SYNTHETIC MINOR OPERATING PERMIT
EVALUATION REPORT
SAN FRANCISCO GENERAL HOSPITAL
PLANT NUMBER A3974
APPLICATION NUMBER 26792

BACKGROUND

San Francisco General Hospital (SFGH) has made application for a new Synthetic Minor Operating Permit under the provisions of Regulation 2, Rule 6-230 for its general services hospital campus located in San Francisco, California. This site requires limitations on its permit conditions to ensure that the facility does not emit more than 100 tons per year of carbon monoxide, and thereby trigger classification of the site as a Major Facility under the provisions of Regulation 2, Rule 6.

SOURCES COVERED BY SYNTHETIC MINOR OPERATING PERMIT

The permitted sources and abatement devices covered by this synthetic minor operating permit are as follows:

PERMITTED SOURCES

S6, Boiler #2, 68.1 MMBtu/hr, max
S7, Emergency Standby Diesel Generator Set, 2,937 BHP
S8, Emergency Standby Diesel Generator Set, 2,937 BHP
S9, Emergency Standby Diesel Generator Set, 3,604 BHP
S10, Emergency Standby Diesel Generator Set, 3,604 BHP
S11, Emergency Standby Diesel Generator Set, 3,604 BHP
S12, Space Heat Boiler #1, 24.5 MMBtu/hr, max
S13, Space Heat Boiler #1, 24.5 MMBtu/hr, max
S15, Emergency Standby Diesel Generator Set, 228 BHP
S16, Emergency Standby Diesel Generator Set, 749 BHP

ABATEMENT DEVICES

A7, Diesel Catalyzed Particulate Filter
A8, Diesel Catalyzed Particulate Filter
A9, Diesel Catalyzed Particulate Filter
A10, Diesel Catalyzed Particulate Filter
A11, Diesel Catalyzed Particulate Filter

EMISSIONS LIMITATIONS AT SAN FRANCISCO GENERAL HOSPITAL

In order to be eligible for a synthetic minor permit, a site must accept permit conditions limiting the site to less than Title V emission threshold (less than 95 tons/year of NO_x, CO, POC, PM_{10}, and SO_2, less than 9 tons/year of any single hazardous air pollutant (HAP), and less than 23 tons/year of all HAPs combined). At currently permitted operational levels, San Francisco General Hospital has the potential to exceed the above emissions limitations for carbon monoxide (CO).

San Francisco General Hospital has requested that a Synthetic Minor permit be issued to limit operations in a manner that ensures that the facility's CO emissions meet the Title V limitations. This will be done by limiting operating hours and criteria pollutant emissions at its combustion sources.

CARBON MONOXIDE EMISSION CALCULATIONS

All of the sources from this facility which produce CO emissions are combustion sources fueled by either natural gas or by diesel fuel. The facility is willing to accept facility-wide throughput limitations which will ensure that the total CO emissions are less than 80 tons per year.

To achieve this throughput limitation, San Francisco General Hospital has agreed to physically derate the gas flow to source S6, Boiler #2, to 50 percent of its maximum operating capacity.[1] To accomplish this emissions restriction, the permit holder will install an orifice plate to restrict the gas input flow to 50 percent of its maximum design capacity.

The carbon monoxide emission factor used for S6 is from Regulation 9, Rule 7-307.6. Carbon monoxide emissions for all other combustion sources are taken from the manufacturers' specifications. The factors used are as follows:

Gas-fired Sources:

S6	Gas-Fired Boiler	136.2 MM Btu/hr	400 ppmv @ 3% O2, dry
S12	Gas-Fired Boiler	24.5 MM Btu/hr	50 ppmv @ 3% O2, dry
S13	Gas-Fired Boiler	24.5 MM Btu/hr	50 ppmv @ 3% O2, dry

Diesel-fueled Sources:

