



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

October 26, 2012

Mr. Gerardo Rios  
Chief – Permits Office  
U. S. EPA, Region IX  
75 Hawthorne Street, Air 3  
San Francisco, CA 94105

Dear Mr. Rios:

Subject: Wheelabrator Norwalk Energy Company (ID 51620) – Title V Permit  
Revision (Application No. 539542)

Wheelabrator has proposed to revise their Title V permit by including monthly oil readiness testing for Boiler No. 2 and clarifying permit language for the turbine. This is a cogeneration facility (SIC 4911) located at 11500 Balsam St., Norwalk, CA 90650. This proposed permit revision is considered a “de minimis significant permit revision” to their Title V permit. Attached for your review is the permit evaluation and proposed Section D. With your receipt of the proposed Section D today, we will note that the EPA 45-day review period begins on October 26, 2012.

If you have any questions or need additional information regarding the proposed permit revision, please call Chris Perri at (909) 396-2696.

Very truly yours,

Brian L. Yeh  
Senior Manager  
Chemical, Mechanical & Public Services

BLY:AYL:JTY:egp

cc: Mike Burt, Wheelabrator, [mburt@wm.com](mailto:mburt@wm.com)

Attachments

## **FACILITY PERMIT TO OPERATE**

**WHEELABRATOR NORWALK ENERGY CO INC  
11500 BALSAM ST  
NORWALK, CA 90650**

### **NOTICE**

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.  
EXECUTIVE OFFICER

By \_\_\_\_\_  
Mohsen Nazemi, P.E.  
Deputy Executive Officer  
Engineering & Compliance

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### 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
<b>Process 1: INTERNAL COMBUSTION</b>					
<b>System 1: I. C. ENGINE: EMERGENCY POWER</b>					
INTERNAL COMBUSTION ENGINE, EMERGENCY FIRE, DIESEL FUEL, CUMMINS, MODEL VS04F2, NATURALLY ASPIRATED, 187 HP A/N: 256286	D1		NOX PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-11-2001; RULE 2012, 12-5-2003]; PM (9) [RULE 404, 2-7-1986]	C1.1, D12.1
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, DIESEL FUEL, CUMMINS, MODEL NT855G2, WITH TURBOCHARGER, 355 HP A/N: 256287	D2		NOX PROCESS UNIT**	NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-11-2001; RULE 2012, 12-5-2003]; PM: (9) [RULE 404, 2-7-1986]	C1.1, D12.1
<b>System 2: COGEN, TURBINE</b>					

\* (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 WHEELABRATOR NORWALK ENERGY CO INC

### 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
<b>Process 1: INTERNAL COMBUSTION</b>					
GAS TURBINE, NATURAL GAS, GENERAL ELECTRIC, MODEL LM2500, LOW CARBON MONOXIDE FUEL NOZZLES, 246 MMBTU/HR WITH A/N:	D4		NOX: MAJOR SOURCE**	CO: 60 LBS/HR (5) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; CO: 200 PPMV (5A) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; CO: 2000 PPMV (5B) [RULE 407, 4-2-1982]; NMHC: 7 LBS/HR (5) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; NOX: 42 PPMV (4) [RULE 2005, 6-3-2011]; NOX: 106 PPMV (8) [40CFR 60 Subpart GG, 3-6-1981]; PM: 0.01 GRAINS/SCF (5B) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; PM: 0.1 GRAINS/SCF (5A) [RULE 409, 8-7-1981]; PM: 3.1 LBS/HR (5) [RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]; PM: 11 LBS/HR (5C) [RULE 475, 10-8-1976; RULE 475, 8-7-1978]; SOX: 150 PPMV (8) [40CFR 60 Subpart GG, 3-6-1981]	A63.1, A63.2, A99.1, A195.1, A327.1, C1.2, C1.3, C4.1, D12.2, D28.1, D82.1, D328.2, E51.1, E51.2, E71.1, E80.1, M333.1
GENERATOR, ELECTRIC, 23 MW  BOILER, UNFIRED  STEAM TURBINE, STEAM					

\* (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 WHEELABRATOR NORWALK ENERGY CO INC

### 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
<b>Process 1: INTERNAL COMBUSTION</b>					
GENERATOR, ELECTRIC, 7.75 MW					
<b>Process 2: EXTERNAL COMBUSTION</b>					
BOILER, NO. 1, NATURAL GAS, UNILUX, MODEL 2250HS, WITH LOW NOX BURNER, 26.249 MMBTU/HR WITH A/N: 497190	D6		NOX: LARGE SOURCE**	CO: 400 PPMV (5) [RULE 1146, 11-17-2000], CO: 2000 PPMV (5A) [RULE 407, 4-2-1982]; NOX: 39 PPMV NATURAL GAS (3) [RULE 2012, 5-11-2001; RULE 2012, 12-5-2003], PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981]	A63.1, A63.3, D12.3, D328.1, E51.3, E80.2, K67.1, M333.2
BURNER, NATURAL GAS, TRANSJET, WITH LOW NOX BURNER, 26.249 MMBTU/HR					
BOILER, NO. 2, FUEL OIL, NATURAL GAS, UNILUX, MODEL 2250HS, WITH LOW NOX BURNER, 26.249 MMBTU/HR WITH A/N:	D7		NOX: LARGE SOURCE**	CO: 400 PPMV (5) [RULE 1146, 11-17-2000], CO: 2000 PPMV (5A) [RULE 407, 4-2-1982]; NOX: 39 PPMV NATURAL GAS (3) [RULE 2012, 5-11-2001; RULE 2012, 12-5-2003]; NOX: 40 PPMV FUEL OIL (3) [RULE 2012, 5-11-2001; RULE 2012, 12-5-2003], PM: 0.1 GRAINS/SCF (5) [RULE 409, 8-7-1981], SO <sub>2</sub> : 500 PPMV FUEL OIL (5) [RULE 407, 4-2-1982]	A63.1, A63.3, A63.4, B75.1, D12.3, D328.1, D371.1, E51.3, E80.2, E226.1, E226.2, H421.1, K67.2, M333.2
BURNER, FUEL OIL, NATURAL GAS, TRANSJET, WITH LOW NOX BURNER, 26.249 MMBTU/HR					

- (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 WHEELABRATOR NORWALK ENERGY CO INC

### 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
<b>Process 3: RULE 219 EQUIPMENT SUBJECT TO SOURCE SPECIFIC RULES</b>					
RULE 219 EXEMPT EQUIPMENT, COOLING TOWERS	E15				H23 4
RULE 219 EXEMPT EQUIPMENT, CLEANING EQUIPMENT, SMALL, UNHEATED, NON-CONVEYORIZED	E16			VOC: (9) [RULE 1171, 8-2-2002, RULE 1171, 11-7-2003]	H23.1
RULE 219 EXEMPT EQUIPMENT, EXEMPT HAND WIPING OPERATIONS	E17			VOC: (9) [RULE 1171, 8-2-2002, RULE 1171, 11-7-2003]	
RULE 219 EXEMPT EQUIPMENT, AIR CONDITIONING UNITS	E18				H23.2
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, LOW USE OR EMISSIONS	E19			VOC: (9) [RULE 1107, 11-9-2001; RULE 1171, 8-2-2002; RULE 1171, 11-7-2003]	H23.3
RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS	E20			VOC: (9) [RULE 1113, 11-8-1996; RULE 1113, 12-5-2003; RULE 1171, 8-2-2002; RULE 1171, 11-7-2003]	K67.3
RULE 219 EXEMPT EQUIPMENT, DIESEL FUEL STORAGE TANK, 20,000 GALLONS	E21				M333.3

- (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  
WHEELABRATOR NORWALK ENERGY CO INC**

**SECTION D: DEVICE ID INDEX**

**The following sub-section provides an index  
to the devices that make up the facility  
description sorted by device ID.**

**FACILITY PERMIT TO OPERATE  
WHEELABRATOR NORWALK ENERGY CO INC  
SECTION D: DEVICE ID INDEX**

<b>Device Index For Section D</b>			
<b>Device ID</b>	<b>Section D Page No.</b>	<b>Process</b>	<b>System</b>
D1	1	1	1
D2	1	1	1
D4	3	1	2
D6	3	2	0
D7	3	2	0
E15	4	3	0
E16	4	3	0
E17	4	3	0
E18	4	3	0
E19	4	3	0
E20	4	3	0
E21	4	3	0

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

#### FACILITY CONDITIONS

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

[RULE 401, 3-2-1984; RULE 401, 11-9-2001]

F14.1 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

This condition shall become effective on or after June 1, 2004.

