



South Coast Air Quality Management District

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

August 25, 2011

Gerardo Rios (R9AirPermits_sc@epa.gov)
Chief – Permit Office
U.S. EPA – Region IX – Air – 3
75 Hawthorne Street
San Francisco, CA 94105

Subject: Los Angeles World Airport (ID 800335) Title V Permit Revision

Dear Mr. Rios:

Los Angeles World Airport has proposed to revise their Title V permit by installing four emergency engines at Tom Bradley Terminal, devices D216, D217, D218 and D219.

This is an aviation service facility (NAICS 48819) located at 275 Center Way, Los Angeles, CA 90045. This proposed permit revision is considered as a “de minimus significant permit revision” to their Title V permit. Attached for your review are the evaluation and permit for the proposed revision. With your receipt of the proposed Title V permit revision today, we will note that the EPA 45-day review period will begin on August 25, 2011.

If you have any questions concerning these changes, please call the processing engineer, Mr. Thai Tran at (909) 396-2562.

Sincerely,

A handwritten signature in black ink, appearing to read 'Brian L. Yeh', is written over a light blue horizontal line.

Brian L. Yeh
Senior Manager
Mechanical, Chemical and Public Services
Engineering and Compliance

BLY:DR:TT
Enclosure

FACILITY PERMIT TO OPERATE LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
INTERNAL COMBUSTION ENGINES					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NO.1, TOM BRADLEY INTERNATIONAL TERMINAL, DIESEL FUEL, CATERPILLAR, MODEL 3516C, WITH DIESEL PARTICULATE FILTER, RYPOS, MODEL HDPF/C, WITH AFTERCOOLER, TURBOCHARGER, 2937 HP A/N:	D216		NOX: PROCESS UNIT**	CO: 2.6 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]; NOX: 0.5 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007; RULE 2005, 5-6-2005; RULE 2005, 6-3-2011]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.07 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]; ROG: 0.3 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1) -BACT, 12-6-2002; RULE 1470, 6-1-2007; RULE 2005, 5-6-2005; RULE 2005, 6-3-2011]	C1.4, C1.11, C1.23, D12.1, E57.3, E71.5, H23.6, I296.1, K67.12

* (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 LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
INTERNAL COMBUSTION ENGINE					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NO.2, TOM BRADLEY INTERNATIONAL TERMINAL, DIESEL FUEL, CATERPILLAR, MODEL 3516C, WITH DIESEL PARTICULATE FILTER, RYPOS, MODEL HDPF/C, WITH AFTERCOOLER, TURBOCHARGER, 2937 HP A/N:	D217		NOX: PROCESS UNIT**	CO: 2.6 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002]; NOX: 0.5 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007; RULE 2005, 6-3-2011]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.07 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1) -BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]; ROG: 0.3 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1) -BACT, 12-6-2002; RULE 1470, 6-1-2007]	C1.4, C1.11, C1.23, D12.1, E57.3, E71.5, H23.6, I296.1, K67.12

* (1) (1A) (1B) Denotes RECLAIM emission factor
 (3) Denotes RECLAIM concentration limit
 (5) (5A) (5B) Denotes command and control emission limit
 (7) Denotes NSR applicability limit
 (9) See App B for Emission Limits
 (2) (2A) (2B) Denotes RECLAIM emission rate
 (4) Denotes BACT emission limit
 (6) Denotes air toxic control rule limit
 (8) (8A) (8B) Denotes 40 CFR limit (e.g. NSPS, NESHAPS, etc.)
 (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 LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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
INTERNAL COMBUSTION ENGINES					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NO.3, TOM BRADLEY INTERNATIONAL TERMINAL, DIESEL FUEL, CATERPILLAR, MODEL 3516C, WITH DIESEL PARTICULATE FILTER, RYPOS, MODEL HDPF/C, WITH AFTERCOOLER, TURBOCHARGER, 2937 HP A/N:	D218		NOX: PROCESS UNIT**	CO: 2.6 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]; NOX: 0.5 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007; RULE 2005, 5-6-2005; RULE 2005, 6-3-2011]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.07 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]; ROG: 0.3 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]	C1.4, C1.11, C1.23, D12.1, E57.3, E71.5, H23.6, I296.1, K67.12

* (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 LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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 16: INTERNAL COMBUSTION ENGINES					
INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NO.4, TOM BRADLEY INTERNATIONAL TERMINAL, DIESEL FUEL, CATERPILLAR, MODEL 3516C, WITH DIESEL PARTICULATE FILTER, RYPOS, MODEL HDPF/C, WITH AFTERCOOLER, TURBOCHARGER, 2937 HP A/N:	D219		NOX: PROCESS UNIT**	CO: 2.6 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]; NOX: 0.5 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007; RULE 2005, 5-6-2005; RULE 2005, 6-3-2011]; NOX: 469 LBS/1000 GAL DIESEL (1) [RULE 2012, 5-6-2005]; PM: (9) [RULE 404, 2-7-1986]; PM: 0.07 GRAM/BHP-HR DIESEL (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]; ROG: 0.3 GRAM/BHP-HR (4) [RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]	C1.4, C1.11, C1.23, D12.1, E57.3, E71.5, H23.6, I296.1, K67.12
Process 6: FUELING OPERATIONS					
System 1a: STATIONARY					

* (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 LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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 OF PERMITTING OPERATIONS					
BULK MATERIAL LOADING STATION, BRADLEY WEST APRON, JET FUEL (JPA), INCLUDES 30 HYDRANTS WITH DRY BREAK COUPLERS WITH A/N:	D214				C1.25, E71.10, E71.11, K67.15
FUGITIVE EMISSIONS, VALVES	D215				

* (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
LA CITY, DEPT OF AIRPORTS**

SECTION H: 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
LA CITY, DEPT OF AIRPORTS**

SECTION H: DEVICE ID INDEX

Device Index For Section H			
Device ID	Section H Page No	Process	System
D180	1	1	1
D214	6	6	1
D215	6	6	1
D216	2	1	1
D217	3	1	1
D218	4	1	1
D219	5	1	1

FACILITY PERMIT TO OPERATE LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

FACILITY CONDITIONS

F14.2 The operator shall not purchase diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

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

F52.1 This facility is subject to the applicable requirements of the following rules or regulation(s):

FACILITY PERMIT TO OPERATE LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

For the purpose of this condition, "facility" shall be defined as Process 9 - Concrete Batch Plant and Concrete/Asphalt Crushing Operations.

