

ORIGINAL

SOUTH COAST AQMD
CLERK OF THE BOARDS
2024 MAR 22 PM 4:25

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

PETITIONER: Sentinel Energy Center LLC CASE NO: 6141-2
FACILITY ID: 152707

FACILITY ADDRESS: 15775 Melissa Lane Rd
[location of equipment/site of violation; specify business/corporate address, if different, under Item 2, below]

City, State, Zip: North Palm Springs, CA 92258

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).

Wayne Forsyth

David Wells

EHS & Regulatory Program Manager, Sentinel Energy Center LLC

EHS Coordinator, Sentinel Energy Center LLC

15775 Melissa Lane Rd

15775 Melissa Lane Rd

North Palm Springs, CA Zip 92258

North Palm Springs, CA Zip 92258

(213) 503-1145 Ext.

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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)

Sentinel Energy Center, LLC (facility ID 152707), a GE LMS100 simple cycle gas turbine, installed a new CO Catalyst on Unit 3 (Device C15) and initiated operations on December 9, 2023. Five days later, Unit 3, a GE LMS100 simple cycle gas turbine, experienced a mechanical breakdown that necessitated it to come out of service (go into "outage") and be sent to a GE Depot repair facility for diagnostics. It is not expected to be placed back in service until some time in August at the earliest.

On February 15, 2024, the District issued the Facility a revised Title V permit that includes a new permit condition (D29.5) that provides for specific testing of CO Catalyst devices, including C15, that requires testing to be completed within 90-days of initiation of operations after CO catalyst installation or replacement to verify compliance with the 2.0 ppm VOC requirement. The permit revision with new condition D29.5 allows for the streamlined installation of a new CO catalyst under the District's catalyst equivalency policy. At the time of the installation of catalyst in device C15 in December of 2023 the permit did not include D29.5 and thus this, permit condition was not in effect. Consequently, Sentinel understands that the 90 day testing requirement did not begin until issuance of the revised permit in February, which the Facility identified as the basis for seeking a variance because the Facility will not be able to undertake the testing within 90-days of the issuance of the permit (i.e. by May 15, 2024).

In discussions with district staff and legal that occurred starting the first week of March, it became clear just in the past few days that the District staff has a different view of the testing requirements of the permit. Sentinel has been advised that staff believes permit condition D29.4 in the permit in effect at the time of the CO Catalyst replacement apply broadly to "SCR systems", which they have interpreted to include CO catalyst, and therefore these same testing requirements applied to device C15. The District staff has communicated the position that D29.5 separated out and reduced somewhat the testing requirements for CO catalyst changes into a standalone requirement in the February 15 permit revision. That point was not clear to Sentinel because, by its terms, D29.4 only lists applicable devices associated with the SCR equipment and does not list the CO Catalyst device (C15) as one of the applicable devices. To the extent the district staff's view results in the 90 day time period having started in December, it would have ended on March 8, 2024. The applicability of D29.4 to devices not listed in the condition was not clearly communicated until this week.

Because of the outage, there is no way to conduct the CO Catalyst testing before May 15, let alone March 8. Sentinel has consulted with district legal counsel to discuss the appropriate type of variance (i.e. interim or regular). As evidence of its diligence, Sentinel raised this issue with district staff and counsel prior to March 8. Also relevant to good cause is that because Unit 3 will be in outage until at least August, there will be no excess emissions and there is no risk to the environment if testing is not conducted within the 90 day period because the unit will not be operating until the summer at the earliest.

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

Sentinel is a nominally rated 850-megawatt natural gas-fired, simple-cycle facility consisting of eight natural gas-fired General Electric LMS100 combustion turbine generators, selective catalytic reduction, and carbon monoxide equipment, and a zero liquid discharge system. Sentinel is designed to meet electric generation load during periods of high demand.

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)*
CO Catalyst	Application No: 643296	C15	

*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 Unit 3 gas turbine is one of eight units that are dispatched according to electricity demand from the surrounding area via the California Independent System Operator (Cal ISO). The unit is operated to supply electrical power as required by existing contracts.

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

If yes, how often: Annual Date of last maintenance and/or inspection: Dec. 3 -9, 2024

Describe the maintenance and/or inspection that was performed.

Regular maintenance and inspections are performed on the entire power generating system for all eight (8) units at least annually during regularly scheduled outages that are coordinated with CAISO. Annual inspections are comprehensive and evaluate the mechanical integrity of the equipment, wearing of parts, and other ancillary equipment necessary to operate the units in compliance. During the annual maintenance and inspection of Unit 3 there were no indication of the issues causing the outage on December 14, 2024.