[RULE 431.2, 9-15-2000]

F14.2 The operator shall not use fuel oil containing sulfur compounds in excess of 0.05 percent by weight.

[RULE 431.2, 5-4-1990; RULE 431.2, 9-15-2000]

#### DEVICE CONDITIONS

##### A. Emission Limits

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

A63.1 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 863 LBS IN ANY ONE DAY
PM	Less than or equal to 74 LBS IN ANY ONE DAY
ROG	Less than or equal to 170 LBS IN ANY ONE DAY

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from equipment D4, D6, and D7.

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

[Devices subject to this condition : D4, D6, D7]

A63.2 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 84 LBS IN ANY ONE DAY
ROG	Less than or equal to 14 LBS IN ANY ONE DAY

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from start-up (which shall not exceed 2 hours in any one day) and shut-down (which shall not exceed 20 minutes in any one day) only.

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

[Devices subject to this condition : D4]

A63.3 The operator shall limit emissions from this equipment as follows:

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 67 LBS IN ANY ONE DAY
PM	Less than or equal to 5 LBS IN ANY ONE DAY
ROG	Less than or equal to 3 LBS IN ANY ONE DAY
SOX	Less than or equal to 1 LBS IN ANY ONE DAY

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

[Devices subject to this condition : D6, D7]

A63.4 The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSIONS LIMIT
CO	Less than or equal to 67 LBS IN ANY ONE DAY
PM	Less than or equal to 9 LBS IN ANY ONE DAY
ROG	Less than or equal to 5 LBS IN ANY ONE DAY
SOX	Less than or equal to 33 LBS IN ANY ONE DAY

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

[Devices subject to this condition : D7]

A99.1 The 42 PPM NOX emission limit(s) shall not apply during start-ups and shutdowns.

During start up and shutdown, the NOx emissions shall not exceed 112 lbs.

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

**[RULE 2005, 6-3-2011]**

[Devices subject to this condition : D4]

A195.1 The 42 PPMV NOX emission limit(s) is averaged over 15 minutes at 15 percent O2, dry.

**[RULE 2005, 6-3-2011]**

[Devices subject to this condition : D4]

A327.1 For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

**[RULE 475, 10-8-1976; RULE 475, 8-7-1978]**

[Devices subject to this condition : D4]

#### **B. Material/Fuel Type Limits**

B75.1 The operator shall not use fuel oil in this equipment except under the following circumstance(s):

Natural gas curtailment

Readiness testing not to exceed 60 minutes per calendar month, a one-time test lasting up to 4 hours may be performed prior to April 1, 2013. There shall be no more than 12 hours of oil firing in any 12 month period.

Fuel oil sulfur content shall not exceed 15 ppm

## **FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

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

[Devices subject to this condition : D7]

#### **C. Throughput or Operating Parameter Limits**

C1.1 The operator shall limit the operating time to no more than 200 hour(s) in any one year.

**[RULE 1110.2, 11-14-1997; RULE 1304(a)-Modeling and Offset Exemption,  
6-14-1996; RULE 2012, 5-11-2001; RULE 2012, 12-5-2003]**

[Devices subject to this condition : D1, D2]

C1.2 The operator shall limit the duration of startup to no more than 2 hour(s).

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

[Devices subject to this condition : D4]

C1.3 The operator shall limit the duration of shutdown to no more than 20 minute(s).

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

[Devices subject to this condition : D4]

C4.1 The operator shall limit the load to no less than 50 percent.

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

[Devices subject to this condition : D4]

#### D. Monitoring/Testing Requirements

D12.1 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[**RULE 1110.2, 11-14-1997; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 2012, 5-11-2001; RULE 2012, 12-5-2003**]

[Devices subject to this condition : D1, D2]

D12.2 The operator shall install and maintain a(n) continuous monitoring system to accurately indicate the steam-to-fuel ratio in the turbine.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2012, 5-11-2001; RULE 2012, 12-5-2003**]

[Devices subject to this condition : D4]

D12.3 The operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage of the equipment.

[**RULE 2012, 5-11-2001; RULE 2012, 12-5-2003**]

[Devices subject to this condition : D6, D7]

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

D28.1 The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted at least once during the life of the permit.

The test shall be conducted to determine the ROG emissions at the outlet.

The test shall be conducted to determine the ROG emissions using District Method 25.3 measured over a 60 minute averaging time period.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : D4]

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

CO concentration in ppmv

O2 concentration in percent

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS will convert the actual CO concentrations to mass emission rates (lbs/hr) and record the hourly emission rates on a continuous basis.

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

[Devices subject to this condition : D4]

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

D328.1 The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD Method 100.1 or 10.1; or (b) conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with Rule 1146 emission limit. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : D6, D7]

D328.2 The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD Method 100.1 or 10.1; or (b) conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with Rule 1303 emission limits. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : D4]

## **FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC**

### **SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS**

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

D371.1 The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever this equipment has combusted one million gallons of diesel fuel, to be counted cumulatively over a five year period. The inspection shall be conducted while the equipment is in operation and during daylight hours. If any visible emissions (not including condensed water vapor) are detected, the operator shall:

Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three working days (or during the next fuel oil firing period if the unit ceases firing on fuel oil within the three working day time frame) and report any deviations to AQMD.

In addition, the operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- a). Stack or emission point identification;
- b). Description of any corrective actions taken to abate visible emissions;
- c). Date and time visible emission was abated; and
- d). Visible emission observation record by a certified smoke reader.

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : D7]

#### **E. Equipment Operation/Construction Requirements**

E51.1 The following condition number(s) shall not apply if any of the requirements stated below are met:

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Condition Number C 4- 1

Requirement number 1: startups

Requirement number 2: shutdown

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

[Devices subject to this condition : D4]

E51.2 The following condition number(s) shall not apply if any of the requirements stated below are met:

Condition Number E 80- 1

Requirement number 1: startups

Requirement number 2: shutdowns

Requirement number 3: during annual utility test and local utility or California Independent System Operator grid emergency conditions when maximum plant output is required, only to the extent necessary to meet the thermal load demand of the hospital

Requirement number 4: Operational readiness testing, including, but not limited to : weekly and monthly checks and repair verification of boiler pressure parts or control system

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

[Devices subject to this condition : D4]

E51.3 The following condition number(s) shall not apply if any of the requirements stated below are met:

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

Condition Number E 80-2

Requirement number 1: startups or shutdowns of the cogeneration gas turbine (device D4)

Requirement number 2: source testing of this boiler or performance of tune-ups

Requirement number 3: during annual utility test and local utility or California Independent System Operator grid emergency conditions when maximum plant output is required, but only to the extent necessary to meet the thermal load demand of the hospital

Requirement number 4: operational readiness testing, including, but not limited to: weekly and monthly checks and repair verification of boiler pressure parts or control systems

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

[Devices subject to this condition : D6, D7]

E71.1 The operator shall only operate this equipment using steam injection during normal operation of the turbine, excluding start-ups and/or shut downs.