District Rule 1157. The requirements include, but not limited to:

Maintaining fugitive dust emissions from any activity, equipment, storage pile, or disturbed surface area not to exceed a) 20% opacity, based on an average of 12 consecutive readings, using the SCAQMD Opacity Test Method No. 9B, or b) 50% opacity, based on five individual, consecutive readings, using the SCAQMD Opacity Test Method No. 9B, or c) any visible fugitive dust plume from exceeding 100 feet in any direction

Promptly removing any pile of material spillage on any internal paved roads, or maintaining in a stabilized condition the pile of material spillage with dust suppressants and remove it by the end of each day

Applying dust suppressants or using other dust control methods during loading, unloading, or transferring activities; at the conveyor including all transfer points where materials are released; at crushing activities; at the screening equipment including all discharge points; open storage piles; internal unpaved haul roads; unpaved roads and parking and staging areas

Posting signs at the two ends of the internal unpaved haul roads, stating that haul trucks shall use these roads unless traveling to the maintenance areas

Sweeping the internal paved roads with a street sweeper at the applicable interval specified by the rule

Using sweepers that are certified by Rule 1186

Installing and utilizing a rumble grate, a wheel washer, or a truck washer in accordance with applicable requirements specified by the rule

Keeping all records specified by the rule on-site for at least 5 years, and making such records available to the Executive Officer upon request

[RULE 1157, 9-8-2006]

FACILITY PERMIT TO OPERATE LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

PROCESS CONDITIONS

P42.1 The operator shall limit the throughputs of the two Concrete/Asphalt Batch Plants A and B, and that of the Concrete/Asphalt Crusher in such a way that when the corresponding throughput values are placed in the following equation, the result is not higher than 581.1:

$$0.00753 P_b + 0.00175 P_c = 593.7$$

Where:

P_b: combined throughputs in cubic yards of the two Concrete/Asphalt Batch Plants in any one calendar month

P_c: throughput in tons of the Concrete/Asphalt Crusher in any one calendar month

AND THAT:

P_b shall not exceed 78,830 cubic yards in a calendar month and

P_c shall not exceed 90,000 tons in a calendar month.

Throughput records shall be kept in a manner approved by the District to demonstrate compliance with this condition.

Records shall be kept for at least 5 years in a manner approved by the District and made available to District personnel upon request.

FACILITY PERMIT TO OPERATE LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[RULE 1303(b)(1)-Modeling, 5-10-1996; RULE 1303(b)(1)-Modeling, 12-6-2002;
RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE
3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Processes subject to this condition : 9]

DEVICE CONDITIONS

C. Throughput or Operating Parameter Limits

C1.4 The operator shall limit the operating time to no more than 200 hour(s) in any one year.

[RULE 1110.2, 2-1-2008; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996;
RULE 1401, 6-5-2009]

[Devices subject to this condition : D180, D216, D217, D218, D219]

C1.11 The operator shall limit the maintenance testing to no more than 50 hour(s) in any one year.

[RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470,
6-1-2007]

[Devices subject to this condition : D180, D182, D216, D217, D218, D219]

C1.23 The operator shall limit the maintenance and testing to no more than 4.2 hour(s) in any one calendar month.

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 212,
12-7-1995; RULE 212, 11-14-1997]

[Devices subject to this condition : D180, D182, D216, D217, D218, D219]

C1.24 The operator shall limit the operating time to no more than 200 hour(s) in any one year.

FACILITY PERMIT TO OPERATE LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

This limit shall be based on the total combined limit for equipment D1 (Application Number 475954), D176 (Application Number 511274) and D182 (Application 504551).

[RULE 1110.2, 2-1-2008; **RULE 1304(c)-Offset Exemption, 6-14-1996**; RULE 1401, 6-5-2009]

[Devices subject to this condition : D182]

C1.25 The operator shall limit the loading rate of JETA fuel to no more than 18300000 gallon(s) in any one calendar month.

[**RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 1401, 9-10-2010]

[Devices subject to this condition : D214]

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, 2-1-2008; **RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1303(b)(1)-Modeling, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**; RULE 1401, 6-5-2009; RULE 1470, 6-1-2007; **RULE 2005, 5-6-2005**; **RULE 2011, 5-6-2005**; **RULE 2012, 5-6-2005**; **RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997**]

[Devices subject to this condition : D180, D182, D216, D217, D218, D219]

E. Equipment Operation/Construction Requirements

E57.3 The operator shall vent this equipment to a Diesel Particulate Filter which is fully functional and is certified by California Air Resource Board as level 3 whenever it is in operation.

FACILITY PERMIT TO OPERATE LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

[**RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1470, 6-1-2007]**

[Devices subject to this condition : D216, D217, D218, D219]

- E71.5 The operator shall only operate this equipment for more than 50 hours per year allocated for engine maintenance and testing only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage provided that the engine operation shall be terminated immediately after the utility distribution company advises that a rotating outage is no longer imminent or in effect.

[**RULE 1303, 5-10-1996; RULE 1303, 12-6-2002; 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 1470, 6-1-2007]**

[Devices subject to this condition : D180, D182, D216, D217, D218, D219]

- E71.10 The operator shall only use this equipment to transfer jet-A fuel.

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

[Devices subject to this condition : D214]

- E71.11 The operator shall only use this equipment to transfer fuel to aircrafts.