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
SCAQMD Rule 3002(c)	Rule 3002 requires Title V permit holders to comply with all terms, requirements, and conditions specified in the Title V permit at all times.
Permit Condition # D29.5 of Facility Permit 152707 (Rev. 7), applicable to Device C15 associated with D13 [SCAQMD rule reference: 1303(a)(1)]	Condition D29.5 requires that a source test be conducted within 90 days of the installation and operation of a new CO oxidation catalyst. To the extent the installation of new catalyst and initiation of operations that occurred in December of 2023 is interpreted as applicable to this condition upon issuance of the permit, the required testing cannot be conducted for Unit 3 (Device D13) until the necessary repairs are completed and the unit has been cleared for operational dispatch by Cal ISO. Unit 3 repairs are expected to be completed by September 2024.

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.

The Facility installed new catalyst at Unit 3 and initiated operations on December 9, 2023. On December 14, 2023, Unit 3 (Device D13, Application No: 634497, Permit No: G74150) at Sentinel Energy Center, LLC (facility ID 152707), a GE LMS100 simple cycle gas turbine, experienced a mechanical breakdown. After investigation by Sentinel Energy Center and General Electric (GE, equipment manufacturer), it was determined that Unit 3 would need to come out of service (go into "outage") and be sent to GE Depot repair facility in Bakersfield for diagnostics.

On February 15, 2024, the District issued the Facility a revised Title V permit that includes a new permit condition (D29.5) for CO Catalyst (C15) associated with Unit 3. The new condition provides for testing to be completed within 90-days of initiation of operations after CO catalyst installation or replacement to verify compliance with the 2.0 ppm VOC requirement.

Later in February, GE notified Sentinel that Unit 3 could not be repaired at the Depot and will require additional diagnostics and testing. Based on this information, Sentinel understands that the unit will not be operational until the third quarter this year (approximately September 2024).

As noted above, Unit 3 ceased operating and went into outage on December 14, 2023 and will not be back in operation until the 3rd Quarter of 2024. Because new permit condition D29.5 requires testing that cannot be performed unless Unit 3 is operating, the Facility is seeking this variance. The unit will not be operating 90 days from the issuance of the new permit (May 15, 2024) and thus it is beyond the Facility's reasonable control to perform the testing within 90 days from issuance of the permit.

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).

- When the new Title V Facility Permit was issued (Facility Permit dated February 15, and received on February 28, 2024) with new permit condition D29.5, the Facility became aware that it would be beyond its reasonable control to test Unit 3 within 90-days.

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

- In late February Sentinel confirmed that Unit 3 will not be repaired and available until the end of 3rd Quarter 2024, or possibly later.
- Sentinel can provide supporting CEMS minute data to demonstrate zero fuel flow as well as the LOTO which has a lock on the fuel supply valve.

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: \$ _____

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).

- Inability to operate Unit 3 under a variance following its repair and prior to successful completion of source testing will result in tens of thousands to millions of lost revenues.
- Potential impacts to California's grid and the public could result if CAISO cannot dispatch a repaired and compliant/source tested Unit 3, which could result in the dispatch of less efficient generation to satisfy electricity demand.

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

Unit 3 is currently undergoing repairs and will not be operational nor ready for testing in time to comply with D29.5. Therefore, a variance is needed to allow for testing to be delayed until the unit can be operated and tested. The unit will not resume normal operation until all the necessary repairs are completed and the unit is cleared by Cal ISO.

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)
N/A	N/A	N/A	N/A

* Column A minus Column B = Column C

Excess Opacity: _____ %

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

Once repairs are complete on the turbine, it will operate in compliance with its emissions requirements based on existing air pollution control equipment and by firing natural gas. The repairs are not expected to affect the natural gas combustion system or the air pollution control equipment.

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.

Unit 3 CEMS will operate to monitor emissions once the turbine is repaired and operational. Source testing will be scheduled as soon as practicable to come into compliance with permit condition D29.5.

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 3 CEMS will monitor its emissions once the unit is repaired and operational.

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.

- Bring Unit 3 back into operation and clear the unit for service
- Schedule source testing within 30 days of Unit 3 being cleared for service.
- Complete source testing no more than 90 days of Unit 3 after being cleared for service.
- Sentinel anticipates source testing to be completed by December 2024 to come into compliance with permit condition D29.5.

24. State the date you are requesting the variance to begin: May 15, 2024; and the date by which you expect to achieve final compliance: December 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.