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

[Devices subject to this condition : D4]

E80.1 The operator shall not use this equipment when any of the following equipment are operating:

Device ID: D6 [BOILER, NO. 1]

Device ID: D7 [BOILER, NO. 2]

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

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

[Devices subject to this condition : D4]

E80.2 The operator shall not use this equipment when any of the following equipment are operating:

Device ID: D4 [TURBINE, LOW CARBON MONOXIDE FUEL NOZZLES]

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

[Devices subject to this condition : D6, D7]

E226.1 The following condition number(s) shall only apply if all of the requirement(s) stated below are met:

Requirement 1: When the equipment is operating on natural gas.

Condition Number A 63- 3

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

[Devices subject to this condition : D7]

E226.2 The following condition number(s) shall only apply if all of the requirement(s) stated below are met:

Requirement 1: When the equipment is operating on fuel oil.

Condition Number A 63- 4

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

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### 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 : D7]

#### H. Applicable Rules

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

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1122

[RULE 1122, 7-11-1997; RULE 1122, 12-6-2002]

[Devices subject to this condition : E16]

H23.2 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Refrigerants	District Rule	1415
Refrigerants	40CFR82, SUBPART	F

[RULE 1415, 10-14-1994; 40CFR 82 Subpart F, 5-14-1993]

[Devices subject to this condition : E18]

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	109

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

[RULE 109, 5-2-2003]

[Devices subject to this condition : E19]

H23.4 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
Chromium, Hexavalent	District Rule	1404

[RULE 1401, 5-2-2003; RULE 1404, 4-6-1990]

[Devices subject to this condition : E15]

H421.1 The operator shall determine compliance with Rule 409 by complying with the tune-up requirements of Rule 1146, whenever the annual fuel oil usage exceeds 1 MM gallons in any one year or the hours of operations on fuel oil exceeds 336 hours in any one year. If annual fuel oil usage exceeds 2 MM gallons in any one year, the operator shall also conduct a source test to determine PM emissions using District method 5.1 measured over a 15 minute averaging time period at least once every five years and with this equipment fired on fuel oil and operating at normal load.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D7]

#### **K. Record Keeping/Reporting**

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Daily natural gas usage

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

[Devices subject to this condition : D6]

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Daily natural gas and fuel oil usage

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

[Devices subject to this condition : D7]

K67.3 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

For architectural applications where no thinners, reducers, or other VOC containing materials are added, maintain semi-annual records for all coating consisting of (a) coating type, (b) VOC content as supplied in grams per liter (g/l) of materials for low-solids coatings, (c) VOC content as supplied in g/l of coating, less water and exempt solvent, for other coatings.

For architectural applications where thinners, reducers, or other VOC containing materials are added, maintain daily records for each coating consisting of (a) coating type, (b) VOC content as applied in grams per liter (g/l) of materials used for low-solids coatings, (c) VOC content as applied in g/l of coating, less water and exempt solvent, for other coatings.

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

**[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]**

[Devices subject to this condition : E20]

#### **M. Title V Permit Shield**

M333.1 Permit Shield. Notwithstanding the other requirements and conditions in this permit, this device is not subject to the following rule requirement(s):

Rule	Number/Subpart	Adopted/Amended Date	Non-Applicable Requirement(s)
District Rule	1134	07-dec-1995	All NOx Requirements
District Rule	1134	08-aug-1997	All NOx Requirements

Compliance with the conditions of this Title V permit shall be deemed in compliance with any regulatory requirements applicable as of the date of permit issuance to this device, provided that such regulatory requirements are included and specifically identified in this permit. Nothing in this permit or in any permit shield can alter or affect: (a) under Section 303 of the Federal Clean Air Act, the provisions for emergency orders; (b) the liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance; (c) the applicable requirements of the Acid Rain Program; (d) the ability of EPA to obtain information from the operator pursuant to Section 114 of the Federal Clean Air Act; (e) the applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do not apply to the facility, such as toxics requirements unique to the State; or, (f) the applicability of regulatory requirements with compliance dates after the permit issuance date. This permit shield shall not apply to any operational change made pursuant to the operational flexibility provisions of District Rule 3005.

**[RULE 1134, 8-8-1997; RULE 3004(c)-Permit Shield, 12-12-1997]**

[Devices subject to this condition : D4]

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

M333.2 Permit Shield. Notwithstanding the other requirements and conditions in this permit, this device is not subject to the following rule requirement(s):

Rule	Number/Subpart	Adopted/Amended Date	Non-Applicable Requirement(s)
District Rule	1146	13-may-1994	(c)(2)
District Rule	1146	13-may-1994	(c)(3)

Compliance with the conditions of this Title V permit shall be deemed in compliance with any regulatory requirements applicable as of the date of permit issuance to this device, provided that such regulatory requirements are included and specifically identified in this permit. Nothing in this permit or in any permit shield can alter or affect: (a) under Section 303 of the Federal Clean Air Act, the provisions for emergency orders; (b) the liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance; (c) the applicable requirements of the Acid Rain Program; (d) the ability of EPA to obtain information from the operator pursuant to Section 114 of the Federal Clean Air Act; (e) the applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do not apply to the facility, such as toxics requirements unique to the State; or, (f) the applicability of regulatory requirements with compliance dates after the permit issuance date. This permit shield shall not apply to any operational change made pursuant to the operational flexibility provisions of District Rule 3005.

[RULE 1146, 11-17-2000; RULE 3004(c)-Permit Shield, 12-12-1997]

[Devices subject to this condition : D6, D7]

M333.3 Permit Shield. Notwithstanding the other requirements and conditions in this permit, this device is not subject to the following rule requirement(s):

Rule	Number/Subpart	Adopted/Amended Date	Non-Applicable Requirement(s)
District Rule	463	11-mar-1994	(e)(5)

## FACILITY PERMIT TO OPERATE WHEELABRATOR NORWALK ENERGY CO INC

### SECTION D: FACILITY DESCRIPTION AND EQUIPMENT SPECIFIC CONDITIONS

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

District Rule | 463 | 11-mar-1994 | (g)

Compliance with the conditions of this Title V permit shall be deemed in compliance with any regulatory requirements applicable as of the date of permit issuance to this device, provided that such regulatory requirements are included and specifically identified in this permit. Nothing in this permit or in any permit shield can alter or affect: (a) under Section 303 of the Federal Clean Air Act, the provisions for emergency orders; (b) the liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance; (c) the applicable requirements of the Acid Rain Program; (d) the ability of EPA to obtain information from the operator pursuant to Section 114 of the Federal Clean Air Act; (e) the applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do not apply to the facility, such as toxics requirements unique to the State; or, (f) the applicability of regulatory requirements with compliance dates after the permit issuance date. This permit shield shall not apply to any operational change made pursuant to the operational flexibility provisions of District Rule 3005.

