The operator shall keep records of to demonstrate compliance with requirements of the conditions of this permit and such records shall be kept for at least five (5) years and made available to the South Coast AQMD personnel upon request.  
[Rule 204]

11. A continuous exhaust temperature monitoring and recording system shall be operated and maintained in the entrance to the heat recovery/steam generator unit pursuant to the operation and maintenance requirements specified in 40 CFR Part 64.7. Such a system shall have an accuracy of within  $\pm 1\%$  of the temperature being monitored and shall be inspected, maintained, and calibrated at least annually in accordance with the manufacturer's specifications.  
[40 CFR 64]

12. For the purpose of this condition, a deviation shall be defined as when the exhaust temperature in the entrance to the heat recovery/steam generator unit less than 700 degrees Fahrenheit, averaged over one hour, occurs during normal operation except during startups and shutdowns not to exceed one hour. The operator shall review the records of exhaust temperature each day the heat recovery/steam generator is operated to determine if a deviation occurs or shall install an alarm system to alert the operator when a deviation occurs.  
[40 CFR 64]

13. All deviations shall be reported to the South Coast AQMD on a semi-annual basis pursuant to the requirements specified in 40 CFR Part 64.9 and Condition Nos. 22 and 23 in Section K of this permit.  
[40 CFR 64]



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14. For each semi-annual reporting period specified in Condition No. 23 in Section K, whenever a deviation occurs from the exhaust temperature, the operator shall take immediate corrective action upon detection, and keep records of the duration and cause (including unknown cause, if applicable) of the deviation and the corrective action taken.  
[40 CFR 64]
15. A semi-annual monitoring report shall be submitted to South Coast AQMD, which shall include but may not be limited to the total operating time of this equipment and the total accumulated duration of all deviations for each semi-annual reporting period.  
[40 CFR 64]
16. The owner or operator shall submit an application with a Quality Improvement Plan (QIP) in accordance with 40 CFR Part 64.8 to South Coast AQMD if an accumulation of deviations for parameters monitored exceeds 5% duration of this equipment's total operating time for any semi-annual reporting period specified in Condition No. 23 in Section K of this permit. The required QIP shall be submitted to the South Coast AQMD within 90 calendar days after the due date of the semi-annual monitoring report.  
[40 CFR 64]
17. All records shall be kept for a period of at least five years in a format acceptable to South Coast AQMD and in compliance with 40 CFR Part 64.9 and shall be made available to South Coast AQMD personnel upon request.  
[Rule 1303(b)(2)-Offset, 40 CFR 64]

### Periodic Monitoring:

18. The operator shall determine compliance with the ROG, PM, and SO<sub>x</sub> emission limits in condition No. 8 by conducting a source test at least once every 3 years using South Coast AQMD-approved test methods. The test shall be conducted when the equipment is operating under maximum attainable conditions to demonstrate compliance. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit. The tests conducted under condition No. 5 or any other tests required by South Coast AQMD rules, and their results, may be used to satisfy the applicable requirements of this condition.  
[Rule 3004(a)(4)]

### Emissions and Requirements:

19. This equipment is subject to the applicable requirements of the following rules and regulations:

CO: 2000 ppm, Rule 407  
CO: 130 ppmvd @15% O<sub>2</sub>, Rule 1303(a)(1)-BACT  
NO<sub>x</sub>: 25 ppmvd @ 15% O<sub>2</sub>, Rule 1303(a)(1)-BACT  
NO<sub>x</sub>: 89.8 ppmv, 40 CFR Part 60 Subpart GG  
PM: 0.1 grain/scf, Rule 409  
SO<sub>x</sub>: 500 ppmv, Rule 407  
SO<sub>x</sub>: Rule 431.1

**This Permit to Operate R-G2782 supersedes Permit to Operate R-G2782 issued on April 9, 2014.**