

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE APPLICATION PROCESSING AND CALCULATIONS	PAGE 1 of 4 A/N 452326 PROCESSED BY MV02 CHECKED BY DATE 2/23/2006
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EVALUATION REPORT FOR PERMIT TO OPERATE

Applicant's Name: City of Hope Medical Center

Mailing Address: 1500 E. Duarte Rd.
Duarte, CA 91010

Equipment Location: 1500 E. Duarte Rd.
Duarte, CA 91010

EQUIPMENT DESCRIPTION:

INTERNAL COMBUSTION ENGINE, PORTABLE, CATERPILLAR, DIESEL-FUELED, EMERGENCY ELECTRICAL GENERATION, MODEL NO. 3304BDITA, SERIAL NO. 9HK00371, TURBOCHARGED, AFTERCOOLED, FOUR CYLINDERS, 167 BHP.

PROCESS HISTORY/DESCRIPTION:

This application was submitted for new installation on Jan. 17, 2006. The internal combustion engine drives an emergency back-up electrical generator at this hospital and research center. The equipment is mounted on a trailer and can be moved around the 100-acre facility during power breakdowns. The engine has been operated at the site since 2000 under an Air Resources Board (ARB) permit. The applicant is now assuming ownership of the equipment and filed this permit application. Since the engine has been installed and operated at the location for several years, the application will be processed for an existing installation. A 50% penalty will be imposed on the permit processing fees. There are no violation notices that have been issued to this facility within the last two years.

Since this engine has been installed at the location site since 2000, it is required to meet the Best Available Control Technology (BACT) requirements for Tier I engines for the criteria pollutants. Based on the manufacturer's emissions data provided with this application, the engine meets the Tier I emission standards for NOx and VOC (6.9 and 1.0 grams/bhp-hr respectively). The CO and PM10 emissions comply with Tier II levels (3.7 and 0.22 grams/bhp-hr respectively). See R. Castro's memo dated 10/05/04 which is attached.

The engine is classified as an "in-use" unit as per Rule 1470 and subject to the rule requirements for this engine type.

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CALCULATIONS:

Please see attachment.

RULES EVALUATION:

Rule 212:

The engine is not located within 1,000 feet of a K-12 school. Public notice will not be required for this project.

Rule 401:

Based on experience with similar equipment, this engine is 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 407:

Exempt per Rule 407(b)(1).

Rule 431.2:

Diesel fuel supplied to this equipment must contain 15 ppm or less sulfur by weight. Compliance is expected.

Rule 1110.2:

Exempt per Rule 1110.2(h)(2).

Regulation XIII: New Source Review

Rule 1303(a)(1) - The equipment must be constructed with BACT. Manufacturer's emissions data provided with the application show that the engine complies with BACT emission standards for Tier 1 engines.

Rule 1303(b) - The equipment is exempt from offset and modeling requirements per Rule 1304(a)(4).

Rule 1401:

Exempt per Rule 1401(g)(1)(F).

Rule 1470:

This engine is expected to comply with the rule requirements.

Rule 1470(c)(3)(B)-

The engine is not located within 500 feet or less from a school.

Rule 1470(c)(3)(C)(ii)(I)-

Based on manufacturer's emissions data, the PM emission from the engine is 0.082 gram/bhp-hr. The engine will be limited to operate no more than 50 hours per year for maintenance and performance testing.

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Rule 1470(c)(3)(C)(iv):

The engine meets the applicable Tier I standards for the criteria pollutants.

Regulation XX:

This facility is not in the Regional Clean Air Incentives Market (RECLAIM) program.

Regulation XXX:

This facility is not operating under the federal Title V permitting program.

CONCLUSIONS & RECOMMENDATIONS:

This application is expected to comply with all applicable District rules and regulations. A Permit to Operate is recommended subject to the following conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED, UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITIONS AT ALL TIMES.
3. THIS ENGINE SHALL NOT BE OPERATED MORE THAN A TOTAL OF 200 HOURS IN ANY ONE YEAR WHICH INCLUDES NO MORE THAN 50 HOURS FOR MAINTENANCE AND PERFORMANCE TESTING.
4. AN OPERATIONAL NON-RESETTABLE ELAPSED TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
5. THE OPERATION OF THIS ENGINE BEYOND 50 HOURS PER YEAR FOR MAINTENANCE AND PERFORMANCE 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 UTILITY DISTRIBUTION COMPANY HAS ORDERED ROTATING OUTAGES IN THE CONTROL AREA WHERE THE ENGINE IS LOCATED OR HAS INDICATED THAT IT EXPECTS TO ISSUE SUCH AN ORDER AT A CERTAIN 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.

