

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

SV
8/1/24

PETITIONER: Walnut Creek Energy, LLC

CASE NO: 6230-3
FACILITY ID: 146536

SOUTH COAST AQMD
CLERK OF THE BOARDS
2024 JUL 19
PM 1:41

FACILITY ADDRESS: 911 Bixby Dr
[location of equipment/site of violation; specify business/corporate address, if different, under Item 2, below]

City, State, Zip: City of Industry, CA, 91745

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).

Greg Wolffe

George Piantka

Principal Scientist, Yorke Engineering, LLC

Senior Director, NRG

31726 Rancho Viejo Rd, Suite 218

4600 Carlsbad Blvd

San Juan Capistrano, CA Zip 92675

Carlsbad, CA Zip 92008

(909) 861-2729 Ext.

(760) 707-6833 Ext.

Fax ()

Fax ()

E-mail GWolffe@YorkeEngr.com

E-mail George.Piantka@nrg.com

3. RECLAIM Permit Yes No

Title V Permit Yes No

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)

N/A

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

Walnut Creek Energy (WCE) is a 500.5 net megawatt natural gas-fired, simple cycle electrical generating facility, designed to meet electric generation load during periods of high demand. WCE operates five (5) GE LMS100 simple-cycle gas turbines, each with an electrical generator and emissions control equipment. As a simple-cycle configuration, there are no heat recovery steam generators, duct burners, or steam turbines.

WCE recently undertook a facility upgrade project that included the installation of state-of-the-art selective catalytic reduction (SCR) catalyst that will achieve the lowest achievable emission rate (LAER) of oxides of nitrogen (NOx) emission of any single cycle electrical power generating facility in the South Coast Air Basin. Permitting for the upgrade was completed on January 31, 2024.

The Walnut Creek units operate as peak electrical generation units that are critical to meet the demand on California's electrical grid. That demand is highest in the summer and early fall months due to ambient air temperatures and wildfires that can cause Public Safety Power Shutoff events in some areas that increase the need for power generation elsewhere to meet grid demands. California's electrical grid is about to transition into that summer peak demand period.

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)
GE LMS100 simple cycle gas turbine (Unit 4)	Application No: 647719	D19	N/A

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.

Unit 4 gas turbine is dispatched according to local demand, system load, and system reliability requirements dictated by the California Independent System Operator (CAISO). As a power generating facility with rapid response (fast start) capability, WCEP is uniquely positioned to provide low-emitting electrical power generation to CAISO under peak demands (operating as a "peaker" plant).

8. Is there a regular maintenance and/or inspection schedule for this equipment? Yes No

If yes, how often: At least annually during scheduled outages. Date of last maintenance and/or inspection: D19 underwent annual outages between January and March 2024.

Describe the maintenance and/or inspection that was performed.

Regular maintenance and inspections are performed during scheduled outages on Unit 4, which are coordinated with CAISO. Annual inspections are comprehensive and evaluate the mechanical integrity of the gas turbines and ancillary equipment necessary to operate the units in compliance.

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
Section H, Permit Condition # E448.3 and of Facility Permit 146536 (Rev. 26), Device D19	Condition E448.3 requires that only GE LM100PA-NGWG06 turbine engines with the following supercore serial numbers (S/N) shall be used at this site: 878-146 (manufacture date 2012), 878-147 (manufacture date 2012), 878-148 (manufacture date 2012), 878-149 (manufacture date 2012), 878-157 (manufacture date 2012), 878-160 (manufacture date 2012). Walnut Creek Energy is seeking relief from this condition by allowing Unit 4 to operate using S/N 878-187 beginning on or around August 1 until the date on which the current Walnut Creek spare (S/N 878-160) can be installed in Unit 4, which is expected to be no later than October 31, 2024.
SCAQMD Rule 2004(f)(1)	Rule 2004 requires RECLAIM Facility permit holders to comply with all rules and permit conditions applicable to the facility, as specified in the Facility Permit.
SCAQMD Rule 3002(c)(1)	Rule 3002 requires Title V permit holders to comply with all terms, requirements, and conditions specified in the Title V permit at all times.

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
6230-2	July 15, 2024	Estimated November 1, 2024	Walnut Creek Energy filed a variance petition for relief from Permit Conditions A195.7 until NOx start-up limits are changed in the facility Title V permit. Case 6230-2 was approved on May 21, 2024.

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
6230-2	July 15, 2024	November 1, 2024	Walnut Creek Energy filed a variance petition for relief from Permit Conditions A195.7 until NOx start-up limits are changed in the facility Title V permit.

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.