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

[Devices subject to this condition : D214]

H. Applicable Rules

- H23.6 This equipment is subject to the applicable requirements of the following rules or regulations:

**FACILITY PERMIT TO OPERATE
 LA CITY, DEPT OF AIRPORTS**

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

Contaminant	Rule	Rule/Subpart
CO	District Rule	1470
NOX	District Rule	1470
PM10	District Rule	1470
ROG	District Rule	1470

[RULE 1470, 6-1-2007]

[Devices subject to this condition : D216, D217, D218, D219]

I. Administrative

I296.1 This equipment shall not be operated unless the operator demonstrates to the Executive Officer that the facility holds sufficient RTCs to offset the annual emissions increase for the first 12 months of operation. In addition, this equipment shall not be operated unless the operator demonstrates to the Executive Officer that, at the commencement of each compliance year after the start of operation, the facility holds sufficient RTCs in an amount equal to the annual emissions increase.

[RULE 2005, 5-6-2005; RULE 2005, 6-3-2011]

[Devices subject to this condition : D216, D217, D218, D219]

K. Record Keeping/Reporting

K67.12 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

FACILITY PERMIT TO OPERATE LA CITY, DEPT OF AIRPORTS

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

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

The date of operation

Indication of whether the engine is started manually or automatically

Time reading in hours at the beginning and end of operation

The elapsed time in hours

The reason for operation

The annual total hours of operation (include hours for manual and automatic operation) which shall be recorded no later than January 15th of the following year

The records shall be kept for a minimum of five calendar years prior to the current year and made available to District personnel upon request.

[RULE 1110.2, 2-1-2008; RULE 1303(a)(1)-BACT, 5-10-1996; RULE 1303(a)(1)-BACT, 12-6-2002; RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996; RULE 1304(c)-Offset Exemption, 6-14-1996; RULE 1470, 11-3-2005; RULE 2005, 5-6-2005; RULE 2011, 5-6-2005; RULE 2012, 5-6-2005; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D180, D182, D216, D217, D218, D219]

K67.15 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Monthly throughput of jet A fuel being transferred by this equipment

Records shall be kept for minimum five years and made available upon request

[RULE 1303(b)(2)-Offset, 5-10-1996; RULE 1303(b)(2)-Offset, 12-6-2002; RULE 3004(a)(4)-Periodic Monitoring, 12-12-1997]

[Devices subject to this condition : D214]

N S R D A T A S U M M A R Y S H E E T

Application No: 525468
Application Type: Permit to Construct
Application Status: PENDAPPRV
Previous Apps,Dev,Permit #: NONE

Company Name: LA CITY, DEPT OF AIRPORTS
Company ID: 800335
Address: 275 CENTER WAY, LOS ANGELES, CA 90045-5834
RECLAIM: NOX
RECLAIM Zone: 01
Air Basin: SC
Zone: 03
Title V: YES

Device ID: 0 -
Estimated Completion Date: 02-15-2012
Heat Input Capacity: 0 Million BTU/hr
Priority Reserve: NONE - No Priority Access Requested
Recommended Disposition: 25 - PERMIT TO CONSTRUCT GRANTED
PR Expiration:
School Within 1000 Feet: NO
Operating Weeks Per Year: 50
Operating Days Per Week: 1
Monday Operating Hours: 08:00 to 09:00
Tuesday Operating Hours: 00:00 to 00:00
Wednesday Operating Hours: 00:00 to 00:00
Thursday Operating Hours: 00:00 to 00:00
Friday Operating Hours: 00:00 to 00:00
Saturday Operating Hours: 00:00 to 00:00
Sunday Operating Hours: 00:00 to 00:00

Emittant: CO
BACT:
Cost Effectiveness: NO
Source Type: MAJOR
Emis Increase: .46
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 3.17 lbs/hr
Max Daily: 3.17 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 3.17 lbs/hr
Max Daily: 3.17 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0.46 lbs/day
Annual Emission: 158.5 lbs/yr
District Exemption: 1304 (a) (4) -10/12/1995-Emergency Equipment

Emittant: NOX
BACT:
Cost Effectiveness: NO
Source Type: MAJOR
Emis Increase: 3.68
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 25.42 lbs/hr
Max Daily: 25.42 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 25.42 lbs/hr
Max Daily: 25.42 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 3.68 lbs/day
Annual Emission: 1271 lbs/yr
District Exemption: 1304 (a) (4) -10/12/1995-Emergency Equipment

Emittant: PM10
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: .01
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.08 lbs/hr
Max Daily: 0.08 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.52 lbs/hr
Max Daily: 0.52 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0.01 lbs/day
Annual Emission: 4 lbs/yr
District Exemption: 1304 (a) (4) -10/12/1995-Emergency Equipment

Emittant: ROG
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: .22
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 1.52 lbs/hr
Max Daily: 1.52 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 1.52 lbs/hr
Max Daily: 1.52 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0.22 lbs/day
Annual Emission: 76 lbs/yr
District Exemption: 1304 (a) (4) -10/12/1995-Emergency Equipment

Emittant: SOX
BACT:
Cost Effectiveness: NO
Source Type: MINOR
Emis Increase: 0
Modeling: N/A
Public Notice: N/A
CONTROLLED EMISSION
Max Hourly: 0.03 lbs/hr
Max Daily: 0.03 lbs/day
UNCONTROLLED EMISSION
Max Hourly: 0.03 lbs/hr
Max Daily: 0.03 lbs/day
CURRENT EMISSION
BACT 30 days Avg: 0 lbs/day
Annual Emission: 1.5 lbs/yr
District Exemption: 1304 (a) (4) -10/12/1995-Emergency Equipment

SUPERVISOR'S APPROVAL: _____ SUPERVISOR'S REVIEW DATE: _____

Processed By: ttran 8/10/2011 1:56:27 PM

SCAQMD PERMIT PROCESSING SYSTEM (PPS)

AEIS DATA SHEET

Company Name : LA CITY, DEPT OF AIRPORTS
 Equipment Address : 275 CENTER WAY
 LOS ANGELES CA 90045

Facility ID : 800335

Application Number : 525468
 Estimated Completion Date : 08/06/11
 Equipment Type : Basic
 Equipment Description : I C E (>500 HP) EM ELEC GEN DIESEL

Equipment B-Cat : 043902
 Equipment C-Cat :

