

LA-14371-SR

Status Report

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Emissions Inventory Report Summary for Los Alamos National Laboratory for Calendar Year 2007

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LA-14371-SR
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Issued: August 2008

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for Los Alamos National Laboratory for
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Ecology and Air Quality Group

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Acronyms

AIRS	Aerometric Information Retrieval System
AQB	Air Quality Bureau
CAS	Chemical Abstracts Service
CO	carbon monoxide
EPA	U.S. Environmental Protection Agency
FGR	flue gas recirculation
HAP	hazardous air pollutant
HCl	hydrochloric acid
LANL	Los Alamos National Laboratory
MSDS	material safety data sheet
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NO _x	nitrogen oxides
PM	particulate matter
PM _{2.5}	particulate matter with diameter less than 2.5 micrometers
PM ₁₀	particulate matter with diameter less than 10 micrometers
PSD	Prevention of Significant Deterioration
R&D	research and development
SO _x	sulfur oxides
TA	Technical Area
VOC	volatile organic compound

EMISSIONS INVENTORY REPORT SUMMARY FOR LOS ALAMOS NATIONAL LABORATORY FOR CALENDAR YEAR 2007

by

ECOLOGY AND AIR QUALITY GROUP

ABSTRACT

Los Alamos National Laboratory (LANL) is subject to annual emissions reporting requirements for regulated air pollutants under Title 20 of the New Mexico Administrative Code, Chapter 2, Part 73 (20.2.73 NMAC), Notice of Intent and Emissions Inventory Requirements. The applicability of the requirements is based on the Laboratory's potential to emit 100 tons per year of suspended particulate matter, nitrogen oxides, carbon monoxide, sulfur oxides, or volatile organic compounds. Additionally, on April 30, 2004, LANL was issued a Title V Operating Permit from the New Mexico Environment Department, Air Quality Bureau, under 20.2.70 NMAC. This permit was modified and reissued on July 16, 2007. This Title V Operating Permit (Permit No. P-100M2) includes emission limits and operating limits for all regulated sources of air pollution at LANL. The Title V Operating Permit also requires semiannual emissions reporting for all sources included in the permit. This report summarizes both the annual emissions inventory reporting and the semiannual emissions reporting for LANL for calendar year 2007. LANL's 2007 emissions are well below the emission limits in the Title V Operating Permit.

1.0 INTRODUCTION

1.1 Regulatory Basis

Los Alamos National Laboratory (LANL or the Laboratory) has reported on air pollutants generated from its operations since the 1970s when Air Quality Control Regulation 703, Registration of Air Contaminant Sources, was promulgated. According to the regulation, the Laboratory was required to register air pollutant sources that emitted more than 2,000 lb per year of any air contaminant. This regulatory requirement later evolved into Title 20 of the New Mexico Administrative Code, Chapter 2, Part 73 (20.2.73 NMAC), Notice of Intent and Emissions Inventory Requirements. The objective of the reporting requirement is to provide emissions data to the New Mexico Environment Department (NMED)/Air Quality Bureau (AQB) so its staff can determine whether LANL meets state and federal air pollutant standards.

Annual emissions inventory reporting requirements under 20.2.73 NMAC apply to any stationary source which

- has been issued a construction permit under 20.2.72 NMAC;

- has been required to file a Notice of Intent under 20.2.73.200 NMAC; or
- emits in excess of
 - 1 ton per year of lead or
 - 10 tons per year of
 - total suspended particulates;
 - particulate matter (PM) with diameter less than 10 micrometers (PM₁₀);
 - PM with diameter less than 2.5 micrometers (PM_{2.5});
 - sulfur dioxide;
 - nitrogen oxides (NO_x);
 - carbon monoxide (CO); or
 - volatile organic compounds (VOCs).