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6. THIS ENGINE SHALL NOT BE USED AS PART OF A DEMAND-RESPONSE PROGRAM USING INTERRUPTIBLE SERVICE CONTRACT IN WHICH A FACILITY RECEIVES A PAYMENT OR REDUCED RATES IN RETURN FOR REDUCING ITS ELECTRIC LOAD ON THE GRID WHEN REQUESTED TO DO SO BY THE UTILITY OR THE GRID OPERATOR.
7. AN ENGINE OPERATING LOG SHALL BE MAINTAINED WHICH ON A MONTHLY BASIS SHALL LIST ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:
 - A. EMERGENCY USE HOURS OF OPERATION
 - B. MAINTENANCE AND TESTING HOURS
 - C. OTHER OPERATING HOURS (DESCRIBE THE REASON FOR OPERATION)
 IN ADDITION, EACH TIME THE ENGINE IS STARTED MANUALLY, THE LOG SHALL INCLUDE THE DATE OF OPERATION AND THE TIMER READING IN HOURS AT THE BEGINNING AND END OF OPERATION. THE LOG SHALL BE KEPT FOR A MINIMUM OF THREE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST. THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SHALL BE RECORDED SOMETIME DURING THE FIRST 15 DAYS OF JANUARY OF EACH YEAR.
8. THIS ENGINE SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF RULES 431.2 AND 1470.
9. MATERIAL SAFETY DATA SHEETS FOR THE DIESEL FUEL USED IN THIS ENGINE SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

CALCULATIONS

A/N 452326

Given:

HP 167
 g to lb conversion factor 0.0022026
 Operating schedule
 hrs/day Max. 1
 hrs/month Max. 3
 hrs./yr Ave. 50
 PM10 in total PM 96%

	VOC	NOx	SOx	CO	PM	PM10
Emission factors (Mfr. Data)	0.299	6.361	0.0049	0.299	0.082	0.079
BACT	1.0	6.9		8.5		0.38

	Yes	No
Retard Timing		x

	VOC	NOx	SOx	CO	PM	PM10
Emission correction factor	1	1	1	1	1	1

Computations:

	VOC	NOx	SOx	CO	PM	PM10
Emission factor, g/HP-hr	0.30	6.36	0.0049	0.30	0.08	0.08
lb/hr	0.11	2.34	0.00	0.11	0.03	0.03
lb/day Max.	0.11	2.34	0.00	0.11	0.03	0.03
lb/day Avg.	0	0	0	0	0	0
lb/yr	5.50	16.99	0.09	5.50	1.51	1.45

Rule 1110.2:

The emissions from this equipment are exempt from this rule per Rule 1110.2(h)(7).

REGULATION XIII:

Since this engine qualifies as a non-road engine under EPA regulations, it is exempt from Reg. XIII per Rule 1301(b)(3).

REGULATION XIV:

This emergency engine, if stationary, would be exempt per Rule 1401 (g)(1)(F). However, portable engines are subject to Rule 1401. This engine's actual operating time will be limited to 70 hours per year based on Tier 3 Risk Assessment.

CARB-EPA Emission Limits for Nonroad Compression-Ignited Engines:

For an engine manufactured on or after January 1, 1997, with an engine rating of between 100 and 175 bhp, the following emission limits apply:

	Emission Limits in grams/bhp-hr			
	NOx	ROG	CO	PM
Required	6.9	none	none	none
Actual	6.36	0.3	0.3	0.08
Compliance	Yes	Yes	Yes	Yes

93116.3 (6) (5)
Tier 1 for NOx
for this size
engine manuf.
1997

Rule 1470:

This rule does not apply since equipment is a portable engine and will operate no more than 70 hours per year.

DISCUSSIONS:

Based on the information submitted with the application, this engine will operate in compliance with all the applicable Rules and Regulations of the District.