Emittants	Emissions	
	R1 LB/HR	R2 LB/HR
CO	3.17	3.17
NOX	25.42	25.42
PM10	0.52	0.08
ROG	1.62	1.62
SOX	0.03	0.03

Applicable Rules

1401	09/10/2010	New Source Review of Toxic Air Contaminants
2000	05/06/2005	General (RECLAIM)
3000	11/05/2010	General (Title V)
401	11/09/2001	Visible Emissions
402	05/07/1976	Nuisance
431.2	09/15/2000	Sulfur Content of Liquid Fuels

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Daily Start Times :	08:00	00:00	00:00	00:00	00:00	00:00	00:00
Daily Stop Times :	09:00	00:00	00:00	00:00	00:00	00:00	00:00

User's Initials : TT01 Date: 08/06/11 Supervisor's Name : _____ Review Date : ___ / ___ / ___

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
STATIONARY SOURCE COMPLIANCE
APPLICATION PROCESSING AND CALCULATIONS

PAGE 1 OF 8
APPL. NO. See below
PROCESSED BY TT
CHECKED BY
DATE 8/25/2011

APPLICANT'S NAME: LOS ANGELES CITY, DEPARTMENT OF AIRPORTS

MAILING ADDRESS: 7301 WORLD WAY WEST, ROOM 312
LOS ANGELES, CA 90045

EQUIPMENT ADDRESS: RESCUE 80 FIRE STATION - LAX AIR FIELD,
COAST GUARD RD.
LOS ANGELES, CA 90045

EQUIPMENT DESCRIPTION:

APPLICATION NO. 525468:

INTERNAL COMBUSTION ENGINE, NO. 1, DEVICE NO. D216, CATERPILLAR, MODEL NO. 3516C, TURBOCHARGED, AFTERCOOLED, SIXTEEN CYLINDERS, DIESEL FUELED, RATED AT 2937 BHP, DRIVING AN EMERGENCY ELECTRICAL GENERATOR, VENTED TO A DIESEL PARTICULATE FILTER, RYPOS, MODEL HDPF/C.

APPLICATION NO. 525469:

INTERNAL COMBUSTION ENGINE, NO. 2, DEVICE NO. D217, CATERPILLAR, MODEL NO. 3516C, TURBOCHARGED, AFTERCOOLED, SIXTEEN CYLINDERS, DIESEL FUELED, RATED AT 2937 BHP, DRIVING AN EMERGENCY ELECTRICAL GENERATOR, VENTED TO A DIESEL PARTICULATE FILTER, RYPOS, MODEL HDPF/C.

APPLICATION NO. 525470:

INTERNAL COMBUSTION ENGINE, NO. 3, DEVICE NO. D218, CATERPILLAR, MODEL NO. 3516C, TURBOCHARGED, AFTERCOOLED, SIXTEEN CYLINDERS, DIESEL FUELED, RATED AT 2937 BHP, DRIVING AN EMERGENCY ELECTRICAL GENERATOR, VENTED TO A DIESEL PARTICULATE FILTER, RYPOS, MODEL HDPF/C.

APPLICATION NO. 525471:

INTERNAL COMBUSTION ENGINE, NO. 4, DEVICE NO. D219, CATERPILLAR, MODEL NO. 3516C, TURBOCHARGED, AFTERCOOLED, SIXTEEN CYLINDERS, DIESEL FUELED, RATED AT 2937 BHP, DRIVING AN EMERGENCY ELECTRICAL GENERATOR, VENTED TO A DIESEL PARTICULATE FILTER, RYPOS, MODEL HDPF/C.

STATIONARY SOURCE COMPLIANCE

APPLICATION PROCESSING AND CALCULATIONS

HISTORY / PROCESS DESCRIPTION:

These applications were filed on 7/26/11 as class 1 for permits to construct/operate four engines driving emergency electrical generators at the above location. These engines will provide emergency power to the Tom Bradley International Terminal in case of power curtailment from the power grid.

CALCULATIONS (EACH):

Given:

Emission factors: (Standard timing)

	RHC [^]	NOX [^]	SOX*	CO [^]	PM [^]	PM10 [^]
g/BHP-hr	0.25	3.93	0.005	0.49	0.08	0.08

* Adjusted for diesel fuel with sulfur content no higher than 15 ppm sulfur by weight

[^] Manufacturer's data, provided in application for Certification permit 449979

Operating schedule, testing and maintenance:

1 hr/day Max.

1 days/wk

50 wks/yr

Engine rating: 2937 HP

Computations:

	RHC	NOX	SOX	CO	PM	PM10
g/BHP-Hr	0.25	3.93	0.005	0.49	0.08	0.08
g/BHP-Hr ⁺	0.25	0.59	0.005	0.49	0.08	0.08
R1 lb/hr	1.62	25.42	0.032	3.17	0.52	0.52
R1 lb/dy	1.62	25.42	0.032	3.17	0.52	0.52
R2 lb/hr	1.62	25.42	0.032	3.17	0.52	0.08
R2 lb/dy	1.62	25.42	0.032	3.17	0.52	0.08

⁺ Controlled emission, according to the Executive Order, 85% reduction for PM/PM10, not available for other pollutants

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
STATIONARY SOURCE COMPLIANCE
APPLICATION PROCESSING AND CALCULATIONS

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APPL. NO. See below
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RULES EVALUATION:

Rule 212:

Section (c)(1): This equipment is not located within 1000 feet of a school. No public notice is required.

Section (c)(2): The increase of emissions at this facility is less than the thresholds specified in section (g). No public notice is required.

Section (c)(1): The MICR from installation of this equipment is less than one in one million. No public notice is required.

Rule 401:

Base on experience with similar equipment, these engines are expected to comply with the visible emission limits.

Rule 402:

Based on experience with similar equipment, nuisance complaints are not expected.

Rule 404:

Based on experience with similar equipment, compliance with this rule is expected.

Rule 431.2:

Diesel fuel supplied to this equipment must contain not higher than 15 ppm by weight of sulfur. Compliance is expected.

Rules 1110.2:

These engines are exempt from this rule because they are emergency engines pursuant to section (h)(2).