S7	Standby Generator	2,937 BHP	0.746 g/bhp-hr
S8	Standby Generator	2,937 BHP	0.746 g/bhp-hr
S9	Standby Generator	3,604 BHP	0.895 g/bhp-hr
S10	Standby Generator	3,604 BHP	0.895 g/bhp-hr
S11	Standby Generator	3,604 BHP	0.895 g/bhp-hr
S15	Standby Generator	228 BHP	3.030 g/bhp-hr
S16	Standby Generator	749 BHP	2.495 g/bhp-hr

[1] In addition to this physical gas flow restriction, source S6 is limited to 10% of its maximum rated capacity per 12-month period in order to avoid lower NOx emission limits (Regulation 9-7-112.2).

Based on federally enforceable permit operating conditions the total facility-wide criteria pollutant emissions will then be as follows:

SOURCE	DESCRIPTION	SIZE	UNITS	Operating Hours Per year	PM (tons/yr)	POC (tons/yr)	NPOC (tons/yr)	NOx (tons/yr)	SO2 (tons/yr)	CO (tons/yr)
S-6	BOILER[(1)]	68.1	MM BTU/HR	876	0.222	0.161	0.091	0.181	0.018	8.815
S-7	GENERATOR	2,937	BHP	500	0.206	0.345		6.536	0.008	1.208
S-8	GENERATOR	2,937	BHP	500	0.206	0.345		6.536	0.008	1.208
S-9	GENERATOR	3,604	BHP	500	0.163	0.393		7.459	0.010	1.778
S-10	GENERATOR	3,604	BHP	500	0.163	0.393		7.459	0.010	1.778
S-11	GENERATOR	3,604	BHP	500	0.163	0.393		7.459	0.010	1.778
S-12	BOILER	24.5	MM BTU/HR	8760	0.800	0.579	0.326	3.964	0.063	3.964
S-13	BOILER	24.5	MM BTU/HR	8760	0.800	0.579	0.326	3.964	0.063	3.964
S-15	GENERATOR	228	BHP	500	0.083	0.141		1.767	0.001	0.381
S-16	GENERATOR	749	BHP	500	0.260	0.140		4.494	0.002	1.030
TPY					3.064	3.469	0.743	49.819	0.192	25.903

With these permit limitations, San Francisco General Hospital's Potential to Emit for carbon monoxide emissions will be less than 100 tons per year, and the facility will be compliant with all Synthetic Minor Operation Condition requirements.

NEW SYNTHETIC MINOR OPERATING PERMIT CONDITION

The new Synthetic Minor Operating Permit Condition will incorporate all of the District requirements as set out in the original source permit conditions. In addition, the new condition will add provisions to ensure that the facility will continue to meet the requirements set out in Regulation 2, Rule 6 to avoid designation as a Title V or PSD facility.

STATEMENT OF COMPLIANCE

This facility is in compliance with the applicable requirements of Regulation 2 Rule 6 to obtain a synthetic minor permit. San Francisco General Hospital has voluntarily accepted federally enforceable permit conditions including throughput limitations that will keep its potential to emit below the synthetic minor thresholds.

Condition # 25962

SYNTHETIC MINOR OPERATING PERMIT

San Francisco General Hospital
1001 Potrero Avenue
San Francisco, CA 94110

Plant #3974

CURRENT SOURCES
S6, Boiler #2, 68.1 MMBtu/hr, max
S7, Emergency Standby Diesel Generator Set, 2,937 BHP
S8, Emergency Standby Diesel Generator Set, 2,937 BHP
S9, Emergency Standby Diesel Generator Set, 3,604 BHP
S10, Emergency Standby Diesel Generator Set, 3,604 BHP
S11, Emergency Standby Diesel Generator Set, 3,604 BHP
S12, Space Heat Boiler #1, 24.5 MMBtu/hr, max
S13, Space Heat Boiler #2, 24.5 MMBtu/hr, max
S15, Emergency Standby Diesel Generator Set, 228 BHP
S16, Emergency Standby Diesel Generator Set, 749 BHP