On June 26, Unit 4 tripped and was forced out of service (into outage). On June 28, WCEP learned that supercore 878-149 in Unit 4 sustained a bearing failure and consequently the forced outage has been extended until the damaged supercore can be repaired, or a replacement supercore is available. General Electric (GE), the turbine manufacturer, was already in the process of completing repairs on a spare supercore for the Carlsbad Energy Center (CEC), a sister facility located in San Diego under common corporate ownership as Walnut Creek Energy, LLC, that will be available as early as July 30, 2024. If GE delivers on this commitment, WCE will seek to operate the CEC Spare (S/N 878-187) in Unit 4 beginning on or around August 1 until the date on which the Walnut Creek spare (S/N 878-160) can be installed in Unit 4, which is expected to be no later than October 31, 2024.

The bearing failure that forced Unit 4 out of service was not foreseeable, and without a variance to allow use of a supercore that is not listed in the permit, Unit 4 will be unavailable during the peak summer months.

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).

On June 26, Walnut Creek Unit 4 tripped and was forced out of service. On June 28, Walnut Creek Energy (WCE) learned that supercore 878-149 in Unit 4 sustained damage and consequently the forced outage will be extended until a replacement supercore is available so that the damaged supercore can be repaired.

16. List date(s) and action(s) you have taken since that time to achieve compliance.

Walnut Creek has been in active communications with CEC and CAISO to propose allowing the supercore to be used temporarily in Unit 4 while the spare supercore for the site fleet (S/N 878-160) is being repaired. Communications with GE have supported a timeline that allows the CEC Spare to be available for use in Unit 4 by August 1, 2024.

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: This unit cannot be operated, which would cause approximately a 20% loss of electrical power generating capacity at the facility, payments and revenue from providing energy and ancillary services to the CAISO grid, and losses amounting to up to \$8.5 million over the proposed short-term variance period. Denial of the variance would render Unit 4 at Walnut Creek inoperable. Not granting this petition could cause significant, unreasonable, and unavoidable harm to Petitioner in that Petitioner would be unable to operate the units for commercial use and result in significant lost revenues.

Number of employees laid off (if any) _____

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

This unit is contracted to provide Resource Adequacy capacity, which requires that the petitioner certify availability monthly and submit bids every hour of every day in the CAISO markets. If the variance is not granted, this unit would need to be shut down until the permit could be amended, which would take several months, meaning that the resources would be unavailable during the critical summer to early fall season when they are most valuable and most critical to electric reliability.

Potential impacts to California's grid and the public could result if this unit cannot be operated under a variance, which could result in the dispatch of less efficient and higher emitting generation to satisfy electricity demand.

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

The Walnut Creek units operate as peak electrical generation units that are critical to meet the demand on California's electrical grid. That demand is highest in the summer and early fall months due to ambient air temperatures and wildfires that can cause Public Safety Power Shutoff events in some areas that increase the need for power generation elsewhere to meet grid demands. California's electrical grid is about to transition into that summer peak demand period. Because the proposed variance relief will extend through these peak demand periods, curtailment of Unit 4 cannot be considered throughout the term of the variance period. As a low-emitting peak power generating facility, Walnut Creek needs to be available during the peak generating periods for grid reliability.

Without a variance, this unit cannot be started, eliminating the ability to provide energy, Spinning and Non-Spinning Reserve and Regulation, services essential to reliable operation of the CAISO Grid, and resulting in loss of approximately 20% of the revenue.

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. N/A

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

* Column A minus Column B = Column C

Excess Opacity: N/A %

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

The replacement unit will be identical to the existing unit, therefore no excess emissions are expected.

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.

N/A; no excess emissions are expected.

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.**

Unit 4 CEMS will operate to monitor emissions during the variance period.

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.

Since the replacement unit is identical to the existing unit, during the variance period, normal operations will continue and WCE will continue to stay in compliance with applicable rules and permit conditions.

24. State the date you are requesting the variance to begin: July 30, 2024; and the date by which you expect to achieve final compliance: October 31, 2024.

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).

List Increments of Progress here: N/A

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.

Chris Perri (Permit engineer) Ext. 2696

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

Greg Wolffe Yorke Engineering, LLC Principal Scientist
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 July 12, 2024, at Carlsbad, California



Signature

George L. Piantka
Print Name

Title: Sr. Director, Environmental



**FACILITY PERMIT TO OPERATE
WALNUT CREEK ENERGY, LLC**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

The operator shall comply with the terms and conditions set forth below:

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions* And Requirements	Conditions
Process 1: INTERNAL COMBUSTION					
GAS TURBINE, UNIT NO.4, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, INTERCOOLED, 891.7 MMBTU/HR AT 30 DEGREES F, WITH WATER INJECTION WITH A/N: 636711	D19	C21	NOX: MAJOR SOURCE**: SOX: PROCESS UNIT**	CO: 4 PPMV NATURAL GAS (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988]; CO: 2000 PPMV NATURAL GAS (5) [RULE 407, 4-2-1982]; NOX: 2.5 PPMV NATURAL GAS (4) [RULE 1703(a)(2) - PSD-BACT, 10-7-1988; RULE 2005, 12-4-2015; RULE 2005, 11-5-2021]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; PM: 0.01 GRAINS/SCF NATURAL GAS (5) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 0.1 GRAINS/SCF NATURAL GAS (5B) [RULE 409, 8-7-1981]; PM: 11 LBS/HR NATURAL GAS (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SO2: (9) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SOX: 0.06 LBS/MMBTU NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; SOX: 0.67 LBS/MMSCF (1) [RULE 2011, 5-6-2005]; VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A63.1, A195.1, A195.2, A195.3, A327.1, C1.1, D12.1, D29.2, D29.3, D82.1, D82.2, E57.1, E193.1, H23.1, I298.4, I298.10, K67.5
GENERATOR, 100.1 NET MW (104 GROSS MW)					

- * (1) (1A) (1B) Denotes RECLAIM emission factor (2) (2A) (2B) Denotes RECLAIM emission rate
 - (3) Denotes RECLAIM concentration limit (4) Denotes BACT emission limit
 - (5) (5A) (5B) Denotes command and control emission limit (6) Denotes air toxic control rule limit
 - (7) Denotes NSR applicability limit (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 - (9) See App B for Emission Limits (10) See section J for NESHAP/MACT requirements
- ** Refer to section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

FACILITY PERMIT TO OPERATE WALNUT CREEK ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

[Devices subject to this condition : D1, C4, D7, C10, D13, C16, D19, C22, D25, C28]

E193.2 The operator shall construct this equipment according to the following specifications:

The SCR catalyst shall be installed and configured as specified in the permit to construct application unless otherwise approved in writing by the Executive Officer. The operator shall notify South Coast AQMD upon completion of the installation of the SCR for each unit.

This permit to construct shall expire 1 year after the issue date (Section H Revision 9) unless an extension has been approved in writing by the Executive Officer. Any extension requests shall be made in writing at least 15 days prior to permit expiration.

[RULE 205, 1-5-1990]

[Devices subject to this condition : C4, C10, C16, C22, C28]

E448.3 The operator shall comply with the following requirements:

FACILITY PERMIT TO OPERATE WALNUT CREEK ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Each turbine assembly installed and operating at this site must have a manufacturer nameplate affixed to the turbine housing in a position that is visible within or adjacent to the engine compartment. The nameplate shall contain the following information at a minimum, the make and model number of the turbine, the date of manufacture, and the serial number.

Only GE LM100PA-NGWG06 turbine engines with the following serial numbers shall be used at this site: 878-146 (manufacture date 2012), 878-147 (manufacture date 2012), 878-148 (manufacture date 2012), 878-149 (manufacture date 2012), 878-157 (manufacture date 2012), 878-160 (manufacture date 2012).

The operator shall provide South Coast AQMD personnel access to the engine compartment for nameplate verification upon request.

Turbine replacement among the site fleet listed above shall only be allowed with notification when the operator has determined that the turbine operating at this site needs evaluation and/or repairs which cannot reasonably be performed in situ.

The operator shall notify South Coast AQMD (1-800-CUT-SMOG) no later than 30 days after becoming aware of the need for turbine replacement within the site fleet. The notification shall include: start date of the turbine replacement and date when the repaired turbine will be returned to the site, if applicable, the serial # of the turbine replaced and the serial # of the turbine replacement, and a description of the maintenance, repairs, and parts replacement to be performed on the turbine being replaced.

The operator shall also provide an estimate of the cost of the work to be performed on the damaged turbine, and an estimate of the cost of a comparable new turbine

At the time the operator notifies South Coast AQMD of a proposed replacement, South Coast AQMD will take into consideration the cost data in determining whether an application shall be filed by the operator.

The operator shall maintain a log of the information demonstrating compliance

FACILITY PERMIT TO OPERATE WALNUT CREEK ENERGY, LLC

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

with this condition on site.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D7, D13, D19, D25]

H. Applicable Rules

H23.1 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
NOX	40CFR60, SUBPART	KKKK
SOX	40CFR60, SUBPART	KKKK

[40CFR 60 Subpart KKKK, 3-20-2009]

[Devices subject to this condition : D1, D7, D13, D19, D25]

I. Administrative

I298.1 This equipment shall not be operated unless the facility holds 43682 pounds of NOx RTCs in its allocation account to offset the annual emissions increase for the first year of operation. The RTCs held to satisfy the first year of operation portion of this condition may be transferred only after one year from the initial start of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the start of operation, the facility holds 35240 pounds of NOx RTCs valid during that compliance year. RTCs held to satisfy the compliance year portion of this condition may be transferred only after the compliance year for which the RTCs are held. If the initial or annual hold amount is partially satisfied by holding RTCs that expire midway through the hold period, those RTCs may be transferred upon their respective expiration dates. This hold amount is in addition to any other amount of RTCs required to be held under other condition(s) stated in this permit.