REGULATION XIII - New Source Review

Rule 1301:

The equipment subjects to and meets BACT and LAER requirements (4.8 gram/BHp-hr NO_x,+ NMHC, 2.6 gram/BHp-hr CO and 0.15 gram/BHp-hr PM, with installation of a DPF) and 50 hour-a-year operation time limit for testing and maintenance purposes.

This equipment is exempt from modeling and offsets requirements for being a emergency equipment pursuant to Rule 1304(a)(4).

REGULATION XIV – TOXICS AND OTHER NON-CRITERIA POLLUTANTS

Rule 1401

These engines are exempt from the requirements of this rule pursuant to section (g)(1)(F).

Rule 1470

These engines are subject to the requirements of this rule as “new” engine as defined by this rule.

Section (c)(1) Diesel fuel purchased for this equipment must contain not higher than 15 ppm by weight of sulfur. Compliance is expected.

Section (c)(2)(A) Because this equipment is located more than 1000 feet from a school, it is not subject to the requirements of this section.

Section (c)(2)(B) The equipment shall not be operated unless it meets all of the criteria described in this section.

Section (c)(2)(C) Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines – All equipment subject to this rule and have requested to install and operate equipment after January 1, 2011 will be evaluated based on the following guidelines:

The South Coast Air Quality Management District (AQMD) adopted Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines on April 2, 2004 to implement the Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition Engines. This rule was subsequently amended on March 4, 2005, November 3, 2006, and June 1, 2007 to implement various amendments that CARB made to this ATCM. AQMD Rule 1470 currently requires that compression-ignition engines 750 hp or greater must meet Tier 4 requirements on and after January 1, 2011.

In October 2010 CARB proposed amendments to their ATCM to remove the Tier 4 emission limits for NOx and Particulate Matter for emergency standby engines and to limit diesel particulate matter emissions for all sizes of engines to 0.15 gram/bhp-hr. In November 2010, CARB posted a Regulatory Advisory (<http://www.arb.ca.gov/diesel/documents/advisory.pdf>) that summarizes the amendments to the ATCM and states that during the transition period from January 1, 2011 to when the amended ATCM becomes effective, CARB will exercise its enforcement discretion and not enforce the more stringent Tier 4 Standards for new emergency standby engines. However, CARB also cautions that local districts may have more stringent requirements. On the local level, the local air quality control or air quality management district's (districts) permit facilities with stationary engines. The amendments to ATCM have just become effective on May 19, 2011 when the California Office of Administrative Law (OAL) approved the CARB rulemaking for the amendments to ATCM.

AQMD has announced that it intends to amend Rule 1470 to incorporate some of amendments to ATCM that have been approved by OAL. At this time, AQMD is considering amendments to Rule 1470 to align with the amended ATCM for all pollutants except diesel particulate matter (PM), which is a toxic and cancer causing air contaminant. The staff's Proposed Amended Rule (PAR) 1470 includes a requirement for installation of a CARB-certified diesel particulate filter (DPF) for new emergency IC Engines by a certain date in the future¹ unless the facility can demonstrate that the maximum individual cancer risk (MICR) from the engine is less than one in one million or the engine is used to drive a fire pump. Please note that the current Rule 1470 already has provisions requiring a PM maximum level of 0.01 gram/bhp-hr (Tier 4 Standard) for equipment that will be located on a school or within 100 meters of a school. This requirement will not be changed as a part of the PAR 1470.

PAR 1470 is currently scheduled to be heard by AQMD's Governing Board on October 7, 2011. A Working Group Meeting was held at AQMD on May 12, 2011 to present the staff's proposed amendments to Rule 1470 and receive input from stakeholders regarding the proposed amendments. This Working Group Meeting was well attended by the engine manufacturers, distributors, contractors, installers, governmental agencies, public school districts, and other end users. The AQMD staff received input and comments from all stakeholders and intends to further evaluate all input and comments and is planning to hold a public workshop in June 2011 to present the specific rule language for the proposed amendments.

Under the current requirements of Rule 1470 and other Rules and Regulations, the AQMD can only issue Permits to Construct to emergency standby engines that meet the Tier 4 emission standards. However, due to the pending amendments to Rule 1470, AQMD will assist any affected party at no cost to seek for an Order of Abatement from the AQMD Hearing Board to allow the construction and operation of an emergency standby engine without meeting the Tier 4 emission standards. Under the terms and conditions of such an Order of Abatement, the affected party is allowed to construct and subsequently operate an emergency standby engine that meets the Tier 3 or Tier 2 (only for 750 bhp or greater engines) emission standards even though the Permit to Construct for the engine requires compliance with Tier 4 emission standards. The Order of Abatement is expected to be in effect until December 31, 2011 to allow sufficient time for the approval of the proposed amendments to Rule 1470. Under the terms and conditions specified in the Order of Abatement, the affected party shall still comply with all applicable requirements once PAR 1470 is approved by the AQMD's Governing Board.

¹ Despite of proposed exemption or delayed requirements, these engines are required DPF pursuant to BACT/LAER requirements from Regulation XIII as discussed above.

Section (d)(1)(B) The owner/operator of this equipment is required to keep a log of entries described in (9)(B) for 36 months. However, since this is Title V facility, the owner/operator is required to maintain records for 5 years.

STATIONARY SOURCE COMPLIANCE

APPLICATION PROCESSING AND CALCULATIONS

REGULATION XX: RECLAIM PERMITS

Rule 2001: This facility is a NO_x RECLAIM facility so this engine is subject to RECLAIM requirements.

Rule 2005

Section (c) The installation of this equipment at this facility is subject to BACT/LAER requirements. The engines are Tier 2 engines, vented to DPFs, and will be operated no more than 50 hours a year for testing and maintenance purposes so it meets BACT.

This equipment is not subject to modeling requirements as it is used on a standby basis pursuant to Section (k)(5).

According to the attached internal email from DEO M. Nazemi dated July 26, 2011, this existing facility only needs to hold enough RTC to cover the first year of operation of these engines. Also, permit condition I.296 (condition no. 9 in this evaluation) will be added to this facility as instructed from this email.