**[RULE 3004(c)-Permit Shield, 12-12-1997; RULE 463, 3-11-1994]**

[Devices subject to this condition : E21]



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**CHANGE OF CONDITION EVALUATION**

**APPLICANT:**

Wheelabrator Norwalk Energy Co.  
11500 Balsam St  
Norwalk, CA 90650

**EQUIPMENT LOCATION:**

11500 Balsam St  
Norwalk, CA 90650

**EQUIPMENT DESCRIPTION:**

Section D of the Facility Permit, ID# 51620

Proposed changes or additions are shown in **bold/underline**, proposed deletions are shown in ~~strikethrough~~

Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
<b>PROCESS 1: POWER GENERATION</b>					
<b>SYSTEM 1: GAS TURBINE</b>					
GAS TURBINE, NATURAL GAS, GENERAL ELECTRIC MODEL LM2500, LOW CARBON MONOXIDE FUEL NOZZLES, 246 MMBTU/HR. WITH WATER INJECTION, WITH A/N: 497188 <u>539543</u>  GENERATOR, ELECTRIC 23 MW  BOILER, UNFIRED  STEAM TURBINE	D4		NOX: MAJOR SOURCE	CO: 60 LBS/HR (5) [RULE 1303(b)(2)-OFFSETS]; CO: 200 PPM (5A) [RULE 1303(b)(2)-OFFSETS]; CO: 2000 PPMV (5B) [RULE 407]; NMHC: 7 LBS/HR (5) [RULE 1303(b)(2)-OFFSETS]; <b><u>NOX: 42 PPMV (4) [RULE 1303(b)(1) - BACT]</u></b> ; NOX:106 PPMV (8) [40 CFR60 SUBPART GG]; PM: 0.1 GR/SCF (5) [RULE 409]; PM: 11 LBS/HR (5) [RULE 475]; PM: 0.01 GR/SCF (5A) [RULE 475]; PM 3.1 LBS/HR (5) [RULE 1303(b)(2) - OFFSETS]; SOX: 150 PPMV (8) [40CFR 60 SUBPART GG]	A63.1, A63.2, <b><u>A99.1, A195.1</u></b> , A327.1, C1.1, C1.3, C4.1, D12.2, D28.1, D82.1, D328.2, E51.1, E51.2, E71.1, E80.1, M333.1



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Equipment	ID No.	Connected To	RECLAIM Source Type/ Monitoring Unit	Emissions and Requirements	Conditions
<b>PROCESS 1: POWER GENERATION</b>					
<b>SYSTEM 1: GAS TURBINE</b>					
GENERATOR, ELECTRIC 7.75 MW					
BOILER, NO. 2, FUEL OIL, NATURAL GAS, UNILUX, MODEL 2250HS, WITH LOW NOX BURNER, 26.249 MMBTU/HR. WITH A/N: 497191 <u>539544</u>  BURNER, FUEL OIL, NATURAL GAS, TRANSJET, WITH LOW NOX BURNER, 26.249 MMBTU/HR	D7		NOX: LARGE SOURCE	CO: 400 PPMV (5) [RULE 1146]; CO 2000 PPMV (5A) [RULE 407]; NOX 39 PPMV NATURAL GAS (3) [RULE 2012]; NOX: 40 PPMV FUEL OIL (3) [RULE 2012]; PM 0.1 GRAINS/SCF (5) [RULE 409]; SO2: 500 PPMV FUEL OIL (5) [RULE 407]	A63.1, A63.3, A63.4, B75.1, D12.3, D328.1, D371.1, E51.3, E80.2, E226.1, E226.2, H421.1, K67.2, M333.2

**FACILITY DESCRIPTION**

Wheelabrator Norwalk Energy Company (WNECI) is a cogeneration facility located at the Metropolitan State Hospital in Norwalk.

**BACKGROUND:**

Wheelabrator is proposing a permit modification to allow a monthly fuel oil readiness test for Boiler No. 2, and clarification of condition language pertaining to the turbine.

The following applications were submitted for this project:

**Project Application Numbers**

A/N	Submittal Date	Equipment	Previous A/N
539543	6/14/12	Gas turbine	434227
539522	6/14/12	Boiler No. 2	497191
539542	6/14/12	Title V Revision	//////////

The applications were deemed complete on 8/3/09, after additional fees were submitted.

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The initial permit to construct for the gas turbine was issued on May 26, 1986 to Signal Energy Systems under A/N 140419. There have been several modifications the permit since then, as summarized in the following table:



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Gas Turbine Permit History

A/N	Description	P/C Issue Date
140419	Initial Permit to Construct to Signal Energy	5/23/86
170659	Allow start up and shutdown exemption, allow simultaneous operation with boilers during start ups and shutdowns (name change to Wheelabrator)	4/25/91
220086	Install high steam injection, low CO fuel nozzles	12/30/91
325247	Remove annual ROG testing requirement	10/29/97
336213	Permit Shield for R1134 monitoring, testing, and record keeping, and increase hourly CO limit	5/29/98
434227	Allow simultaneous operation with the boilers during SCE capacity testing, emergency situations, and required source testing	4/4/05
497188	Add equipment to Title V permit	7/7/09

Boiler No. 2 was issued its first permit to construct on 2/27/86 to Calcogen under A/N 135524. The equipment was then purchased by Signal Energy Systems and a permit to construct to the new owner was issued under A/N 153475 on 7/8/87. The equipment was modified to add low NOx burners under A/N 226075 in the early 1990's. Following is the permit history:

Boiler No. 2 Permit History

A/N	Description	P/C Issue Date
135524	Initial Permit to Construct to Calcogen	2/27/86
153475	Transfer of ownership to Signal Energy	7/8/87
226075	Install a low NOx burner (name change to Wheelabrator)	7/26/90
434250	Allow simultaneous operation with the turbine during SCE capacity testing, emergency situations, and required source testing	3/3/05
466732	Allow further simultaneous operation with the turbine during operational readiness testing	5/20/08
497191	Add equipment to Title V permit	7/7/09

The Wheelabrator facility is subject to both Reclaim and Title V.

**COMPLIANCE RECORD REVIEW:**

The facility has been issued 2 notices in the last 3 years. Notice to Comply D20384 was issued on 4/3/12 to check 2011 CEMS data for emission points outside the valid range of the analyzer. Notice of Violation P55661 was issued on 5/15/12 for exceeding the annual NOx allocation in 2011. There are currently no outstanding compliance issues with the facility.



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**PROCESS DESCRIPTION:**

The facility operates a gas turbine and 2 small boilers to produce steam and electricity which is used at the hospital for space heating, hot water and air conditioning. Excess power is sold to SCE.

**GAS TURBINE**

Under condition No. D28.1, the turbine is required to test for ROG emissions once during the term of the permit using AQMD method 25.1. The facility is now requesting that the condition be modified to specify that the test be conducted using AQMD method 25.3 instead.

The gas turbine is a GE model LM2500 equipped with a steam turbine. Total rated power output is 30.75 MW including the steam turbine. The unit is controlled with steam injection and approximate NOx concentration is 39 ppm.

**BOILER NO. 2**

Boiler No.2 is rated at 26.249 mmbtu/hr heat input. It is equipped with a Low NOx burner, however the burner was installed in the 1990's to meet the then-current Rule 1146 limit, which was 30 ppm NOx. Since 1994 the facility has been regulated under the RECLAIM program, and as such the boiler was not required to meet the more stringent NOx limit of the amended Rule 1146.