CURRENT ABATEMENT DEVICES
A7, Diesel Catalyzed Particulate Filter
A8, Diesel Catalyzed Particulate Filter
A9, Diesel Catalyzed Particulate Filter
A10, Diesel Catalyzed Particulate Filter
A11, Diesel Catalyzed Particulate Filter

FUTURE SOURCES
None

FUTURE ABATEMENT DEVICES
None

EXEMPT SOURCES
None

This facility, Site # A3974, has a synthetic minor operating permit. This operating permit covers all equipment existing at this facility as of permit issuance. The sources and abatement devices are listed above.

The following conditions establish the federally enforceable permit terms that ensure this plant is classified as a Synthetic Minor Facility under District Regulation 2, Rule 6, Major Facility Review, and ensure it is not subject to the permitting requirements of Title V of the Federal Clean Air Act as amended in 1990 and 40 CFR Part 70. All applications submitted by the applicant and all modifications to the plant's equipment after issuance of the synthetic minor permit must be evaluated to ensure that the facility will not exceed the synthetic minor general limits below, and that sufficient monitoring, recordkeeping, and reporting requirements are imposed to ensure enforceability of the limits.

Any revision to a condition establishing this plant's status as a Synthetic Minor Facility or any new permit term that would limit emissions of a new or modified source for the purpose of

maintaining the facility as a synthetic minor must undergo the procedures specified by Regulation 2, Rule 6, section 423. The basis for the synthetic minor conditions is an emission limit of 95 tons per year for regulated air pollutants, an emission limit for a single hazardous air pollutant of 9 tons per year, and an emission limit for a combination of hazardous air pollutants of 23 tons per year.

Any District conditions that do not establish this facility as a synthetic minor are marked with an asterisk. The facility must comply with all conditions, regardless of asterisks, and must comply with all District requirements for new and modified sources regardless of its status as a synthetic minor.

1. In no event shall the emissions from this site exceed any of the emission limits listed below. The owner/operator shall demonstrate compliance with these emission limits by complying with all emission limits, monitoring procedures, and record keeping requirements identified in Parts 4-18 below. [Basis: Regulation 2-6-423]

NOx	95 tons/year
CO	95 tons/year
POC	95 tons/year
PM10	95 tons/year
SO2	95 tons/year
Any Single HAP	9 tons/year
Combination of HAPs	23 tons/year

2. Boiler S6 shall be fired primarily on natural gas, except for short periods of up to 48 hours per year for testing and maintenance operations, plus an additional 168 hours per year for emergency operations. [Basis: Regulations 9-7-113]

3. Boilers S12 and S13 shall be fired exclusively on natural gas. [Basis: NSPS, Cumulative Increase]

4. The maximum firing rate at S6 shall not exceed 68.1 MM Btu/hour per boiler (based on HHV of the fuel) when firing natural gas. [Basis: NSPS, Avoidance of Title V Permitting Requirements]

5. The maximum firing rate at Sources S12 and S13 shall not exceed 24.5 MM Btu/hour per boiler (based on HHV of the fuel) when firing natural gas. [Basis: NSPS]

6. The total fuel used at Source S6 shall not exceed 596,556 therms in any successive 12-month period. [Basis: Cumulative Increase; Regulation 9, Rule 7-112.2; Avoidance of Title V Permitting]

7. Emissions from Source S6 shall not exceed the following limits:

   NOx: 30 ppmv at 3% O2, dry
   CO: 400 ppmv at 3% O2, dry

   [Basis: Regulation 9-7-307.6; SIP 9-7-301.1; Cumulative Increase; BACT; Avoidance of Title V Permitting]

8. The total fuel used at Sources S12 and S13 shall not exceed 2,145,674 therms in any successive 12- month period. [Basis: Cumulative Increase; BACT]