Ruling from the meeting on July 28, 2010 among Messieurs B. Yeh - Senior Engineering Manager, A. Lee - Air Quality and Compliance Supervisor, and R. Castro - Senior Engineer, was that potential to emit (PTE) emissions from emergency engine are to assess on 50 hours a year (to be consistent with the limits BACT and public notification from Rule 212), rather than 200 hours a year. The annual PTE of these engines are 5084 lb (@25.42 lb/hr, each).

Records show that 54680 lb NO_x RTC so this facility holds sufficient RECLAIM Trading Credit to offset annual emission increase from installing this equipment.

Section (f) As indicated above, this facility holds sufficient RECLAIM Trading Credit to cover annual emission increase from installing these engines. No offsets are required.

Section (g) Not applicable because the emission source is not a major source.

Rule 2012: These engines are defined as a NO_x process unit by this rule. It meets the requirements of this rule by installing, maintaining and operating a timer; by reporting emissions quarterly; and by accepting the emission factors and permit conditions.

REGULATION XXX: TITLE V PERMITS

Rule 3000 (b)(6): The Title V expected permit revision caused by this equipment installation satisfies all the applicable conditions listed in this rule so, it constitutes a de minimus significant permit revision.

Rule 3003: The anticipated de minimus significant permit revision is expected to comply with all the applicable requirements in this rule by complying with EPA's reviewing procedures.

Rule 3005 (e): Whenever applicable, the procedures for de minimus significant permit revision stated in this rule will be addressed in a proper and timely manner.

CEQA: The installation of these engines is part of the larger federally mandated project. Environmental impact study was conducted and it was determined that no significant effect on the environment.

DISCUSSIONS:

It has been determined that the equipment is expected to operate in compliance with all the applicable Rules and Regulations of the District.

RECOMMENDATIONS:

Issue permits to construct subject to the following permit conditions:

PERMIT CONDITIONS

1. OPERATION OF THIS EQUIPMENT SHALL BE IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT WAS ISSUED, UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS ENGINE SHALL NOT BE OPERATED MORE THAN 200 HOURS IN ANY ONE CALENDAR YEAR, WHICH INCLUDES NO MORE THAN 50 HOURS IN ANY ONE YEAR, NOR 4.2 HOURS IN ANY ONE MONTH, MAINTENANCE AND TESTING PURPOSES.
4. SULFUR CONTENT OF DIESEL FUEL SUPPLIED TO THE ENGINE SHALL NOT EXCEED 0.0015% BY WEIGHT.
5. A NON-RESETTING TIMER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
6. THIS EQUIPMENT SHALL BE OPERATED IN COMPLIANCE WITH REQUIREMENTS OF DISTRICT RULE 1470.

7. AN ENGINE OPERATING LOG SHALL BE KEPT AND MAINTAINED ON FILE TO RECORD WHEN THIS ENGINE IS STARTED MANUALLY. THE LOG SHALL LIST THE DATE OF OPERATION, THE TIME READING IN HOURS AT THE BEGINNING AND END OF OPERATION, THE REASON FOR OPERATION FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION (INCLUDE HOURS FOR MANUAL AND AUTOMATIC OPEARTION) SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.
8. OPERATION OF THE ENGINE BEYOND THE 50 HOURS PER YEAR ALLOTTED FOR ENGINE MAINTENAINCE AND TESTING SHALL BE ALLOWED ONLY IN THE EVENT OF A LOSS OF GRID POWER OR UP TO 30 MINUTES PRIOR TO A ROTATING OUTAGE, PROVIDED THAT THE ELECTRICAL GRID OPERATOR OR ELECTRIC UTILITY HAS ORDERED ROTAING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAN TIME, AND THE ENGINE IS LOCATED IN A UTILITY SERVICE BLOCK THAT IS SUBJECT TO THE ROTATING OUTAGE. ENGINE OPERATION SHALL BE TERMINATED IMMEDIATELY AFTER THE UTILITY DISTRIBUTION COMPANY ADVISES THAT A ROTATING OUTAGE IS NO LONGER IMMINENT OR IN EFFECT.
9. THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE OPERATOR DEMONSTRATES TO THE EXECUTIVE OFFICER THAT THE FACILITY HOLDS SUFFICIENT RTCS TO OFFSET THE ANNUAL EMISSIONS INCREASE FOR THE FIRST 12 MONTHS OF OPERATION. IN ADDITION, THIS EQUIPMENT SHALL NOT BE OPERATED UNLESS THE OPERATOR DEMONSTRATES TO THE EXECUTIVE OFFICER THAT, AT THE COMMENCEMENT OF EACH COMPLIANCE YEAR AFTER THE START OF OPERATION, THE FACILITY HOLDS SUFFICIENT RTCS IN AN AMOUNT EQUAL TO THE ANNUAL EMISSIONS INCREASE.
10. THIS EQUIPMENT SHALL BE VENTED TO A DIESEL PARTICULATE FILTER WHICH IS CERTIFIED BY CALIFORNIA AIR RESOURCE BOARD LEVEL 3.

RULE 1401 ANALYSIS

Data-entry

Equipment	engine	boiler/engine
if engine list hp rating	2937	hp
Fuel rate	138.0	gal/hr
Hr/dy	1	hr/dy
dy/wk	1.00	dy/wk
wk/yr	50.00	wk/yr
deemed complete date	6/30/2011	

Data output

Tier 2 MICR	2.35E-05	
Tier 3-MICR	3.93E-07	
Allowed hr per location	50.00	hr/location
Allowed gallon per location	138.00	gal/location

Tier 2 and 3 defaults

Distance-tier 2	50	meters
X/Q	16.88	
MET	1	
LEA	1	
(X/Q)Max	2000	
Adjust for 70 yr-tier 3 (9/70)	no	yes/no
Adjust for 70 yr-tier 2 (9/70)	no	yes/no
Tier 3 adjustment (hr to annual)	0.1	