Boiler No.2 is permitted to fire fuel oil as a back up in emergency situations. The facility is now requesting that the boiler be allowed to fire oil on a regular monthly basis for readiness testing. The facility has stated that because the boilers provide the steam requirements for the hospital, under the state's Building Standard Requirements for healthcare facilities, they are required to show that the boilers can operate on the back up fuel if natural gas should become unavailable.

**EMISSIONS:**

The turbine emissions will not change as a result of the application to modify the ROG test method. The emissions are taken from the previous application (A/N 434227).

**Gas Turbine Emissions**

Pollutant	Uncontrolled Maximum Emissions		Controlled Maximum Emissions		30 Day Ave	Annual
	lbs/hr	lbs/day	lbs/hr	lbs/day	lbs/day	lbs/yr
NOx	110	2640	34	816	816	297840
CO	11	264	11	264	264	96360
ROG	3	72	3	72	72	26280
PM10	3	72	3	72	72	26280
SOx	0	0	0	0	0	0

The hourly controlled emissions of NOx and CO are based on a source test performed on 5/5/93 which showed NOx concentrations of about 35 ppm and CO concentrations of about 21 ppm.



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Existing boiler emissions are taken from the previous application (A/N 466732).

**Boiler No. 2 Emissions Natural Gas Firing**

Pollutant	Uncontrolled Maximum Emissions		Controlled Maximum Emissions		30 Day Ave	Annual
	lbs/hr	lbs/day	lbs/hr	lbs/day	lbs/day	lbs/yr
NOx	1.29	30.96	1.29	30.96	31	11300
CO	2.16	51.84	2.16	51.84	52	18922
ROG	0.142	3.41	0.142	3.41	3	1244
PM10	0.197	4.72	0.197	4.72	5	1726
SOx	0.015	0.36	0.015	0.36	0	131

The emission factors are from AP-42 Chapter 1, Table 1.4-2, in lbs/mmcf as follows:

NOx – 50 lbs/mmcf

CO – 84 lbs/mmcf

PM10 – 7.6 lbs/mmcf

ROG – 5.5 lbs/mmcf

SOx – 0.6 lbs/mmcf

A maximum natural gas firing rate of 0.026 mmcf/hr was used in the calculations and is based on 1020 btu/scf.

**Boiler No. 2 Emissions Oil Firing**

Pollutant	Uncontrolled Maximum Emissions		Controlled Maximum Emissions		Annual
	lbs/hr	lbs/day	lbs/hr	lbs/day	lbs/yr
NOx	1.46	35	1.46	35	12790
CO	2.79	67	2.79	67	24440
ROG	0.185	5	0.185	5	1621
PM10	0.37	9	0.37	9	3241
SOx	0.41	33	0.41	33	12001

The emission factors are taken from the calculations done for the permit to construct evaluation for A/N 226075 and are based on AP-42, Table 1.3-1.

The factors are as follows:

ROG = 1 lbs/1000 gals

NOx = 20 lbs/1000 gals

CO = 5 lbs/1000 gals

SOx = 148 lbs/1000 gals\*sulfur percent

PM10 = 2 lbs/1000 gals

A maximum oil firing rate of 185 gal/hr was used in the calculations and is based on 140,000 btu/gal. NOx control efficiency was assumed to be 61%, and sulfur content was 0.05% (now



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changed to 0.015%). The CO emissions were later revised upwards to 67 lbs/day based on a request from the facility.

With a 60 minute test every month, the estimated NEW 30 DAY AVERAGE emissions are calculated as follows:

720 hours/month (30 days)  
719 hours fired on natural gas  
1 hour fired on oil

**New 30 Day Average Emissions**

Pollutant	Natural Gas Emissions		Oil Emissions		Total	Average
	lbs/hr	lbs/month	lbs/hr	lbs/month	lbs/month	lbs/day
NOx	1.29	927.51	1.46	1.46	928.97	30.97
CO	2.16	1553.04	2.79	2.79	1555.83	51.86
ROG	0.142	102.10	0.185	0.185	102.28	3.41
PM10	0.197	141.64	0.37	0.37	142.01	4.73
SOx	0.015	10.79	0.41	0.41	11.2	0.37

**Comparison of Current 30 Day Averages to New 30 Day Averages**

Pollutant	Current 30 Day Average	New 30 Day Average
	lbs/day	lbs/day
NOx	31	31
CO	52	52
ROG	3	3
PM10	5	5
SOx	0	0

There is no increase in the 30 Day Averages.

On the days when the 60 minute test is performed the NEW MAXIMUM DAILY emissions are calculated as follows:

24 hours/day  
23 hours fired on natural gas  
1 hour fired on fuel oil



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**New Daily Maximum Emissions**

Pollutant	Natural Gas Emissions		Oil Emissions		Total
	lbs/hr	lbs/day	lbs/hr	lbs/day	lbs/day
NOx	1.29	29.67	1.46	1.46	31.13
CO	2.16	49.68	2.79	2.79	52.47
ROG	0.142	3.27	0.185	0.185	3.45
PM10	0.197	4.53	0.37	0.37	4.90
SOx	0.015	0.35	0.41	0.41	0.76

**Comparison of Current Daily Maximum Emissions to New Daily Maximum Emissions**

Pollutant	Current Daily Maximum	New Daily Maximum	Increase
	lbs/day	lbs/day	lbs/day
NOx	30.96	31.13	0.17
CO	51.84	52.47	0.63
ROG	3.41	3.45	0.04
PM10	4.72	4.90	0.18
SOx	0.36	0.76	0.4

There are no increases in the daily maximum emissions greater than 1 lb/day.

**Comparison of Current Hourly Maximum NOx Emissions to New Hourly Maximum NOx Emissions**

Pollutant	Current Hourly Maximum	New Hourly Maximum	Increase
	lbs/hour	lbs/hour	lbs/hour
NOx	1.29	1.46	0.17

New hourly emissions are based on 1 hour of oil firing.

**EVALUATION:**

**Rule 212 – Standards for Approving Permits and Issuing Public Notice**

There are no K-12 schools within 1000 feet of the facility, there is no increase in daily emissions exceeding the thresholds of this rule, and there is no increase in toxic emissions causing an MICR greater than 1 in a million. Therefore, the project is not considered significant under this rule, and a public notice is not required.

**Rule 401 – Visible Emissions**

Visible emissions are not expected under normal operation for either the boiler firing natural gas or the turbine. However, combusting fuel oil in the boiler has the potential to result in visible emissions. Fuel oil is will only be fired in the unit during a natural gas curtailment, or during maintenance testing.



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**Rule 402 – Nuisance**

Nuisance problems are not expected from the normal operation of the turbine or boiler.

**Rule 407 – Liquid and Gaseous Air Contaminants**

This rule limits the CO emissions to 2000 ppm, and also limits the SO2 emissions to 500 ppm when firing fuel oil. For the boiler, the Rule 1146 CO limit of 400 ppm is more stringent.

The turbine was tested on 5/5/93 and the CO emissions were about 21 ppm.

Boiler No. 2 was also tested in the early 1990's, and the results of that test showed that the CO emissions were about 111 ppm. Boiler No. 2 has not been tested when firing oil for SO2 emissions, however, since 15 ppm sulfur fuel oil is required by Rule 431.2, the equipment should theoretically be able to comply with the 500 ppm SO2 limit.