RECOMMENDATIONS:

Issue Permit to Operate subject to the following operating conditions:

CONDITIONS

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITIONS AT ALL TIMES.
3. AN OPERATIONAL NON-RESETTABLE/TOTALIZING TIME METER SHALL BE INSTALLED AND MAINTAINED TO INDICATE THE ENGINE ELAPSED OPERATING TIME.
4. THIS ENGINE SHALL NOT BE OPERATED MORE THAN 70 HOURS IN ANY ONE YEAR AT ANY ONE LOCATION.

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5. THE OPERATOR SHALL MAINTAIN AN ENGINE OPERATING LOG WHICH ON A MONTHLY BASIS LIST AND DOCUMENT ALL ENGINE OPERATIONS IN EACH OF THE FOLLOWING AREAS:

- A. HOURS OF OPERATION;
- B. DATE AND TIME OF OPERATION;
- C. LOCATION OF OPERATION;
- D. REASON FOR OPERATION; AND
- E. FUEL CONSUMPTION IN GALLONS OF DIESEL FUEL.

THE OPERATOR SHALL RECORD THE TOTAL HOURS OF OPERATION FOR THE PREVIOUS CALENDAR YEAR SOME TIME DURING THE FIRST 15 DAYS OF JANUARY EACH YEAR.

THE LOG ENTRIES SHALL BE KEPT FOR A MINIMUM OF FIVE CALENDAR YEARS PRIOR TO THE CURRENT YEAR AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

6. UPON THE FIFTH DAY AFTER PLACEMENT OF THIS EQUIPMENT INTO OPERATION AT A NEW SITE, THE DISTRICT SHALL BE NOTIFIED VIA TELEPHONE AT 1-877-810-6995 OF THE EXACT NATURE OF THE PROJECT AS FOLLOWS:

- A. APPLICATION AND PERMIT NUMBER OF THE PORTABLE EQUIPMENT.
- B. NAME AND TELEPHONE NUMBER OF A CONTACT PERSON.
- C. LOCATION WHERE THE PORTABLE EQUIPMENT WILL BE OPERATED.
- D. ESTIMATED TIME THE PORTABLE EQUIPMENT WILL BE LOCATED AT THE SITE.
- E. DESCRIPTION OF THE PROJECT.
- F. IF LESS THAN 1/4 MILE, THE DISTANCE TO THE NEAREST SENSITIVE RECEPTOR. SENSITIVE RECEPTORS ARE DEFINED AS LONG-TERM HEALTH CARE FACILITIES, REHABILITATION CENTERS, CONVALESCENT CENTERS, RETIREMENT HOMES, RESIDENCES, SCHOOLS, PLAYGROUNDS, CHILD CARE CENTERS, AND ATHLETIC FACILITIES.

7. THIS ENGINE OR A REPLACEMENT ENGINE INTENDED TO PERFORM THE SAME OR SIMILAR FUNCTION, SHALL NOT RESIDE AT ANY ONE LOCATION FOR MORE THAN 12 CONSECUTIVE MONTHS. THE PERIOD DURING WHICH THIS ENGINE AND ITS REPLACEMENT ARE MAINTAINED AT A STORAGE FACILITY SHALL BE EXCLUDED FROM THE RESIDENCE TIME DETERMINATION.

8. THIS ENGINE SHALL NOT BE REMOVED FROM ONE LOCATION FOR A PERIOD OF TIME AND THEN THIS ENGINE OR A REPLACEMENT ENGINE RETURNED TO THE SAME LOCATION, IN ORDER TO CIRCUMVENT THE PORTABLE ENGINE RESIDENCE TIME REQUIREMENTS.

9. THE OPERATOR SHALL NOT USE FUEL CONTAINING SULFUR COMPOUNDS IN EXCESS OF 15 PPM BY WEIGHT.

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10 MATERIAL SAFETY DATA SHEETS FOR THE DIESEL FUEL USED IN THIS ENGINE SHALL BE KEPT CURRENT AND MADE AVAILABLE TO DISTRICT PERSONNEL UPON REQUEST.

Emergency ICEs

Given:

HP 167
 g to lb conversion factor 0.0022046
 Operating schedule
 hrs/day Max. 1
 hrs/day Avg. 1
 days/wk 1
 hrs/month Max. 3
 wks/yr 50

	VOC	NOx	SOx	CO	PM	PM10
Emission factors	0.299	6.361	0.0049	0.299	0.082	0.08

	Yes	No
Retard Timing	0	x

	VOC	NOx	SOx	CO	PM	PM10
Emission correction factor	1	1	1	1	1	1

Computations:

	VOC	NOx	SOx	CO	PM	PM10
Emission factor, g/HP-hr	0.299	6.361	0.0049	0.50	0.082	0.08
lb/hr	0.11	2.34	0.00	0.11	0.03	0.03
lb/day Max.	0	2	0	0	0	0
lb/day Avg.	0	0	0	0	0	0
lb/yr	5.61	119.44	0.09	5.61	1.54	1.48

Data Inputs

ENGR. INI:	GV02
A/N:	459326
Appln Date:	1/17/2006
Class:	5

Applicant: CITY OF HOPE
 Mailing address: 1500 E. DUARTE RD.
 DUARTE, CA 91010

Equipment location: 1500 E. DUARTE RD., DUARTE, CA 91010 (Portable)

MANUFACTURER: CAT/PERILLAR
 MODEL NO.: 3304BD1FA
 SERIAL NO.: 9HK00371
 CYLINDERS: 4
 HP RATING: 167

	Turbocharged/ Aftercooled	Naturally Aspirated
Turbocharged	X	0
TURBOCHARGED AND AFTERCOOLED		

Driving:

Generator	Compressor	Pump
X	0	0

GENERATOR

Note: Emission factors taken from engine manufacturer data provided with this application.

	VOC	NOx	CO	PM*
Emission Factors, g/HP-hr	0.299	6.361	0.299	0.082

	Yes	No
Retard Timing	0	X

Operating schedule:

hrs/day Max:	1
hrs/day Avg:	1
days/wk:	1
hrs/month Max:	3
wks/yr:	50

TIER 1 SCREENING RISK ASSESSMENT REPORT

Receptor Distance (actual)	25
Receptor Distance (for X/Q LOOKUP)	25

Tier 1 Results	
Cancer/Chronic ASI 1.75E+01 FAILED	Acute ASI PASSED

APPLICATION SCREENING INDEX CALCULATION

Compound	Annual Emission Rate (lbs/yr)	Max Hourly Emission Rate (lbs/hr)	Cancer / Chronic Pollutant Screening Level (lbs/yr)	Acute Pollutant Screening Level (lbs/hr)	Cancer/Chronic Pollutant Screening Index	Acute Pollutant Screening Index (PSI)
Diesel PM from diesel-fueled internal combustion	2.10E+00	3.00E-02	1.20E-01		1.75E+01	

TOTAL (APPLICATION SCREENING INDEX) 1.75E+01

Table B (These values are needed to calculate cancer burden)

Stack Height (ft):	8		interpolation		Row:		X/Q for one-in-a-million:
	Residential	Industrial	near	far	near	far	
Distance	25.00	25.00	50.00	50.00	25.00	25.00	96.00
X/Q -1 hr conc (ng/m ³)	161.00	161.00	200.00	200.00	161.00	161.00	300.00
X/Q Annualized (ug/m ³)(tons/yr)	5.48	2.94	3.66	3.66	5.48	2.94	3.66

CONVERSION CALCULATOR FOR SCREEN MODELING INPUT (British to Metric Units)

SCREEN INPUT DATA - BRITISH UNITS

Actual exhausted rate	190653	acfm
Temperature	723.20	degree F
Stack diameter	4.00	in
Stack height	48.00	ft
Modeling emissions rate	4.00	lb/hr

SCREEN INPUT DATA - METRIC UNITS

Temperature	657.00	degrees K
Stack diameter	0.102	meter
Stack area	0.008	square meter
Stack height	2.438	meter
Stack velocity	52.799	m/s
Modeling emissions rate	0.12611	kg/s

Table A

Modeling emissions rate	0.12611	gr/sec
Modeling emissions rate	1.00	lb/hr
Modeling emissions rate	4.38	tons/yr
Max hr/day	24	hr/day
Day per week	7	day/week
Week per year	52	week/yr

MODELING RESULTS - MAX ONE HOUR

Distance residence...	25.00	meter
Max 1-hour Conc: Residence	161.00	ug/m ³
Annualized Conc: Residence	12.88	ug/m ³
Distance Commercial	25.00	meter
Max 1-hour Conc: Commercial	161.00	ug/m ³
Annualized Conc: Commercial	12.88	ug/m ³

Annualized X/Q

X/Q Residential	2.94	(ug/m ³)(tons/yr)
X/Q Commercial	2.94	(ug/m ³)(tons/yr)

Max X/Q

X/Q Residential	161	(ug/m ³)(lb/hr)
X/Q Commercial	161	(ug/m ³)(lb/hr)

TIER 3 SCREENING RISK ASSESSMENT REPORT

Application deemed complete date: 10/09/09

A/N: 452326
 Fac: 23184

2. Tier 2 Data

AET Factor	1300
4-hr	0.78
6 or 7-hrs	0.59

Dispersion Factors tables:

2	For Chronic X/Q
6	For Acute X/Q

Dilution Factors (ug/m3)/(ug/m3)

Receptor	X/Q	X/Qmax
Residential	2.943232426	161.1419753
Commercial	2.943232426	161.1419753

Adjustment and Intake Factors:

	A/Pain	DBR	GVF
Residential Worker	4.2	302	0.96
		149	0.38

TIER 3 RESULTS

5a. MICR

$$\text{MICR} = \text{CP} (\text{mg}/(\text{kg}\text{-day}))^{-1} * \text{Q} (\text{ton}/\text{yr}) * (\text{X}/\text{Q}) * \text{AFann} * \text{MET} * \text{DBR} * \text{EVE} * 1 \text{E-9} * \text{MP}$$

Compound	Residential	Commercial
Diesel PM from diesel-fueled internal combustion engine	9.86E-07	8.08E-07
Total	9.86E-07	8.08E-07
	PASS	PASS

No Cancer Burden, MICR < 1.0E-6

5b. Cancer Burden	no
X/Q for one-in-a-million:	
Distance (meter)	
Area (km ²):	
Population:	
Cancer Burden:	

6. Hazard Index
 $HIA = [C(Ib/hr)] \cdot (X/Q)max \cdot AF / Acute REL$
 $HIC = [C(ton/yr)] \cdot (X/Q) \cdot MET \cdot MPI / Chronic REL$

Target Organs	Acute	Chronic	Acute Pass/Fail	Chronic Pass/Fail
Alimentary system (liver) - AL			Pass	Pass
Bones and teeth - BN			Pass	Pass
Cardiovascular system - CV			Pass	Pass
Developmental - DEV			Pass	Pass
Endocrine system - END			Pass	Pass
Eye			Pass	Pass
Haematopoietic system - HEM			Pass	Pass
Immune system - IMM			Pass	Pass
Kidney - KID			Pass	Pass
Nervous system - NS			Pass	Pass
Reproductive system - REP			Pass	Pass
Respiratory system - RES		6.1 RE-04	Pass	Pass
Skin			Pass	Pass

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Application deemed complete date: 10/09/09

6a. Hazard Index Acute

$HIA = [Q(l/h)] \cdot (X/Q)_{max}$: AF/Acute REL

Compound	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Diesel PM from diesel-fueled internal combustion engine										
Total										

Compound	HIA - Commercial									
	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
Diesel PM from diesel-fueled internal combustion engine										
Total										

6b. Hazard Index/Chronic

HIC = (C_l(envy)) * (XAC) * (MEL) * (MPJ) / Chronic REL

Compound	HIC - Residential												
	AL	BN	CV	DEV	END	EYE	HEM	MM	KID	NS	REP	RESP	SKIN
Diesel PM from diesel-fueled internal combustion engine												6.18E-04	
Total												6.18E-04	

10/09/08

Application deemed complete date:

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6b. Hazard Index Chronic (cont.)

HIC - Commercial											
AL	BN	CV	DEV	DND	EYE	HEMT	INNM	KID	NS	RESP	SKIN
Compound											
Diesel PM from diesel-fueled internal combustion engines											
										6.18E-04	
Total										6.18E-04	

10/13/09
10:46:33

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

CITY OF HOPE

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
EMISSION RATE (G/S) = 126110
STACK HEIGHT (M) = 2.4400
STK INSIDE DIAM (M) = 1.020
STK EXIT VELOCITY (M/S) = 52.3583
STK GAS EXIT TEMP (K) = 657.0000
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 REGULATORY (DEFAULT) 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 = 906.53000 (ACFM)

BUOY. FLUX = .740 M**4/S**3; MOM. FLUX = 3.180 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
10.	110.2	3	10.0	10.0	3200.0	4.15	2.22	2.03	NO