Rel Adjustment factor (ave time) worst case

4 hr	0.7
6 or 7 hr	0.62

Note, can change value if nessassary

Tier 3 modeling data

Calculate acfm	no	yes/no
Conversion factor-ice	6.2	ft ³ /hp
Conversion factor-boiler	1375.185	ft ³ /gal
Actual exhaust rate	15136	ft ³ /min
exhaust rate used in model	15136.00	ft ³ /min
Temp.	762.00	degree F
Stack diameter	8.00	in
Stack height	10.00	ft
emissions rate	1.00	lb/hr

Tier 3 modeling input data

Temp	679.000	degrees k
Stack dia	0.203	meter
Stack area	0.032	square meter
Stack height	3.048	meter
Stack velocity	220.391	m/s
emissions rate	0.126	gr/s

Tier 3 modeling output data-max 1hr concentration

max concentration	12.38	ug/l
max distance	50.00	meter

RULE 1401 ANALYSIS

Tier 2 Modeling	E.F.*	Emission			Tier 2								%MICR
Toxic Pollutants	lb/Mgal	lb/hr	lb/hr-data entry	ton/yr (Q)	U-(ug/m3)-1	RELC	RELA	MICR-mp	Chronic	MICR	HIA	HIC	
BENZENE	1.13E-01	1.56E-02	15594.0000	3.90E-04	2.90E-05	6.00E+01	1.30E+03	1	1	1.91E-07	1.4874E-02	0.000109678	0.81
FORMALDEHYDE	1.73E+00	2.38E-01	238201.8000	5.96E-03	6.00E-06	3.00E+00	9.40E+01	1	1	6.03E-07	5.0681E+00	0.033507053	2.57
PAH'S	2.78E-02	3.84E-03	3836.4000	9.59E-05	1.10E-03	0.00E+00	0.00E+00	12.7		2.26E-05			96.32
NAPHTHALENE	1.25E-02	1.73E-03	1725.0000	4.31E-05	0.00E+00	9.00E+00	0.00E+00	1	1	0.00E+00		8.08833E-05	0.00
ACETALDEHYDE	1.07E-01	1.48E-02	14766.0000	3.69E-04	2.70E-06	9.00E+00	0.00E+00	1	1	1.68E-08		0.000692361	0.07
ACROLEIN	8.43E-03	1.16E-03	1163.3400	2.91E-05	0.00E+00	0.00E+00	1.90E-01	1	1	0.00E+00	1.2246E+01		0.00
1,3-BUTADIENE	5.41E-03	7.47E-04	746.5800	1.87E-05	1.70E-04	0.00E+00	0.00E+00	1		5.36E-08			0.23
CHLOROBENZENE	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00			0.00E+00			0.00
TOLUENE	3.70E-02	5.11E-03	5108.0000	1.28E-04	0.00E+00	3.00E+02	3.70E+04	1	1	0.00E+00	2.7600E-04	7.18244E-06	0.00
XYLENES	1.74E-02	2.40E-03	2401.2000	6.00E-05	0.00E+00	7.00E+02	2.20E+04	1	1	0.00E+00	2.1829E-04	1.44758E-06	0.00
ARSENIC	0.00E+00	0.00E+00	0.0000	0.00E+00	3.30E-03	0.00E+00	1.90E-01	2.7		0.00E+00	0.0000E+00		0.00
CADMIUM	0.00E+00	0.00E+00	0.0000	0.00E+00	4.20E-03	0.00E+00	0.00E+00	1		0.00E+00			0.00
HEXAVALENT CHROMIUM	0.00E+00	0.00E+00	0.0000	0.00E+00	1.50E-01	0.00E+00	0.00E+00	1.01		0.00E+00			0.00
COPPER	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00	0.00E+00	1.00E+02	1		0.00E+00	0.0000E+00		0.00
LEAD	0.00E+00	0.00E+00	0.0000	0.00E+00	1.20E-05	0.00E+00	0.00E+00	1		0.00E+00			0.00
MANGANESE	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00	2.00E-01	0.00E+00	1	1	0.00E+00			0
MERCURY	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00	9.00E-02	1.80E+00	1	1.6	0.00E+00	0.0000E+00		0
NICKEL	0.00E+00	0.00E+00	0.0000	0.00E+00	2.60E-04	5.00E-02	6.00E+00	1	1	0.00E+00	0.0000E+00		0
SELENIUM	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1	1	0.00E+00			0.00
ZINC	0.00E+00	0.00E+00	0.0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1	1	0.00E+00			0.00
Total										2.35E-05	17.3292	0.034398606	100.00
										> 1 IN A MILLION			

* ARB CATEF LIST per Hamang Desi

boiler cfm calculation = 196.455 ft3/lb (ref ap-42 table D-6, pg 947) * 7 lb/gal = 1375 ft3/gal

Note, lb/hr data entry value is in terms of 10 to the minus six (easy toxic nr entry)

MICR = Q x U x MET x MP x LEA

HIC = (Qyr x (X/Q) x MET x MP)/Chronic REL

HIA = (Qhr x (X/Q)hr)/Acute REL

RULE 1401 ANALYSIS

max con
max hr

12.38
50.00

Tier 3 Toxic Pollutants	Max-lb/hr	annual lb/hr	Adjusted con (ug/m3)		Tier 3		
			max hr	annual	MICR	HIC	HIA
BENZENE	1.56E-02	0.00008901	1.93E-01	1.10E-03	3.20E-09	1.83651E-06	9.2072E-05
FORMALDEHYDE	2.38E-01	0.001359599	2.95E+00	1.68E-02	1.01E-08	0.000561061	2.2684E-03
PAH'S	3.84E-03	2.18973E-05	4.75E-02	2.71E-04	3.79E-07		
NAPHTHALENE	1.73E-03	9.84589E-06	2.14E-02	1.22E-04	0.00E+00	1.35436E-06	
ACETALDEHYDE	1.48E-02	8.42808E-05	1.83E-01	1.04E-03	2.82E-10	1.15933E-05	
ACROLEIN	1.16E-03	6.64007E-06	1.44E-02	8.22E-05	0.00E+00		1.1079E-05
1,3-BUTADIENE	7.47E-04	4.2613E-06	9.24E-03	5.28E-05	8.97E-10		
CHLOROBENZENE	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00		
TOLUENE	5.11E-03	2.91438E-05	6.32E-02	3.61E-04	0.00E+00	1.20267E-07	4.8625E-05
XYLENES	2.40E-03	1.37055E-05	2.97E-02	1.70E-04	0.00E+00	2.42391E-08	2.2867E-05
ARSENIC	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00		0.0000E+00
CADMIUM	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00		
HEXAVALENT CHROMIUM	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00		
COPPER	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00		0.0000E+00
LEAD	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00		
MANGANESE	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0	
MERCURY	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0	0.0000E+00
NICKEL	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00	0	0.0000E+00
SELENIUM	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00		
ZINC	0.00E+00	0	0.00E+00	0.00E+00	0.00E+00		
	0.00E+00		0.00E+00				
	0.00E+00		0.00E+00				
Total	0.00E+00		0.00E+00		3.93E-07	0.00057599	0.002443056