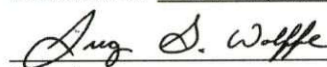
Li Chen Ext. 2426
Christian Aviles Ext. 3147
Nicholas Sanchez Ext. 3450

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 March 22, 2024, at San Juan Capistrano, California

 Greg Wolffe
Signature Print Name

Title: Principal Scientist



**FACILITY PERMIT TO OPERATE
SENTINEL ENERGY CENTER 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, GTG 3, NATURAL GAS, GENERAL ELECTRIC, MODEL LMS100PA, SIMPLE CYCLE, 891.7 MMBTU/HR AT 72 DEGREES F, WITH WATER INJECTION WITH A/N: 634497	D13	C15	NOX: MAJOR SOURCE**	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]; NOX: 15 PPMV NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; PM10: 0.01 GRAINS/SCF NATURAL GAS (5A) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM10: 0.1 GRAINS/SCF NATURAL GAS (5) [RULE 409, 8-7-1981]; PM10: 11 LBS/HR NATURAL GAS (5B) [RULE 475, 8-7-1978]; SO2: (8) [40CFR 72 - Acid Rain Provisions, 11-24-1997]; SOX: 0.06 LBS/MMSCF NATURAL GAS (8) [40CFR 60 Subpart KKKK, 3-20-2009]; VOC: 2 PPMV NATURAL GAS (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A63.1, A63.2, A99.3, A99.9, A99.10, A195.1, A195.2, A195.3, A327.1, A433.1, A433.2, A433.3, A433.4, B61.1, C1.1, C1.6, D12.1, D29.2, D29.3, D82.1, D82.2, E71.1, E193.1, H23.1, I298.4, K40.1, K48.1, K67.1
GENERATOR, 103 MW					
CO OXIDATION CATALYST, NO. 3, SYNERGY, WITH 141 CUBIC FEET OF TOTAL CATALYST VOLUME, OR APPROVED EQUIVALENT CATALYST A/N: 643296	C15	D13 C16			D29.5, E519.2

* (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 SENTINEL ENERGY CENTER LLC

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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					
SELECTIVE CATALYTIC REDUCTION, NO.3, CORMETECH CM21ST, OR APPROVED EQUIVALENT CATALYST, WITH 12 MODULES, 107 CU.FT.; WIDTH: 9 FT 7.75 IN; HEIGHT: 6 FT 3.38 IN; LENGTH: 1 FT 9.25 IN WITH A/N: 643296 AMMONIA INJECTION, GRID	C16	C15 S18		NH3: 5 PPMV NATURAL GAS (4) [RULE 1135, 11-2-2018; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]	A195.4, D12.2, D12.3, D12.4, D29.4, E179.1, E179.2, E193.1, E519.1
STACK, NO. 3, HEIGHT: 90 FT ; DIAMETER: 13 FT 6 IN A/N: 634497	S18	C16			

* (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
SENTINEL ENERGY CENTER LLC**

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

analysis is not to be below 70 F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than unmodified AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval, except for the determination of compliance with the BACT level of 2.0 ppmv VOC calculated as carbon set by CARB for natural gas fired turbines

For the purposes of this condition, alternative test method may be allowed for each of the above pollutants upon concurrence of SCAQMD, EPA, and CARB.

[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; RULE 1703(a)(2) - PSD-BACT, 10-7-1988]

[Devices subject to this condition : D1, D7, D13, D19, D25, D31, D37, D43]

D29.4 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
NOX emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
SOX emissions	District method 100.1	1 hour	Outlet of the SCR serving this equipment
VOC emissions	District Method 25.1 or 25.3	1 hour	Outlet of the SCR serving this equipment
CO emissions	District Method 100.1 or 10.1	1 hour	Outlet of the SCR serving this equipment
PM emissions	Approved District method	District-approved averaging time	Outlet of the SCR serving this equipment



FACILITY PERMIT TO OPERATE SENTINEL ENERGY CENTER LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

PM10 emissions	District Method 25.1 or 25.3	District-approved averaging time	Outlet of the SCR serving this equipment
Benzene	CARB Method 410A or 410B	District-approved averaging time	Outlet of the SCR serving this equipment
Acetaldehyde	CARB method 430	District-approved averaging time	Outlet of the SCR serving this equipment
Formaldehyde	CARB method 430	District-approved averaging time	Outlet of the SCR serving this equipment
Toluene	CARB Method 410A or 410B	District-approved averaging time	Outlet of the SCR serving this equipment
Ethyl benzene	CARB Method 410A or 410B	District-approved averaging time	Outlet of the SCR serving this equipment
Xylene	CARB Method 410A or 410B	District-approved averaging time	Outlet of the SCR serving this equipment



FACILITY PERMIT TO OPERATE SENTINEL ENERGY CENTER LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

The test shall be conducted within 90 days of the installation and operation of a new SCR catalyst.