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:

15.	161.0	3	8.0	8.0	2560.0	4.58	3.75	3.43	NO
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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

*** SCREEN DISCRETE 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
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11.	130.3	3	10.0	10.0	3200.0	4.15	2.44	2.23	NO
12.	144.2	3	10.0	10.0	3200.0	4.15	2.66	2.43	NO
13.	152.4	3	10.0	10.0	3200.0	4.15	2.87	2.62	NO
14.	156.1	3	10.0	10.0	3200.0	4.15	3.09	2.82	NO
15.	159.6	3	8.0	8.0	2560.0	4.58	3.32	3.03	NO
16.	161.0	3	8.0	8.0	2560.0	4.58	3.54	3.23	NO
17.	160.0	3	8.0	8.0	2560.0	4.58	3.75	3.43	NO
18.	157.2	3	8.0	8.0	2560.0	4.58	3.97	3.63	NO
19.	155.9	3	5.0	5.0	1600.0	5.86	4.22	3.86	NO
20.	157.4	3	5.0	5.0	1600.0	5.86	4.44	4.06	NO
21.	157.2	3	5.0	5.0	1600.0	5.86	4.65	4.26	NO
22.	155.9	3	5.0	5.0	1600.0	5.86	4.87	4.46	NO
23.	154.7	4	8.0	8.0	2560.0	4.58	3.69	3.24	NO
24.	154.2	4	8.0	8.0	2560.0	4.58	3.85	3.38	NO
25.	152.7	4	8.0	8.0	2560.0	4.58	4.00	3.51	NO
30.	151.2	4	5.0	5.0	1600.0	5.86	4.84	4.26	NO
35.	144.6	4	4.5	4.5	1440.0	6.24	5.65	4.97	NO
40.	136.2	4	3.5	3.5	1120.0	7.32	6.50	5.74	NO
45.	128.1	4	3.5	3.5	1120.0	7.32	7.27	6.41	NO
50.	121.0	4	3.0	3.0	960.0	8.14	8.09	7.14	NO

WASH= 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 ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	161.0	16.	0.

 * REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS *

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EVALUATION REPORT FOR TITLE V FACILITY PERMIT REVISION

APPLICANT'S NAME: City of Hope
MAILING ADDRESS: 1500 E. Duarte Road
Duarte, CA 91010
EQUIPMENT LOCATION: Same as above

EQUIPMENT DESCRIPTION:

TITLE V REVISION

HISTORY/PROCESS DESCRIPTION:

City of Hope is requesting to modify its Title V Facility Permit by adding an emergency portable internal combustion engine (A/N 452326) and removing 4 existing pieces of equipment (A/N's 180215, C21426, 283149, 027700). City of Hope submitted application 500057 on June 25, 2009 to revise their facility permit.

Attached are the drafts of Sections D and K and Appendix B in the facility permit which are affected by the changes to the Title V permit.

The modification is classified as a "de minimis significant revision" to the Title V permit.

The emergency portable engine (A/N 452326) complies with all air pollution requirements and is recommended for a permit to operate. The permit evaluation for this equipment is attached.

Compliance staff conducted a facility inspection in June, 2009 and requested that the Equipment Descriptions be updated to correct a typo error on the model number of the 3 identical boilers listed on permits F11044, F11046, and F11047 (A/N's 316435, 316436, and 316437). The corrections will be noted in this revision.

EMISSIONS CALCULATIONS:

Refer to the evaluation file for A/N 452326.

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RULES EVALUATION:

The proposed modification to the Title V facility permit complies with the following:

Rule 3003:

The "de minimis significant permit revision" is expected to comply with all applicable requirements of this rule.

Rule 3003(i)(4) – The permit revision will be issued only after the permit revision application has been found to comply with all conditions of this section.

Rule 3003(j) – The proposed permit revision is expected to comply with all requirements of this section.

Rule 3005(e)(1):

The proposed Title V permit revision brought about by the addition of an emergency portable engine, satisfies all the applicable requirements of this section.

Rule 3006(a):

The proposed "de minimis significant permit revision" is exempt from the requirements of this section per Rule 3006(b).

CONCLUSIONS & RECOMMENDATIONS:

This application is expected to comply with all applicable District Rules and Regulations. The issuance of a revised Title V permit is recommended.