**Rule 409 – Combustion Contaminants**

This rule restricts the discharge of contaminants from the combustion of fuel to 0.23 grams per cubic meter (0.1 grain per cubic foot) of gas, calculated to 12% CO2, averaged over 15 minutes. Based on the following theoretical calculations, both the turbine and boiler can be expected to meet this limit at the maximum firing load.

$$\text{Grain Loading} = \frac{[(A \times B)/(C \times D)] \times 7000 \text{ gr/lb}}$$

where:

- A = PM10 emission rate during normal operation
- B = Rule specified percent of CO2 in the exhaust (12%)
- C = Percent of CO2 in the exhaust (approx. 4.29% for natural gas)
- D = Stack exhaust flow rate

**Turbine**

$$\begin{aligned} \text{Grain Loading} &= \frac{3 \text{ lbs/hr} \times [(7000 \text{ grains/lb}) \times (12/4.29)]}{7.63 \text{ E}+06 \text{ scf/hr}} \\ &= \boxed{0.008 \text{ grains/scf}} \end{aligned}$$

**Boiler No. 2**

$$\begin{aligned} \text{Grain Loading} &= \frac{0.197 \text{ lbs/hr} \times [(7000 \text{ grains/lb}) \times (12/4.29)]}{269,031 \text{ scf/hr}} \\ (\text{natural gas}) &= \boxed{0.014 \text{ grains/scf}} \end{aligned}$$



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$$\begin{aligned} \text{Grain Loading (oil)} &= \frac{0.37 \text{ lbs/hr} \times [(7000 \text{ grains/lb}) \times (12/4.29)]}{282,237 \text{ scf/hr}} \\ &= \boxed{0.026 \text{ grains/scf}} \end{aligned}$$

The boiler was tested in the early 1990's for PM emissions when firing oil. The results showed PM emissions of about 2.64 lbs/day, which is approximately 0.0027 grains/scf.

Rule 431.1 – Sulfur Content of Gaseous Fuels

The turbine and boiler will be fired on pipeline natural gas, which under this rule, is required to meet a sulfur content of 16 ppm sulfur. Compliance is expected.

Rule 431.2 – Sulfur Content of Liquid Fuels

The rule requires that the maximum sulfur content of the oil cannot exceed 500 ppm if the fuel was purchased prior to June 1, 2004, and that only 15 ppm sulfur fuel can be purchased after June 1, 2004. Wheelabrator has stated that only 15 ppm sulfur oil will be fired in the boiler (this will be added to condition B75.1). Compliance is expected.

Rule 475 – Electric Power Generating Equipment

This rule applies to power generating equipment greater than 10 MW installed after May 7, 1976. Requirements are that the equipment meet a limit for combustion contaminants of 11 lbs/hr or 0.01 gr/scf. Compliance is achieved if either the mass limit or the concentration limit is met. Mass PM10 emissions from the turbine is estimated at 3 lbs/hr, and 0.0084 gr/scf during natural gas firing at maximum firing load (see calculations below). Therefore, compliance is expected.

$$\text{Stack Exhaust Flow} \left( \frac{\text{scf}}{\text{hr}} \right) = F_d \times \frac{20.9}{(20.9 - \%O_2)} \times TFD$$

where:

Fd: Dry F factor for fuel type, 8710 dscf/MMBtu

O2: Rule specific dry oxygen content in the effluent stream, 3%

TFD: Total fired duty measured at HHV, 246 MMBtu/hr

$$\text{Combustion Particulate} \left( \frac{\text{grain}}{\text{scf}} \right) = \frac{PM_{10}, \text{ lb/hr}}{\text{Stack Exhaust Flow, scf/hr}} \times 7000 \frac{\text{gr}}{\text{lb}}$$

$$\text{Stack flow} = 8710(20.9/17.9)*246 = 2.51 \text{ mmscf/hr}$$

$$\text{Combustion particulate} = (3.0/2.51E+06)*7000 = \boxed{0.0084 \text{ gr/scf}}$$

Rule 1146 – Emissions of NOx from Boilers and Steam Generators

The boiler is only subject to the CO portion of this rule, since the facility is in RECLAIM. The rule limit for CO is 400 ppm, which the boiler is expected to comply with based on the test in the



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early 1990's which showed that the CO emissions were about 111 ppm when the unit was firing natural gas.

#### Regulation XIII/Rule 2005 – New Source Review

The proposed modification to the turbine permit concerning the ROG testing method does not result in any change to the emissions from the unit. Therefore, NSR is not applicable to the turbine modification.

The proposed modification to the boiler permit to allow a 60 minute oil readiness test does result in a slight emission increase. The increases are less than 0.5 lb/day for all criteria pollutants.

For NO<sub>x</sub>, Rule 2005 defines an emissions increase as a comparison of the hourly PTE emissions rate before and after the proposed modification. There is a slight increase of 0.17 lbs/hr NO<sub>x</sub> when comparing 1 hour of natural gas firing vs. 1 hour of oil firing. However, the oil firing is limited to a short monthly readiness test only, and therefore a case can be made that it should not be subject to NSR.

#### Rule 1401 – New Source Review of Toxic Air Contaminants

A Tier 2 analysis was performed for Boiler No. 2 firing oil up to 12 hours per year. The cancer risk was shown to be less than 1 in a million, and the hazard indices are less than 1.0. Reference Appendix A.

#### Rule 2012 – RECLAIM, Monitoring, Recording, and Recordkeeping

The facility is subject to RECLAIM for NO<sub>x</sub>. Boiler No. 2 is classified as a Large Source and as such is required to report emissions on a monthly basis using fuel data and the concentration limit on the permit (39 ppm for natural gas and 40 ppm for oil). The boiler is required to maintain a fuel meter for both natural gas and fuel oil.

The gas turbine is a Major Source under RECLAIM and is required to maintain a CEMS, which includes a fuel meter, a NO<sub>x</sub> analyzer, an O<sub>2</sub> analyzer, and a data acquisition and handling system. Emissions are reported on a daily basis through the RTU. Other parameters to be measured are the exhaust temperature into the SCR, the ammonia injection rate, and the differential pressure across the SCR.

Continued compliance is expected.

#### REGULATION XXX – Title V

The Wheelabrator facility is subject to Title V. The facility is currently operating under a valid permit issued on June 1, 2008. The permit modifications proposed under these applications are considered a de minimis significant revision to the existing Title V permit because there is an increase in both criteria pollutants and toxic emissions as a result of the 60 minute per month oil testing, but the increases are less than the thresholds for significant revisions. As a de minimis significant revision, the permit is subject to a 45 day EPA review and comment period.



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**DISCUSSION:**

**Item 1**

A concern that arose in the course of this review is the fact that there is no NOx limit on the turbine permit. Looking into the history of the permit for this equipment, it appears that the BACT requirements for the turbine at the time the permit was first issued was a NOx limit of 42 ppm and a CO limit of 200 ppm. This is evident from the evaluation of both A/N's 140419 and 170659, as well as the permits issued under those applications, which contained the limits. There were also daily and hourly mass emission limits on these original permits. None of these limits pertaining to NOx were included in the RECLAIM permit (38 lbs/hr during normal operations, 112 lbs/hr during start up and shutdowns, and 913 lbs/day for the turbine + boilers). The daily limits for CO, ROG, and PM have been included in the RECLAIM permit (see condition A63.1), and the start up/shutdown limits for CO and ROG have been included as well (see condition A63.2). The 200 ppm CO limit is also currently on the permit. When the facility was included into RECLAIM, the argument could be made that the NOx daily mass limit should be dropped, however the NOx concentration limit and the start up/shutdown limits constitute BACT and should have remained on the permit.

