

Synthetic Minor Condition #19876

The following conditions establish the 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:

This synthetic minor condition #19876, Parts 1 through 15, and Existing conditions 5533, 14676, 25541, 25542, and 25543.

Revised conditions presented in this SMOP shall become effective 90 days from the facility's receipt of the final version of this SMOP.

All applications submitted by the applicant and all modifications to the plant's equipment after issuance of the SMOP must be evaluated to ensure that the facility cannot exceed the synthetic minor general limits below, and that sufficient monitoring, record keeping, 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 Rule 2-6, Section 423. The basis for the synthetic minor conditions is an emission limit for regulated air pollutants of less than 95 tons per year except less than 35 tons per year for POC and less than 35 tons per year for NOx, an emission limit for a single HAP of less than 9 tons per year, and an emission limit for a combination of HAP of less than 23 tons per year.

This operating permit covers all sources listed on Certificates of Registration, issued Permits to Operate and/or Authorities to Construct at the facility on the date of issuance.

The following permit conditions are District conditions that do not establish this facility as a Synthetic Minor: 1525, 1526, 4324, 4852, 5191, 5548, 5587, 5602, 5742, 5965, 6092, 6640, 6641, 6642, 6643, 7615, 9716, 10051, 10270, 11037, 11044, 11478, 11741, 11758, 12536, 14321, 14658, 14753, 15925, 17685, 17686, 18817, 19328, 20666, 21766, 21767, 22490, 22820, 22830, 22850, 23117, 23310,

23311, 23514, 23583, 23712, 23810, 24038, 24059,
24060, 24583, 24665, and 25596.

Synthetic Minor Conditions:

1. The owner/operator shall ensure that this facility, subject to a SMOP, shall emit no more than the following quantities of emissions in any 12-month period:
 - (1) 95 percent of the major source thresholds for regulated air pollutants (excluding HAP) except that NO_x and POC shall each be less than 35 tons,
 - (2) 9 tons of any single HAP,
 - (3) 23 tons of any combination of HAP, and
 - (4) 90 percent of any lesser threshold for a single HAP as the U.S. EPA or District may establish by rule.

These limits are for the purpose of this Synthetic Minor Operator Permit only, and do not allow the owner/operator to exceed any other District permit conditions. These Synthetic Minor Operating Permit limits shall not be used as actual emissions, a permitted emission level or baseline emission levels in conjunction with new source review, banking of emission reduction credits, or any other District rule.

These limits shall include emissions from permitted, unpermitted, portable, and temporary sources at the facility except for the following sources/activities:

1. non-road engines as defined in 40 CFR 89
2. the following activities that meet an exemption in Regulation 2-1: coating of stationary structures and their appurtenances, the use of aerosol container products, and the use of other (exempt) small container products
3. the following solvent cleaning operations that meet an exemption in Regulation 2-1:
 - (a) the cleaning solution has a VOC content less than 50 grams per liter,
 - (b) the equipment or operation uses unheated solvent and contains less than 1 gallon of solvent,
 - (c) the equipment or operation uses unheated solvent and has a surface area of less than 1 square foot,
 - (d) the equipment uses a heated solvent

mixture for steam cleaning, surface preparation, fluxing, stripping, wipe cleaning, washing or drying products where the solution contains less than 2.5 percent VOC by weight and any combustion source used in the process is exempt from permit under air district regulation.

4. solvent wipes that meet an exemption in Regulation 2-1
5. laboratory fume hood operations and bench scale research and development experiments (which may include use of adhesives) that meet an exemption in Regulation 2-1
6. portable equipment used for construction and/or maintenance, rented or leased for less than one year that meets an exemption in Regulation 2-1. Because the activities are exempt from permit requirements of the District, emissions from these activities are not substantial, and the POC limit for LLNL is substantially below the synthetic minor maximum limit of 95 tons per year, the emissions from these activities are not required to be included in emission calculations.

(basis: Synthetic Minor)

Conditions 2 - 7

Demonstration of Compliance for NO_x for Combustion Sources:

2. The owner/operator shall use the site-wide gas meter to measure throughput of natural gas used by boilers and natural gas fired equipment. The owner/operator can subtract the natural gas used to fuel the natural gas vehicles at LLNL. To subtract the natural gas used by the vehicle fleet, the owner/operator must install a gas meter on the gas line used to fuel the vehicle fleet. (basis: Synthetic Minor)
3. The owner/operator shall install either a fuel meter or hour meter on all diesel fuel combustion sources that are subject to air permits. (basis: Synthetic Minor)
4. The owner/operator shall maintain monthly logs and rolling 12-month total logs of the usage of diesel fuel, propane, natural gas, solid fuel and other liquid fuel when the fuel usage is used in an emission calculation. (basis: Synthetic Minor)
5. NO_x and POC emissions from combustion sources

shall be calculated as follows:

Emissions shall be calculated using one or more of the following methods:

- (1) continuous emission monitor systems (CEMs),
- (2) source test data,
- (3)(a) manufacturer's emissions data, or emission factors from AP-42, or the California Air Resources Board (CARB) [including CARB's Off-road Certification Database, CARB's "Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines, October 2000 (The Risk Reduction Plan)" and CARB's "California's Emissions Inventory For Off-Road Large Compression-Ignited (CI) Engines (> 25HP), January 2000" (The OFFROAD Model)], plus
- (b) fuel supplied or actual fuel usage, run time and/or energy produced.

If emissions information is not available for a propane -fired engine, the owner/operator may assume emissions are the same as for a natural gas fired engine.

The owner/operator may use the NO_x and POC emission factors for "commercial boilers" in Table 1.5-1 of AP-42 for propane boilers and for all other propane or LPG fired sources at the facility except internal combustion engines.

The owner/operator may use the NO_x and POC emission factors for "small boilers" in Tables 1.4-1 and 1.4-2, respectively, of AP-42 for natural gas fired boilers and for all other natural gas fired sources at the facility except internal combustion engines.

If an engine drives a generator and the generator output is measured, the owner/operator may assume that it takes 1.34 horsepower-hours to produce 1 kW-hr of electricity. Emissions shall be estimated using accepted methodology that is appropriate to the emitting sources.

(basis: Synthetic Minor)

6. The owner/operator shall not use fuels other than natural gas, propane, LPG diesel and bio-diesel fuel at permitted sources at the facility. (This condition does not preclude LLNL from using gasoline or other alternative fuels, such as ethanol, methane, and E85 in

vehicles.) (basis: Synthetic Minor)

7. The owner/operator shall calculate NO_x and POC from all combustion sources on a rolling 12-month basis. (basis: Synthetic Minor)

Condition 8

Demonstration of Compliance for POC and HAP for Solvent Evaporating Sources:

8. The owner/operator shall do all of the following for each of the Solvent Evaporating Sources listed above:
 - a. Maintain records of Material Safety Data Sheets (MSDS) or other product information identifying the POC content and individual HAP contents for each of the solvent-containing materials or mixtures, as appropriate, used at the sources. LLNL may use a representative, product-type MSDS and /or technical data sheet to identify the POC and HAP contents for similar products.
 - b. Keep a log of the quantity of each solvent-containing material or mixtures, as appropriate, used at each source, summarized on a monthly basis.
 - c. Calculate monthly emissions of POC, individual HAP and combination of HAP from each source, based on the POC content and individual HAP contents. The owner/operator may use a higher POC content and/or higher individual HAP content and/or higher combination HAP content in lieu of any actual material content values.
 - d. The owner/operator may keep records (i.e. waste manifests) of the amount of specific solvent-containing material disposed of as waste, and deduct such waste from the monthly POC and/or HAP emission calculations. Any material collected as waste which cannot be specifically identified, such as mixtures of solvents, shall not be used to reduce POC and HAP emissions.
 - e. Calculate POC, individual HAP and combined HAP emissions on a rolling 12-month basis for each source, except as allowed in Part 15.
 - f. Calculate total POC, individual HAP and combined HAP emissions from all sources for each month, and on a rolling 12-month

basis, except as allowed in Part 15.
(basis: Synthetic Minor)