The annual emissions inventory must be submitted to NMED/AQB by April 1 of each year. The NMED/AQB enters the data in the Aerometric Information Retrieval System (AIRS) (EPA 2008a). This nationwide system, administered by the U.S. Environmental Protection Agency (EPA), is used to help ensure ambient air quality standards are maintained and to track the state's air pollutant emissions. AIRS is a large air pollution database that contains information, requirements, and data on air pollution and air quality in the United States and various World Health Organization member countries. The program is operated by the EPA and state/local air pollution control agencies. The AIRS database tracks each state's progress towards achieving and maintaining National Ambient Air Quality Standards for criteria pollutants. The database is also used as a tool to help improve each state's air quality programs by enabling program members to access and compare past data and view data from other states. For 2007 emissions inventory reporting, NMED imported existing facility data from the AIRS database into spreadsheets and requested facilities to update the sheets with 2007 facility emissions information.

Additionally, on July 16, 2007, the Laboratory received their Title V Operating Permit (P-100M2) from the NMED/AQB (NMED 2007) as required under 20.2.70 NMAC. A condition of the Title V Operating Permit is that LANL must submit semiannual emissions reports to NMED documenting that emissions from all permitted sources are below permitted emission levels. Section 4.0 of the permit states:

Reports of actual emissions from permitted sources in Section 2.0 of the permit shall be submitted on a 6 month basis. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.11 of the permit. The reports shall be submitted within 90 days from the end of the reporting period. The reporting periods are January 1 through June 30, and July 1 through December 31. This condition is pursuant to 20.2.70.302.E.1 NMAC.

Therefore, in 2004 the Laboratory began submitting the semiannual emissions reports as well as the annual emissions inventory. There are a few differences in which sources are included in the two emissions reports. These differences are explained in the following sections.

1.2 Contents of Annual Emissions Inventory Submittal

NMED requested that LANL submit annual emissions inventory data for 2007 via electronic format for entry into AIRS. The information required for submittal includes the following:

- company name, address, and physical location for the facility;
- facility contact information;
- signed certification statement by a responsible facility official; and
- specific information for each emission unit such as stack and exhaust parameters, type and efficiency of control equipment, schedule of operation, annual process or fuel combustion rates, and estimated actual emissions for 2007.

This annual emissions inventory submittal includes air pollutant data for PM, PM₁₀, CO, NO_x, sulfur oxides (SO_x), VOCs, beryllium, hazardous air pollutants (HAPs), and aluminum. Additionally, at the request of NMED, the 2007 report provides data on emissions from PM_{2.5} and ammonia.

For 2007, LANL is required to report PM_{2.5} emissions. LANL previously reported PM_{2.5} emissions at the request of NMED for 2006. Further, ammonia is a precursor to PM_{2.5} formation. It contributes to the secondary aerosol formation of PM_{2.5} by combining with NO_x and SO_x to form ammonium nitrate and fine sulfate particles. LANL is also required to report emissions of ammonia for 2007.

In the 2007 annual emissions inventory submittal, LANL provided PM_{2.5} emissions data for all combustion sources and other emission sources where PM_{2.5} emission factors were readily available. In the absence of PM_{2.5} emission factors, PM or PM₁₀ emissions were assumed to be equivalent to PM_{2.5}. The Laboratory does not operate any emission units that are sources of ammonia emissions. Ammonia was included in the facility-wide emission estimates for chemical use.

1.3 Contents of the Semiannual Title V Operating Permit Emissions Reports

The semiannual Title V Operating Permit emissions reports include actual emissions for the reporting period for each emission source or source category included in the Title V Operating Permit. For each source category, the actual emissions are compared to emission limits listed in the permit. The emissions are calculated using operating data from logbooks and records maintained on-site. All emission calculations are consistent with calculation methods used for the annual emissions inventory.

The semiannual emissions reports include a few source categories not included in the annual emissions inventory. The Laboratory requested emission limits in their Title V Operating Permit for two source categories that are considered insignificant sources for the annual emissions inventory. These source categories are 1) small boilers and heaters and 2) stationary standby generators. LANL requested emission limits for these source categories to obtain federally enforceable limits that would keep the Laboratory under the major source threshold for Prevention of Significant Deterioration (PSD) applicability (20.2.74 NMAC). LANL's actual emissions from these insignificant sources have historically been very low; however, without federally enforceable limits on their operation, the potential to emit from these sources was quite high. To demonstrate that LANL is below the PSD applicability and is in compliance with the emission limits placed on these emission sources, LANL now must include these emissions in the semiannual Title V Operating Permit emissions reports.