The test shall be conducted when the respective turbine is operating at 80 percent or greater of its design capacity. Alternatively, for SO_x, VOC and PM₁₀, the test may be conducted as prescribed under condition D29.3 for periodic monitoring.

The test shall be conducted to determine the concentration and report mass emission rate in pounds per hour for NO_x, SO_x, VOC, CO, Total PM, Total PM₁₀ and toxic air contaminants, including acetaldehyde, benzene, formaldehyde, toluene, ethyl benzene, and xylene.

The test shall be conducted to determine the oxygen concentration at the outlet of the SCR, fuel flow rate (CFH), flue gas flow rate, and the electricity generation of the turbine in MW.

The test shall be conducted to demonstrate equivalency of the replacement catalyst to the catalyst as permitted for the SCR serving the respective turbines. At a minimum, the proposed replacement catalyst shall meet all of the following requirements:

- a. NO_x concentrations at the outlet of the SCR shall be no more than 2.5 ppmv, averaged over 60 minutes and corrected to 15 percent O₂ dry.
- b. Ammonia concentration at the outlet of the SCR shall be no more than 5 ppmv, averaged over 60 minutes and corrected to 15 percent O₂ dry.

The test shall be conducted and test report submitted to the South Coast AQMD in accordance with Section E of the Facility Permit.

The South Coast AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

[**RULE 1135, 7-19-1991**; **RULE 1135, 1-7-2022**; **RULE 1303(a)(1)-BACT, 5-10-1996**; **RULE 1303(a)(1)-BACT, 12-6-2002**]



FACILITY PERMIT TO OPERATE SENTINEL ENERGY CENTER LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[Devices subject to this condition : C4, C10, C16, C22, C28, C34, C40, C46]

D29.5 The operator shall conduct source test(s) for the pollutant(s) identified below.

Pollutant(s) to be tested	Required Test Method(s)	Averaging Time	Test Location
VOC emissions	District Method 25.1 or 25.3	1 hour	Outlet of the SCR serving this equipment



FACILITY PERMIT TO OPERATE SENTINEL ENERGY CENTER LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

The test shall be conducted within 90 days of the installation and operation of a new CO oxidation catalyst.

The test shall be conducted when the respective turbine is operating at 80 percent or greater of its design capacity. Alternatively, for VOC, the test may be conducted as prescribed under condition D29.3 for periodic monitoring.

The test shall be conducted to determine the concentration and report mass emission rate in pounds per hour for VOC.

The test shall be conducted to determine the oxygen concentration at the outlet of the SCR, fuel flow rate (CFH), flue gas flow rate, and the electricity generation of the turbine in MW.

The test shall be conducted to demonstrate equivalency of the replacement catalyst to the catalyst as permitted for the CO oxidation catalyst serving the respective turbines. At a minimum, the proposed replacement catalyst shall meet all of the following requirements:

- a. VOC concentrations at the outlet of the SCR shall be no more than 2.0 ppmv, averaged over 60 minutes and corrected to 15 percent O₂ dry.

For natural gas fired turbines only, an alternative to South Coast AQMD Method 25.3 for the purpose of demonstrating compliance with BACT as determined by CARB and South Coast AQMD, may be the following:

- a) Triplicate stack gas samples are extracted directly into Summa canisters, maintaining a final canister pressure between 400-500 mm Hg absolute,
- b) Pressurization of the Summa canisters is done with zero gas analyzed/certified to containing less than 0.05 ppmv total hydrocarbons as carbon, and
- c) Analysis of Summa canisters is per unmodified EPA Method TO-12 (with preconcentration) or the canister analysis portion of SCAQMD Method 25.3 with a minimum detection limit of 0.3 ppmv or less and reported to two significant figures,



FACILITY PERMIT TO OPERATE SENTINEL ENERGY CENTER LLC

SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

and

d) The temperature of the Summa canisters when extracting samples for analysis is not to be below 70 F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than unmodified South Coast AQMD Method 25.3, nor does it mean that it may be used in lieu of South Coast AQMD Method 25.3 without prior approval, except for the determination of compliance with BACT level of 2.0 ppmv VOC calculated as carbon set by CARB for natural gas fired turbines.

For the purposes of this condition, alternative test method may be allowed for VOC upon concurrence of South Coast AQMD, EPA, and CARB.

The test shall be conducted and test report submitted to the South Coast AQMD in accordance with Section E of the Facility Permit.

The South Coast AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

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

[Devices subject to this condition : C3, C9, C15, C21, C27, C33, C39, C45]

D82.1 The operator shall install and maintain a CEMS to measure the following parameters: