

Boilers and Heaters

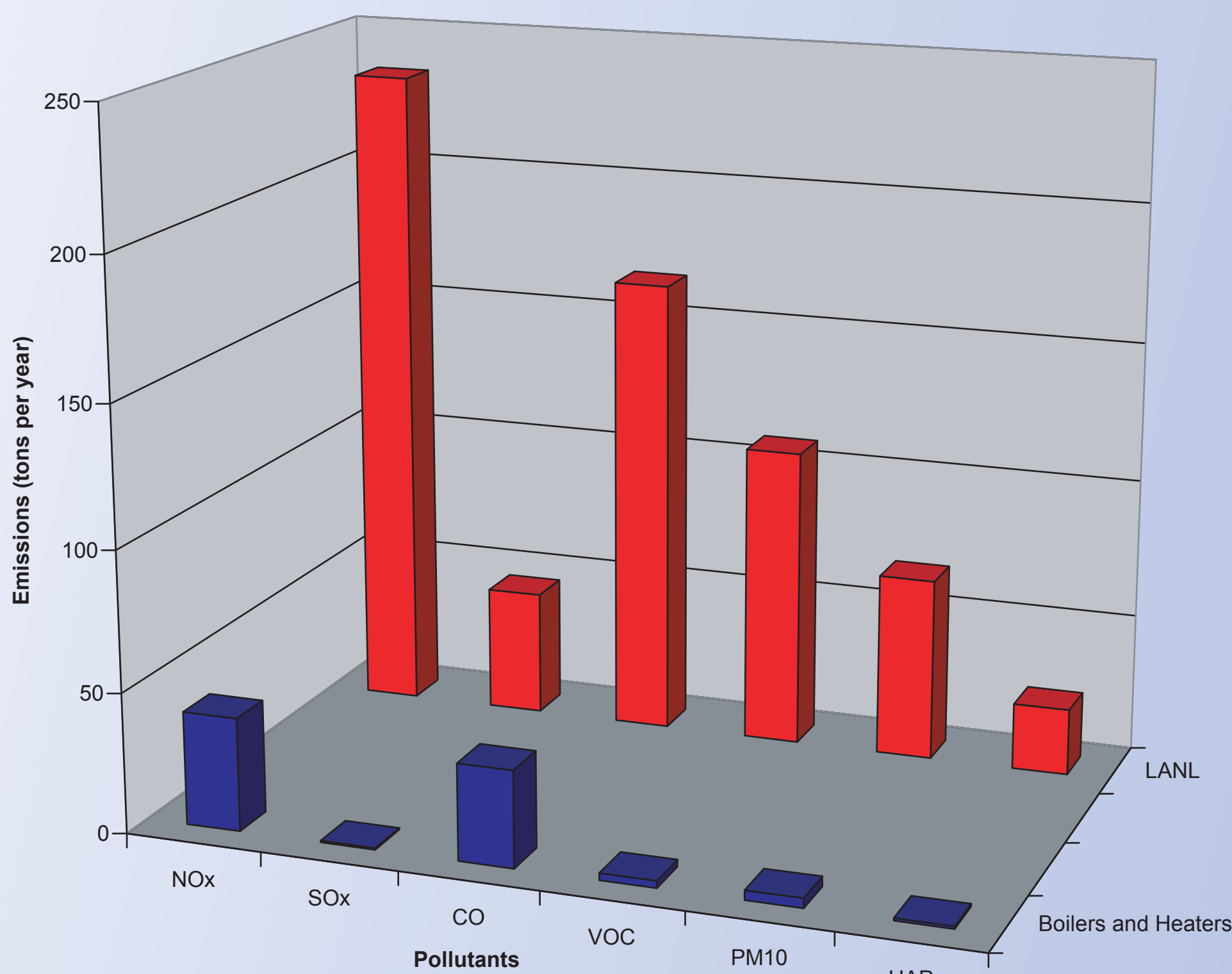
General Description

- ❖ This source category includes all boilers and heaters at the Laboratory except the three boilers at the TA-3-22 Power Plant. The majority of boilers and heaters are used solely for comfort heating and hot water for personal use.
- ❖ There are approximately 200 small boilers ranging in size from 0.075 million British Thermal Units per hour (MMBtu/hr) to 14.6 MMBtu/hr. There are also approximately 1100 small furnaces, heaters, and HVAC units ranging in size from 0.05 MMBtu/hr to 0.2 MMBtu/hr. All units are gas-fired. Three boilers at the TA-21 Steam Plant can use fuel oil as a standby or emergency fuel.
- ❖ All units in this category qualify as insignificant activities under NMED policy except for 17 boilers.
- ❖ The Laboratory will track and record fuel usage from all units in order to demonstrate compliance with proposed facility-wide limits.
- ❖ The Laboratory is proposing fuel limits to reduce air emissions from the Laboratory operations.



Boiler at Technical Area 21

Comparison of Boilers and Heaters and LANL Emissions



Applicable Requirements

- ❖ Two boilers, located at TA-55, are subject to the EPA New Source Performance Standard (NSPS) at 40 CFR Part 60, Subpart Dc. For gas-fired boilers of this size, Subpart Dc requires the quantity of natural gas used to be measured and recorded.
- ❖ Emission limits: Visible emissions from all units shall not equal or exceed an opacity of 20%.
- ❖ Operational requirements: Fuel usage for the three boilers at TA-21 is limited to 60 million cubic feet per year (MMscf/yr) of natural gas and 10,000 gallons per year of fuel oil (Laboratory-proposed). Natural gas usage for all other units combined is limited to 870 MMscf/yr (Laboratory-proposed).

Proposed Monitoring, Recordkeeping, and Reporting

- ❖ Monitoring: Use flow meters to record the total amount of natural gas used at both the TA-21 Steam Plant and the two boilers at TA-55 regulated under the Subpart Dc NSPS. Monitoring for all other units involve maintaining records of total natural gas and fuel oil used.
- ❖ Recordkeeping: Records of fuel used shall be maintained.
- ❖ Reporting: Submit a semi-annual emissions report and monitoring report to the NMED.

Process Flow Diagram for TA-21 Steam Plant