**Item 2**

Wheelabrator had anticipated that the oil firing would normally consist of a 30 minute per month test, but they asked for the flexibility to fire oil for up to 8 hours per 12 month rolling period, with no limitation on the amount of time any one test would run. The facility was informed that traditionally, a 30 minute per month test is allowed for hospitals to perform their oil readiness testing, and anything more than that would not be considered readiness testing. As a compromise, the permit conditions will allow up to 60 minutes per month oil firing, no more than 12 hours of oil firing per 12 month period, with a single one-time test lasting up to 4 hours.

**RECOMMENDATION:**

After the 45 day EPA review and comment period, issue a revised Title V and RECLAIM permit which allows up to 60 minutes of oil firing per month for Boiler No. 2 to perform readiness testing, and correct the language in condition D28.1 to specify that the ROG testing is to be performed using AQMD method 25.3. Also include a 42 ppm NOx BACT limit to the gas turbine permit in the 'emission limits' column, and a NOx start up/shutdown limit of 112 lbs to the permit conditions.

**CONDITIONS:**

Proposed changes or additions are shown in **bold/underline**, proposed deletions are shown in ~~strikethrough~~.



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### Gas Turbine Conditions

**A63.1**

The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
CO	Less than or equal to 863 LBS IN ANY ONE DAY
PM	Less than or equal to 74 LBS IN ANY ONE DAY
ROG	Less than or equal to 170 LBS IN ANY ONE DAY

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from equipment D4, D6, and D7.

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

[Devices subject to this condition : D4, D6, D7]

**A63.2**

The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
CO	Less than or equal to 84 LBS IN ANY ONE DAY
ROG	Less than or equal to 14 LBS IN ANY ONE DAY

For the purposes of this condition, the limit(s) shall be based on the total combined emissions from start-up (which shall not exceed 2 hours in any one day) and shut-down (which shall not exceed 20 minutes in any one day) only.

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

[Devices subject to this condition : D4]

**A99.1**

**The 42 PPM NOx emission limits shall not apply during start-ups and shutdowns.**

**During start up and shutdown, the NOx emissions shall not exceed 112 lbs.**

**[Rule 2005 – BACT]**

**A195.1**

**The 42 PPMV NOX emission limit(s) is averaged over 15 minutes at 15 percent O2, dry.**

**[Rule 2005 – BACT]**

**A327.1**

For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

[RULE 475, 10-8-1976; RULE 475, 8-7-1978]

[Devices subject to this condition : D4]

**C1.2**

The operator shall limit the duration of startup to no more than 2 hour(s).



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[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]  
[Devices subject to this condition : D4]

C1.3

The operator shall limit the duration of shutdown to no more than 20 minute(s).  
[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]  
[Devices subject to this condition : D4]

C4.1

The operator shall limit the load to no less than 50 percent.  
[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]  
[Devices subject to this condition : D4]

D12.2

The operator shall install and maintain a(n) continuous monitoring system to accurately indicate the steam-to-fuel ratio in the turbine.

The operator shall also install and maintain a device to continuously record the parameter being measured.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 2012, 5-11-2001; RULE 2012, 12-5-2003]

[Devices subject to this condition : D4]

D28.1

The operator shall conduct source test(s) in accordance with the following specifications:

The test shall be conducted at least once during the life of the permit.

The test shall be conducted to determine the ROG emissions at the outlet.

The test shall be conducted to determine the ROG emissions using District method 25.1 ~~25.3~~ measured over a 60 minute averaging time period.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D4]

D82.1

The operator shall install and maintain a CEMS to measure the following parameters  
CO concentration in ppmv

O2 concentration in **percent**

Concentrations shall be corrected to 15 percent oxygen on a dry basis.

The CEMS will convert the actual CO concentrations to mass emission rates (lbs/hr) and record the hourly emission rates on a continuous basis.

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

[Devices subject to this condition : D4]

D328.1

The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD Method 100.1 or



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10.1; or (b) conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with Rule 1146 emission limit. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D6, D7]

**E51.1**

The following condition number(s) shall not apply if any of the requirements stated below are met:

**Condition Number C4.1**

Requirement number 1: startups

Requirement number 2: shutdown

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

[Devices subject to this condition : D4]

**E51.2**

The following condition number(s) shall not apply if any of the requirements stated below are met:

**Condition Number E80.1**

Requirement number 1: startups

Requirement number 2: shutdowns

Requirement number 3: during annual utility test and local utility or California Independent System Operator grid emergency conditions when maximum plant output is required, only to the extent necessary to meet the thermal load demand of the hospital

Requirement number 4: Operational readiness testing, including, but not limited to : weekly and monthly checks and repair verification of boiler pressure parts or control system

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

[Devices subject to this condition: D4]

**E71.1**

The operator shall only operate this equipment using steam injection during normal operation of the turbine, excluding start-ups and/or shut downs.

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

[Devices subject to this condition: D4]



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**E80.1**

The operator shall not use this equipment when any of the following equipment are operating:

Device ID: D6 [BOILER, NO. 1]

Device ID: D7 [BOILER, NO. 2]

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

[Devices subject to this condition: D4]

**M333.1**

Permit Shield. Notwithstanding the other requirements and conditions in this permit, this device is not subject to the following rule requirement(s):

Rule	Number/Subpart	Adopted/Amended Date	Non-Applicable Requirements
District Rule	1134	07-dec-1995	All NOx Requirements
District Rule	1134	08-aug-1997	All NOx Requirements

Compliance with the conditions of this Title V permit shall be deemed in compliance with any regulatory requirements applicable as of the date of permit issuance to this device, provided that such regulatory requirements are included and specifically identified in this permit. Nothing in this permit or in any permit shield can alter or affect: (a) under Section 303 of the Federal Clean Air Act, the provisions for emergency orders; (b) the liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance; (c) the applicable requirements of the Acid Rain Program; (d) the ability of EPA to obtain information from the operator pursuant to Section 114 of the Federal Clean Air Act; (e) the applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do not apply to the facility, such as toxics requirements unique to the State; or, (f) the applicability of regulatory requirements with compliance dates after the permit issuance date. This permit shield shall not apply to any operational change made pursuant to the operational flexibility provisions of District Rule 3005.

[RULE 1134, 8-8-1997; RULE 3004(c)-Permit Shield, 12-12-1997]

[Devices subject to this condition : D4]

**Boiler No. 2 Conditions**

**A63.1**

The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
CO	Less than or equal to 863 LBS IN ANY ONE DAY
PM	Less than or equal to 74 LBS IN ANY ONE DAY
ROG	Less than or equal to 170 LBS IN ANY ONE DAY



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For the purposes of this condition, the limit(s) shall be based on the total combined emissions from equipment D4, D6, and D7.

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

[Devices subject to this condition : D4, D6, D7]

A63.3

The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
CO	Less than or equal to 67 LBS IN ANY ONE DAY
PM	Less than or equal to 5 LBS IN ANY ONE DAY
ROG	Less than or equal to 3 LBS IN ANY ONE DAY
SOX	Less than or equal to 1 LBS IN ANY ONE DAY

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

[Devices subject to this condition : D6, D7]

A63.4

The operator shall limit emissions from this equipment as follows:

CONTAMINANT	EMISSION LIMIT
CO	Less than or equal to 67 LBS IN ANY ONE DAY
PM	Less than or equal to 9 LBS IN ANY ONE DAY
ROG	Less than or equal to 5 LBS IN ANY ONE DAY
SOX	Less than or equal to 33 LBS IN ANY ONE DAY

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

[Devices subject to this condition : D7]

B75.1

The operator shall not use fuel oil in this equipment except under the following circumstance(s):

Natural gas curtailment

**Readiness testing not to exceed 60 minutes per calendar month, a one-time test lasting up to 4 hours may be performed prior to April 1, 2013. There shall be no more than 12 hours of oil firing in any 12 month period.**

**Fuel oil sulfur content shall not exceed 15 ppm**

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

[Devices subject to this condition : D7]

D12.3

The operator shall install and maintain a(n) non-resettable totalizing fuel flow meter to accurately indicate the fuel usage of the equipment.