9. Emissions from Sources S12 and S13 shall not exceed the following limits:

NOx: 9 ppmv at 3% O2, dry
CO: 50 ppmv at 3% O2, dry

[Basis: Regulation 9-7-307.5; Cumulative Increase; BACT; Avoidance of Title V Permitting]

10. The permit holder shall perform an annual source test on Sources S6, S12, and S13 to demonstrate compliance with the above emissions limitations. The results shall be maintained onsite for 5 years from the date of the test and shall be made available for review by the District upon request. [Basis: Regulations 2-6-501; 9-7-506; Cumulative Increase; District MOP, Volume V; 40 CFR 60.4400; 40 CFR 60.8]

11. The gas lines to Sources S6, S12, and S13 shall each be equipped with dedicated, standard natural gas meters to monitor the gas flow to each source. [Basis: Cumulative Increase]

*12. Sources S7, S8, S9, S10, S11, S15, and S16, Emergency Standby Diesel Generator Engines, shall be fired exclusively on diesel fuel having a sulfur content of no more than 0.0015% by weight. The sulfur content of the fuel oil shall be certified by the fuel oil vendor. [Basis: Title 17, CCR, 93115: CARB ATCM for Stationary Compression-Ignition Engines]

*13. Sources S7, S8, S9, S10, S11, S15, and S16, Emergency Standby Diesel Generator Engines, shall only be operated to operate stationary standby diesel generator engines during emergency operations or for reliability-related activities. Operations for reliability-related activities shall not exceed 50 hours per year per source for Sources S7, S8, S9, S10, and S11, and shall not exceed 20 hours per year per source for Sources S15 and S16. [Basis: Title 17, CCR, 93115: CARB ATCM for Stationary Compression-Ignition Engines]

*14. Emergency conditions are defined as any of the following:

a. Loss of regular natural gas supply
b. Failure of regular 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: Title 17, CCR, 93115: CARB ATCM for Stationary Compression-Ignition Engines]

15. Facility-wide diesel fuel usage shall not exceed 423,650 gallons in any consecutive 12-month period. [Basis: Regulation 2, Rule 6; Cumulative Increase]

*16. Sources S7, S8, S9, S10, S11, S15, and S16 shall be equipped with non-resettable totalizing meters that measure and record the hours of operation for each engine. [Basis: Title 17, CCR, 93115: CARB ATCM for Stationary Compression-Ignition Engines]

*17. The following monthly records shall be maintained in a District-approved log for at least five years and shall be made available for District inspection upon request:
a. Total hours of operation for each generator
b. Total hours of operation under emergency conditions for each generator, and a description of the nature of each emergency condition
[Basis: Regulation 2-6-501; Title 17, CCR, 93115: CARB ATCM for Stationary Compression-Ignition Engines]

18. The following records shall be maintained in a District-approved log. The rolling 12-month totals shall be derived every month by summing the totals from the most recent twelve-month period. The summaries shall be completed within twenty business days after the end of each month.
a. Monthly natural gas throughput to S6, S12, and S13 on a source-specific basis
b. HHV of natural gas delivered to S6, S12, and S13 on a monthly basis;
c. Monthly records of diesel deliveries for S6, S7, S8, S9, S10, S11, S15, and S16 on a source-specific basis;
d. Total natural gas usage at: S6, S12, and S13 on a rolling 12-month basis;
e. Total diesel fuel usage at S6, S7, S8, S9, S10, S11, S15, and S16 on a rolling 12-month basis
Records shall be retained for at least five years from the last date of entry and shall be made available for review by the District upon request. [Basis: Regulations 1-402; 1-441; 1-544; 2-6-501; 9-7-503; 9-7-504; 9-8-530; Title 17, CCR, 93115: CARB ATCM for Stationary Compression-Ignition Engines]

By: _____
Catherine S. Fortney
Air Quality Engineer II

Date: _____