Condition 9

Demonstration of Compliance for POC and HAP from
Fuel Dispensing Sources:

9. The owner/operator shall do all of the following for each of the Fuel Dispensing Sources listed above:
 - a. Maintain records of Material Safety Data Sheets (MSDS) or other product information identifying the POC content and individual HAP contents for each of the fuel or fuel mixtures, as appropriate, dispensed at the sources. LLNL may use a representative, fuel-type MSDS and /or technical data sheet to identify the POC and HAP contents for similar fuels.
 - b. Keep a log of the quantity of each fuel dispensed at each source, summarized on a monthly basis.
 - c. Calculate monthly emissions of POC (as gasoline) and combined HAP (as benzene) from each source, assuming that emissions of gasoline vapors occurring during the loading, breathing, refueling and spillage are 2 pounds of gasoline per 1,000 gallons dispensed and 6.75 pounds of benzene per million gallons dispensed. LLNL shall use for E85 the POC emission factor of 2 pounds per 1,000 gallons dispensed, and a combined HAP (as benzene) emission factor of 15% of 6.75 pounds per million gallons of E85 dispensed unless other emission factors are approved by the District or CARB.
 - d. Calculate POC and combined HAP (as benzene) emissions on a rolling 12-month basis for each source.
 - e. Calculate total POC and combined HAP (as benzene) emissions from all sources for each month, and on a rolling 12-month basis.

(basis: Synthetic Minor)

Condition 10

Demonstration of Compliance for POC and HAP from
wastewater and remediation sources to remove HAP
from contaminated groundwater and soil:

10. In lieu of calculating emissions from the

following sources, the owner/operator has agreed to assume that

- (1)the combined POC emissions,
- (2)the combined HAP emissions, and
- (3)the emissions for any single HAP is each 1 ton in any consecutive 12-month period for the following sources:

Source
S-3623
S-3698
S-3699
S-3700
S-6008
S-6191
S-6192

(basis: Synthetic Minor)

Conditions 11 through 15
Monthly and Annual Emissions and Non-Compliance Reporting:

11.The owner/operator shall calculate and maintain records on a monthly basis of the quantities of NOx, POC and HAP emitted into the atmosphere as required for sources identified in the SMOP. Within 30 days of the end of each month, the NOx, POC and HAP emissions must be totaled for the last consecutive 12-month period to ensure compliance with part 1. The owner/operator shall keep all the information required to calculate NOx, POC and HAP emissions for at least five years, and shall make those records available for review during normal business hours by the District's representatives.
(basis: Synthetic Minor)

12.The owner/operator shall prepare an annual emissions report. The report shall contain the following items for the year ending June 30:

- a. Monthly report on each HAP and total combined HAP emissions for the rolling 12-month period (including the assumed 1 tpy), except as allowed by Part 15.
- b. Monthly report on total POC emissions for the rolling 12-month period (including the assumed 1 tpy).
- c. Monthly report on NOx emissions for the rolling 12-month period.

This report shall be submitted to the Director of Compliance and Enforcement by August 31 of each year. (basis: Synthetic Minor)

13. Together with the annual emissions report, the owner/operator shall submit an annual certification of compliance, signed by the owner/operator's responsible official. The certification shall read: "Under penalty of perjury, I certify the following: based on information and belief formed after reasonable inquiry, the owner/operator facility has been in compliance with the synthetic minor conditions for the following period of time:_____."
14. The owner/operator shall report non-compliance with any of the above conditions in writing to the Director of Compliance and Enforcement within 10 calendar days of discovery of non-compliance. (basis: Synthetic Minor)
15. Individual records of each HAP are not required if the total combined HAPs from all sources at LNL are less than 9 tpy. If the total combined HAPs from all sources at LNL are greater than 9 tpy, LNL shall demonstrate that no individual HAP exceeds 9 tpy. (For example, LNL may calculate and report individual HAPs that are greater than 5 tpy to show that no single HAP is greater than 9 tpy.) (basis: Synthetic Minor)