[RULE 2012, 5-11-2001; RULE 2012, 12-5-2003]

[Devices subject to this condition : D6, D7]

D328.1

The operator shall determine compliance with the CO emission limit(s) either: (a) conducting a source test at least once every five years using AQMD Method 100.1 or



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10.1; or (b) conducting a test at least annually using a portable analyzer and AQMD-approved test method. The test shall be conducted when the equipment is operating under normal conditions to demonstrate compliance with Rule 1146 emission limit. The operator shall comply with all general testing, reporting, and recordkeeping requirements in Sections E and K of this permit.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D6, D7]

D371.1

The operator shall conduct an inspection for visible emissions from all stacks and other emission points of this equipment whenever this equipment has combusted one million gallons of diesel fuel, to be counted cumulatively over a five year period. The inspection shall be conducted while the equipment is in operation and during daylight hours. If any visible emissions (not including condensed water vapor) are detected, the operator shall: Have a CARB-certified smoke reader determine compliance with the opacity standard, using EPA Method 9 or the procedures in the CARB manual "Visible Emission Evaluation", within three working days (or during the next fuel oil firing period if the unit ceases firing on fuel oil within the three working day time frame) and report any deviations to AQMD. In addition, the operator shall keep the records in accordance with the recordkeeping requirements in Section K of this permit and the following records:

- a). Stack or emission point identification;
- b). Description of any corrective actions taken to abate visible emissions;
- c). Date and time visible emission was abated; and
- d). Visible emission observation record by a certified smoke reader.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D7]

E51.3

The following condition number(s) shall not apply if any of the requirements stated below are met:

Condition Number E80.2

Requirement number 1: startups or shutdowns of the cogeneration gas turbine (device D4)

Requirement number 2: source testing of this boiler or performance of tune-ups

Requirement number 3: during annual utility test and local utility or California Independent System Operator grid emergency conditions when maximum plant output is required, but only to the extent necessary to meet the thermal load demand of the hospital

Requirement number 4: operational readiness testing, including, but not limited to: weekly and monthly checks and repair verification of boiler pressure parts or control systems.

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

[Devices subject to this condition: D6, D7]



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**E80.2**

The operator shall not use this equipment when any of the following equipment are operating:

Device ID: D4 [TURBINE, LOW CARBON MONOXIDE FUEL NOZZLES]  
[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]  
[Devices subject to this condition: D6, D7]

**E226.1**

The following condition number(s) shall only apply if all of the requirement(s) stated below are met:

Requirement 1: When the equipment is operating on natural gas.

Condition Number: A 63- 3

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]  
[Devices subject to this condition: D7]

**E226.2**

The following condition number(s) shall only apply if all of the requirement(s) stated below are met:

Requirement 1: When the equipment is operating on fuel oil.

Condition Number: A 63- 4

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]  
[Devices subject to this condition: D7]

**H421.1**

The operator shall determine compliance with Rule 409 by complying with the tune-up requirements of Rule 1146, whenever the annual fuel oil usage exceeds 1 MM gallons in any one year or the hours of operations on fuel oil exceeds 336 hours in any one year. If annual fuel oil usage exceeds 2 MM gallons in any one year, the operator shall also conduct a source test to determine PM emissions using District method 5.1 measured over a 15 minute averaging time period at least once every five years and with this equipment fired on fuel oil and operating at normal load.

[RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]  
[Devices subject to this condition: D7]

**K67.2**

The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Daily natural gas and fuel oil usage

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002]  
[Devices subject to this condition: D7]



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M333.2

Permit Shield. Notwithstanding the other requirements and conditions in this permit, this device is not subject to the following rule requirement(s):

Rule	Number/Subpart	Adopted/Amended Date	Non-Applicable Requirements
District Rule	1146	13-may-1994	(c)(2)
District Rule	1146	13-may-1994	(c)(3)

Compliance with the conditions of this Title V permit shall be deemed in compliance with any regulatory requirements applicable as of the date of permit issuance to this device, provided that such regulatory requirements are included and specifically identified in this permit. Nothing in this permit or in any permit shield can alter or affect: (a) under Section 303 of the Federal Clean Air Act, the provisions for emergency orders; (b) the liability of the operator for any violation of applicable requirements prior to or at the time of permit issuance; (c) the applicable requirements of the Acid Rain Program; (d) the ability of EPA to obtain information from the operator pursuant to Section 114 of the Federal Clean Air Act; (e) the applicability of state or local requirements that are not "applicable requirements", as defined in Rule 3000, at the time of permit issuance but which do not apply to the facility, such as toxics requirements unique to the State; or, (f) the applicability of regulatory requirements with compliance dates after the permit issuance date. This permit shield shall not apply to any operational change made pursuant to the operational flexibility provisions of District Rule 3005.

[RULE 1146, 11-17-2000; RULE 3004(c)-Permit Shield, 12-12-1997]

[Devices subject to this condition: D6, D7]



Appendix A

1401 Analysis

Q is based on 185 gal/hr for 12 hrs/yr (1 hr/month)  
Emission factors are from CARB and Ventura County  
Receptor Distance is assumed to be 25 meters  
Meteorological Station is Compton

Pollutant	Factor	Emissions	
	Lbs/1000 gal	Lbs/hr	Tons/yr
Benzene	2.54E-03	5.64E-03	3.38E-05
Formaldehyde	3.49E-01	7.75E-01	4.65E-03
PAH	1.022E-03	2.27E-03	1.36E-05
Naphthalene	3.67E-01	8.15E-01	4.89E-03
Acetaldehyde	3.506E-01	7.78E-01	4.67E-03
1,3-butadiene	1.48E-02	3.29E-02	1.97E-04
Chlorobenzene	2.0E-04	4.44E-04	2.66E-06
Propylene	1.71E-03	3.80E-03	2.28E-05
Hexane	1.21E-03	2.69E-03	1.61E-05
Toluene	1.5E-03	3.33E-03	2.00E-05
Xylenes	1.49E-03	3.31E-03	1.98E-05
Ethyl benzene	1.49E-03	3.31E-03	1.98E-05
Hydrogen chloride	1.863E-01	4.14E-01	2.48E-03
Arsenic	1.6E-03	3.55E-03	2.13E-05
Cadmium	1.5E-03	3.33E-03	2.00E-05
Cr+6	1.0E-04	2.22E-04	1.33E-06
Copper	4.1E-03	9.10E-03	5.46E-05
Lead	8.3E-03	1.84E-02	1.11E-04
Manganese	3.1E-03	6.88E-03	4.13E-05
Mercury	2.0E-03	4.44E-03	2.66E-05
Nickel	3.9E-03	8.66E-03	5.19E-05
Selenium	2.2E-03	4.88E-03	2.93E-05

The Tier 2 analysis shows a cancer risk of 4.21E-07 for residential and 4.46E-08 for commercial.  
The Acute Hazard Index for residential is 8.8E-03 the Chronic Hazard Index for residential is 5.77E-03.