2.0 REPORTED EMISSION SOURCES

Table 2.0-1 shows the emission sources included in the Laboratory's 2007 annual emissions inventory (LANL 2008a) and the 2007 semiannual emissions reports (LANL 2007 and 2008b). The source categories and the methodology used to calculate emissions are described in the following sections.

Table 2.0-1
Sources Included in LANL's 2007 Annual Emissions
Inventory and Semiannual Emissions Reports

Included in Annual Emissions Inventory	Included in Semiannual Emissions Reports	Comment
Steam Plants (TA-3* & TA-21)	Steam Plants (TA-3 & TA-21)	n/a**
Boilers greater than 5 MMBTU/hr (14 units)	All small and large boilers and heaters (approximately 175 units)	Small boilers less than 5 MMBTU/hr are exempt from annual emissions inventory requirements (see Section 3.1).
Asphalt Plant	Asphalt Plant	n/a
Degreasers	Degreasers	n/a
Air Curtain Destructors (shut down)	Not included	Air curtain destructors were shut down before issuance of the Title V Operating Permit.
Carpenter Shops	Carpenter Shops	n/a
Oil Storage Tanks	No tanks included	Applicability of the New Source Performance Standard for storage tanks changed in 2004 and the LANL oil storage tanks were not required to be included in the Title V Operating Permit.
Permitted Beryllium Sources	Permitted Beryllium Sources	n/a
Facility-wide Chemical Use	Facility-wide Chemical Use	n/a
Process Generators	Process Generators and Stationary Standby Generators (approximately 45 units)	Stationary standby generators are exempt from annual emissions inventory requirements (see Section 3.2).
TA-3 Turbine	TA-3 Turbine	n/a

*TA = Technical Area **n/a = Not Applicable

The following subsections describe emission sources included in the 2007 emissions inventory and semiannual emissions reports and emission calculation methodology for each source type. A summary table of actual reported emissions by source is included at the end of this section (Section 2.12). Attachment A includes worksheets showing detailed emission calculations for individual emissions sources. A copy of the 2007 emissions inventory as submitted to NMED is presented in Attachment B. The 2007 semiannual emissions reports are included as Attachment C.

2.1 Steam Plants

The Laboratory operates two steam plants, one located at TA-3 and the other at TA-21. The TA-3 steam plant produces steam for heating and electricity for much of the Laboratory when sufficient

power from outside sources is not available. The steam plant at TA-21 provides steam for heating of buildings at this technical area. The heat produced from both steam plants is used for comfort heat and hot water and to support facility processes. Each steam plant has three boilers that are fueled primarily with natural gas with No. 2 fuel oil as a backup.

For the 2007 emissions inventory, NMED requested that emissions from natural gas and No. 2 fuel oil be reported separately for the boilers located at each of the steam plants. The TA-3 steam plant was originally included in LANL's emissions inventory as a single unit. When a modification to the plant was made in 2001, the TA-3 steam plant was separated into three separate units for emissions reporting purposes. Because each of the three boilers has the capability of burning either natural gas or No. 2 fuel oil, the TA-3 steam plant is now reported as six units. The boilers at the TA-21 steam plant are included in the emissions inventory as two units, one for natural gas and one for No. 2 fuel oil.

The 2007 emissions inventory reporting year used the updated emission factors for fuel oil for PM, PM₁₀, and PM_{2.5} as described for the TA-3 power plant boilers. Gas use and fuel oil use for the TA-21 steam plant are provided on a monthly data deliverable by the site support contractor. As described above, emissions from natural gas and from No. 2 fuel oil have been reported separately for the boilers.

Actual emissions are calculated on the basis of metered fuel consumption and emission factors. The primary source of emission factors is AP-42, the EPA's Compilation of Air Pollutant Emission Factors (EPA 1998). However, emission factors from stack tests conducted at the TA-3 steam plant when burning natural gas were also used, as appropriate.