Max time = 50.00 hr
 Annual lb/hr = ton/yr * 1yr/365 day * 1 dy/24 hr * 2000 lb/ton
 Adjusted con = actual. Con * (annual ave lb/hr/ 1 lb/hr)
 Adjusted Max 1 hr concentration (HIA) = actual concentration * max lb/hr

MICR tier 3 = ajusted con. * 0.10 * Unit risk factor
 HIC tier 3 = adjusted concentraion * 0.1 / Chronic REL
 HIA tier 3 = adjusted Max one hour concentration / Acute REL

08/25/11

09:02:31

*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

LAX 525468-71

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	POINT
EMISSION RATE (G/S)	=	.126000
STACK HEIGHT (M)	=	3.0500
STK INSIDE DIAM (M)	=	.2030
STK EXIT VELOCITY (M/S)	=	220.7104
STK GAS EXIT TEMP (K)	=	679.0000
AMBIENT AIR TEMP (K)	=	293.0000
RECEPTOR HEIGHT (M)	=	.0000
URBAN/RURAL OPTION	=	URBAN
BUILDING HEIGHT (M)	=	.0000
MIN HORIZ BLDG DIM (M)	=	.0000
MAX HORIZ BLDG DIM (M)	=	.0000

THE NON-REGULATORY BUT CONSERVATIVE BRODE 2 MIXING HEIGHT OPTION WAS SELECTED.

THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

STACK EXIT VELOCITY WAS CALCULATED FROM
VOLUME FLOW RATE = 15136.000 (ACFM)

BUOY. FLUX = 12.676 M**4/S**3; MOM. FLUX = 216.559 M**4/S**2.

*** FULL METEOROLOGY ***

*** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

	DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)
DWASH									
NO	25.	3.161	4	20.0	20.0	30.0	10.25	4.24	3.78
NO	100.	8.480	4	10.0	10.0	30.0	17.44	15.96	14.10
NO	200.	7.329	4	5.0	5.0	38.2	31.84	31.64	28.16
NO	300.	5.797	4	4.0	4.0	45.3	39.03	46.51	41.52
NO	400.	4.708	4	3.0	3.0	57.1	51.03	60.98	54.66
NO	500.	4.690	6	1.0	1.0	10000.0	60.56	52.83	34.41
NO	600.	4.917	6	1.0	1.0	10000.0	60.56	61.51	38.50
NO	700.	4.875	6	1.0	1.0	10000.0	60.56	70.01	42.42

NO	800.	4.692	6	1.0	1.0	10000.0	60.56	78.34	46.17
NO	900.	4.445	6	1.0	1.0	10000.0	60.56	86.47	49.76
NO	1000.	4.178	6	1.0	1.0	10000.0	60.56	94.41	53.20
NO	1100.	3.912	6	1.0	1.0	10000.0	60.56	102.16	56.50
NO	1200.	3.660	6	1.0	1.0	10000.0	60.56	109.74	59.68
NO	1300.	3.425	6	1.0	1.0	10000.0	60.56	117.15	62.74
NO	1400.	3.209	6	1.0	1.0	10000.0	60.56	124.39	65.70
NO	1500.	3.012	6	1.0	1.0	10000.0	60.56	131.47	68.56
NO	1600.	2.833	6	1.0	1.0	10000.0	60.56	138.41	71.34
NO	1700.	2.670	6	1.0	1.0	10000.0	60.56	145.21	74.03
NO	1800.	2.522	6	1.0	1.0	10000.0	60.56	151.87	76.64
NO	1900.	2.387	6	1.0	1.0	10000.0	60.56	158.39	79.19
NO	2000.	2.264	6	1.0	1.0	10000.0	60.56	164.80	81.67
NO	2100.	2.151	6	1.0	1.0	10000.0	60.56	171.09	84.09
NO	2200.	2.048	6	1.0	1.0	10000.0	60.56	177.26	86.45
NO	2300.	1.953	6	1.0	1.0	10000.0	60.56	183.32	88.76
NO	2400.	1.866	6	1.0	1.0	10000.0	60.56	189.29	91.02
NO	2500.	1.785	6	1.0	1.0	10000.0	60.56	195.15	93.23
NO	2600.	1.711	6	1.0	1.0	10000.0	60.56	200.91	95.39
NO	2700.	1.642	6	1.0	1.0	10000.0	60.56	206.59	97.51
NO	2800.	1.578	6	1.0	1.0	10000.0	60.56	212.17	99.60
NO	2900.	1.518	6	1.0	1.0	10000.0	60.56	217.67	101.64
NO	3000.	1.462	6	1.0	1.0	10000.0	60.56	223.09	103.65

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 25. M:
 51. 12.38 4 20.0 20.0 30.0 10.25 8.36 7.37
 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** SUMMARY OF SCREEN MODEL RESULTS ***

<u>CALCULATION PROCEDURE</u>	<u>MAX CONC (UG/M**3)</u>	<u>DIST TO MAX (M)</u>	<u>TERRAIN HT (M)</u>
SIMPLE TERRAIN	12.38	51.	0.

** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
