

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

PERMIT SERVICES DIVISION

APPLICATION PROCESSING AND CALCULATIONS

Pages 3	Page 1
Appl No. 05701	Date 10/03/2002
Processed By E.Y. Chan	Checked By

**Molloy Construction; Plant #14608
900 Van Ness Ave, San Francisco 94109**

BACKGROUND

Molloy Construction is for a Permit to Operate for the following new emergency:

S-1 Standby Generator, Caterpillar D150P4, 215 hp

EMISSIONS SUMMARY

Basis: AP42 Table 3.3-2 factors for uncontrolled diesel engines based on applicant's 100 hr/yr of non-emergency use & 11.52 gal/hr maximum fuel usage. Per the Toxic Section's 9/5/02 memo, this engine is capable of firing at 377 hp.

	g/hp-hr	BACT	abatement	lb/hr	lb/yr	tpy
POC	0.22371	1.5	1	0.186	18.59	0.009
NOx	4.62334	6.9	1	3.843	384.26	0.192
CO	1.4914	2.75	1	1.240	123.95	0.062
PM	0.11	0.15	1	0.091	9.14	0.005

SO₂: (0.05% S) (1/100%) (1152 gal/yr) (6.11 lb/gal) (2 SO₂/S) = 7.04 lb/yr = 0.004 tpy

PLANT EMISSIONS

Pollutant	tons/year		
	current	application increase	New Total
PM-10	0	0.005	0.005
POC	0	0.009	0.009
Nitrogen Oxides	0	0.192	0.192
Sulfur Dioxide	0	0.004	0.004
Carbon Monoxide	0	0.062	0.062

TOXIC RISK SCREENING ANALYSIS

Per Toxic Section's 9/5/02 memo, this project passes its Risk Screening Analysis and its PM-10 emission meeting TBACT limit at 100 hr/yr non-emergency operation.

BACT ANALYSIS

This engine meets the BACT2 limits for NO_x, CO, and POC of 6.9, 2.75, and 1.5, respectively, for diesel engines greater than 175 hp.

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APPLICATION PROCESSING AND CALCULATIONS

Pages 3	Page 2
Appl No. 05701	Date 10/03/2002
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OFFSET ANALYSIS

Per Regulation 2-2-302, this facility does not trigger Offsets because its emissions are less than 15 tpy.

STATEMENT OF COMPLIANCE

S-1, diesel emergency generator, meets the Emergency Standby Engines provisions of Reg 9-8-330 and 9-8-530.

This project is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors and therefore is not discretionary as defined by CEQA (MOP chapter 2.3).

This project is within 1000 feet from the nearest school and is subject to the public notification requirements of Reg 2-1-412. A public notice was issued 10/2/02.

Offsets, PSD, NSPS, and NESHAPS do not apply to this project.

CONDITIONS

CONDITIONS FOR NON-ESSENTIAL EMERGENCY ENGINES:

Stationary Equipment Requirements

1. Hours of Operation: The owner/operator shall operate the emergency standby engine(s) only to mitigate emergency conditions or for reliability-related activities. Operating while mitigating emergency conditions is unlimited. Operating for reliability-related activities is limited to 100 hours per any calendar year. [Basis: Reg. 9-8-330]

2. "Emergency Conditions" is defined as any of the following:

- a. Loss of regular natural gas supply.
- b. Failure of regular electric power supply.
- c. Flood mitigation.
- d. Sewage overflow mitigation.
- e. Fire.
- f. Failure of a primary motor, but only for such time as needed to repair or replace the primary motor. [Basis: Reg. 9-8-231]

3. "Reliability-related activities" is defined as any of the following:

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Pages 3	Page 3
Appl No. 05701	Date 10/03/2002
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- a. Operation of an emergency standby engine to test its ability to perform for an emergency use, or
 - b. Operation of an emergency standby engine during maintenance of a primary motor.
- [Basis: Reg. 9-8-232]

4. The owner/operator shall equip the emergency standby engine(s) with either:
- a. a non-resettable totalizing meter that measures and records the hours of operation for the engine.
 - b. a non-resettable fuel usage meter.
- [Basis: Reg. 9-8-530]

5. The engine shall meet the following emission limits:
- POC 1.5 g/hp-hr
NOx 6.9 g/hp-hr
CO 2.75 g/hp-hr
PM10 0.11 g/hp-hr
- [Basis: BACT, Toxic Risk Analysis]

6. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 2 years and shall make the log available for District inspection upon request:
- a. Hours of operation (total).
 - b. Hours of operation (emergency).
 - c. For each emergency, the nature of the emergency condition.
- [Basis: Reg. 9-8-530, 1- 441]

RECOMMENDATION

Issue a Permit to Operate for the following source:

S-1 Standby Generator, Caterpillar D150P4, 215 hp

By: _____
Eric Y. W. Chan
Air Quality Engineer II

Date