The TA-3 steam plant has historically been the largest source of NO_x emissions at the Laboratory. In 2002, a voluntary project to install pollution control equipment on the three boilers at the TA-3 steam plant was completed. The three boilers were fitted with flue gas recirculation (FGR) equipment to reduce NO_x emissions. Stack testing for NO_x and CO was conducted before FGR equipment was installed and again after it was operational. Based on these stack test results, FGR reduced NO_x emissions by approximately 64 percent. In 2007, the TA-3 steam plant underwent maintenance during all of June and July plus part of August. During this time, the FGR equipment was also not operational but the steam plant was not combusting any fuel. Figure 2.1-1 shows a picture of the TA-3 steam plant building and stacks.



Figure 2.1-1 Main steam plant at TA-3 at LANL.

2.2 Small Boilers and Heaters

The Laboratory operates approximately 200 small boilers and heaters, used primarily for seasonal comfort heat. Most of the boilers are exempt from permitting requirements because of their small size and use as comfort boilers and are not included in the annual emissions inventory. The exemption analysis applied to boilers is discussed in Section 3.1 of this report.

The nonexempt boilers reported in the 2007 annual emissions inventory include the following:

- two boilers at TA-16 (Eqpt 17);
- three boilers at TA-48 (Eqpt 8, 9, and 10);
- two boilers at TA-53 (Eqpt 11 and 12);
- two boilers at TA-59 (Eqpt 13 and 14);
- two boilers at TA-55 (Eqpt 29 and 30); and
- one process-related boiler at TA-50 (Eqpt 41).

All of the reported boilers burn natural gas. Operating logs of actual fuel used for the TA-55 and TA-50 boilers were used to quantify emissions from these units. Fuel use for all other boilers was estimated based on the total amount of natural gas used by the Laboratory minus the amount supplied to metered sources. The amount of natural gas left after subtracting out metered sources was apportioned to the various boilers based on their size. Since virtually all of the small boilers are seasonal boilers used for building heating, it was assumed they would all operate approximately the same amount of time over the course of the year. Some emission factors were available from stack tests (TA-55), some were provided by the boiler manufacturer (Sellers Engineering Company), and the rest were taken from AP-42 (EPA 1998). Copies of spreadsheets showing fuel use and emission factors for each boiler are included in Attachment A.

For the semiannual emissions reports, emissions from all small boilers and heaters are included as a source category. The Title V Operating Permit includes emissions limits for this group of emission sources. To estimate emissions, all un-metered fuel use was multiplied by AP-42 emission factors for small boilers burning natural gas (EPA 1998). Total emissions of each pollutant from all boilers and heaters in this source category were then summed and reported on the semiannual emissions reports.

2.3 Asphalt Plant

The TA-60 asphalt plant began operations in July 2005. This unit replaced the TA-3 asphalt plant which has not operated since June 2003. The TA-3 asphalt plant was dismantled and removed in September 2003. Information on the amount of asphalt produced and the amount of asphalt oil used at the TA-60 asphalt plant was provided as part of a monthly site support contractor data deliverable. The amount of oil is used in calculating releases for the Emergency Planning and Community Right-to-Know Act 313 report and not for the emission inventory report. The total asphalt produced in 2007 was 1,730 tons.

The emissions from the asphalt plant include criteria pollutants and HAPs. None of the emissions were significant in regard to the overall Laboratory emissions. The largest pollutant emitted from the asphalt plant was CO at 0.35 tons per year.

2.4 Data Disintegrator

The data disintegrator is included in the 2007 emissions inventory as Eqpt 89. Operation of this source started in August 2004. Emissions are calculated using the methodology described in the permit application dated June 23, 2003. Emissions of PM, PM₁₀, and PM_{2.5} are calculated based on the number of boxes shredded, the amount of dust estimated to enter the exhaust (provided by the manufacturer), and the control efficiency of the cyclone and baghouse (also provided by the manufacturer). The permit application did not include PM_{2.5} emission estimates. Therefore, an emission methodology had to be developed for the emission inventory reporting. No specific PM size distribution data were available. However, the manufacturer reported that dust into the exhaust would be in the size range of 5 to 20 µm. Based on visual observation and engineering judgment, a particle size distribution in the exhaust was estimated as follows:

- PM_{2.5} 15%
- PM₁₀ 90%
- Total Suspended Particulates 100%

The number of boxes of material shredded is provided on a monthly data deliverable from the site support contractor. The total number of boxes shredded at the data disintegrator in 2007 was 11,420.

2.5 Degreasers

The halogenated solvent cleaning machine at TA-55 has a capacity of 18 liters and is registered with NMED/AQB as required under the National Emissions Standards for Hazardous Air Pollutants, 40 CFR 63 Subpart T, Halogenated Solvent Cleaning. The solvent used in the machine, trichloroethylene (Chemical Abstracts Service [CAS] No. 79-01-6), is a VOC and a HAP. This

emission unit is included in the annual emissions inventory as Eqpt 21. LANL uses a mass balance approach to estimate emissions. Logbooks are kept on the amount of solvent added and removed from the machine. Additionally, solvent levels in the machine are logged monthly. LANL has two additional halogenated solvent cleaning machines registered with NMED (Eqpt 29 and 30). These units were not operational in 2007. The emissions from the TA-55 degreaser for this reporting period are 25 lbs or 0.013 tons per year. This source category is reported in both the annual emissions inventory and the semiannual emissions reports.

2.6 Carpenter Shop

LANL operates a carpenter shop at TA-3-38 which was operated intermittently through the year. This carpenter shop was built before 1960 and is not subject to 20.2.72 NMED construction permitting. However, LANL included carpenter shops in the Title V Operating Permit. Therefore, this source category is included in the annual emissions inventory as Area 3 and is included on the semiannual emissions reports. Additionally, a carpenter shop located at TA-15 is included in the Operating Permit and began operations in June 2005.

Emissions from the carpenter shops were calculated based on the flow rate out of the cyclone, the estimated concentration of particulate in the exhaust, AP-42 emission factors, and the hours of operation of the cyclones.

In 2007, total operation of the TA-3 carpenter shop was 66 hours and the total operation of the TA-15 carpenter shop was 177 hours.

2.7 Oil Storage Tanks

Two large diesel storage tanks are located at the TA-3 steam plant for backup fuel to the boilers. These tanks are included in the annual emissions inventory as Eqpt 27 and 28. Emissions from these tanks are estimated using software developed by EPA for estimating emissions from storage tanks (EPA 2008b). The TANKS 4.0 software requires inputs for tank parameters, site-specific meteorological conditions, and actual fuel throughputs.

The Laboratory included 15 storage tanks in their recently updated Title V permit application because they were subject to NSPS 40 CFR 60, Subpart Kb, New Source Performance Standards. Fourteen of the 15 tanks store mineral oil, scintillation oil, or dielectric oil, which all have vapor pressures of <0.01 mm Hg. Applicability of Subpart Kb was modified by EPA in 2003 and these tanks are no longer subject to this regulation and were subsequently removed from the draft LANL Title V permit application.

Emissions from these smaller oil storage tanks were included for the first time in the 2002 annual emissions inventory. With agreement from NMED, emissions from the 14 tanks were summed and listed as one stack entry in the emissions inventory report due to the small quantity of emissions (email correspondence with Jim Shively, NMED/AQB, dated February 3, 2003). This “composite” mineral oil tank was assigned Eqpt 108. Because an equipment number is now assigned, emissions from these tanks will continue to be included in the annual emissions inventory submittal. However, these tanks are not included in the Title V Operating Permit semiannual emissions reports. Based on the most conservative tank parameters and actual throughput from chemical inventory records, a unit emission rate was calculated. The TANKS 4.0 software was used to estimate emissions for both vertical and fixed-roof tanks (EPA 2008b). Unit emission rates in lb/yr were multiplied by the

number of active horizontal and vertical tanks to provide an estimate of total annual emissions from all of the active tanks.

2.8 Permitted Beryllium-Machining Operations

The Laboratory operates four permitted beryllium-machining operations that are subject to 40 CFR 61, Subpart C, and National Emission Standards for Beryllium. Beryllium-machining operations are reported in the emissions inventory under Act 2, 3, and 6 and Eqpt 5. Emissions reported for the Beryllium Test Facility (Act 3) are from actual stack emissions measurements. Emissions for the Target Fabrication Facility (Act 2) are from initial compliance stack testing and are reported as permitted emission levels. In addition, emissions from the Plutonium Facility (Act 6 and Eqpt 5) are reported at permitted emission levels. Foundry operations within the Plutonium Facility did not occur during this reporting period. Total emissions from all permitted beryllium operations are included in the semiannual emissions reports.

2.9 Generators

LANL installed a process-related generator at TA-33 to support research activities. NMED issued a construction permit (Permit No. 2195-F) in October 2002 for installing the generator, and this unit is included in LANL's Title V Operating Permit. The unit first operated in May 2006. It did not operate during 2007. The TA-33 generator is included as Eqpt 56 in the 2007 emissions inventory report.

The Laboratory maintains approximately 45 stationary standby generators that are considered exempt sources under the Construction Permit regulations (20.2.72.202.b NMAC) and the annual emissions inventory requirements. However, these sources are included in LANL's Title V Operating Permit with operating limits and emission limits. Therefore, these sources must be included in the semiannual emissions reports. All stationary standby generators at LANL are exercised on a routine schedule to ensure they are operational and will function properly if needed. All units are equipped with hour meters to document how many hours they are used. The Laboratory maintains records on a semiannual basis to document hour meter readings. The number of hours each generator is used in a reporting period is multiplied by AP-42 emission factors for diesel-fired internal combustion engines or natural-gas-fired internal combustion engines (EPA 1996). Emissions are then summed for each pollutant and reported on the semiannual emissions reports for this source category.

2.10 Combustion Turbine

LANL has one combustion turbine located at the TA-3 Power Plant. A revised construction permit was issued by NMED July 2004 to add the TA-3 combustion turbine as a new permitted source. This unit started operations in September 2007. Emissions calculations are based on the initial stack compliance tests performed in 2007, AP-42, Tables 3.1-2a and 3.1-3, and information provided by the manufacturer. In 2007 this combustion turbine operated for 31 hours.

2.11 Emissions from Chemical Use Activities

The majority of the Laboratory's work is devoted to research and development (R&D) activities. Varying operating parameters, as well as amounts and types of chemicals, are used in these activities. R&D activities occur at virtually all technical areas within the Laboratory, typically in small

quantities in laboratory settings. Figure 2.11-1 shows a typical laboratory at LANL where chemicals are used.



Figure 2.11-1 Example of a laboratory fume hood at LANL.

For the purposes of annual emissions inventory reporting, one equipment number has been assigned for all R&D chemical use (Act 7). Facility-wide chemical use emissions are reported on both the annual emissions inventory and the semiannual emissions reports. The methods used to quantify emissions of VOC and HAPs from R&D activities are discussed below.

2.11.1 VOC Emissions

The Laboratory tracks chemical purchases through a facility-wide chemical tracking system called ChemLog. A download from the ChemLog inventory system was created that included all chemical containers added to LANL's inventory between January 1, 2007, and December 31, 2007. This dataset included 55,638 separate line items of chemicals purchased.

The dataset was reviewed electronically to identify all VOCs purchased and received at LANL in 2007. With the exception of specific listed chemicals, VOCs are any compounds of carbon that participate in atmospheric photochemical reactions. VOCs include commonly used chemicals such as

ethanol, methanol, trichloroethylene, and isopropanol. The general assumption used in estimating VOC emissions from chemical use is

$$\text{Purchasing} = \text{Use} = \text{Emissions}$$

From the dataset of chemicals purchased in 2007, certain categories of chemicals were separated and eliminated from the analysis. The classifications assigned and corresponding reasons (noted in parentheses) for exclusion of chemicals from inventory records are noted below.

- Solid materials (not a significant source of air emissions based on their low vapor pressure);
- Non-VOC materials as defined by 40 CFR 51.100 (specific chemicals in 40 CFR 51.100 are listed as having negligible photochemical reactivity and are exempt from the definition of VOC);
- Paints (paints were evaluated separately—see Section 3.5);
- Inorganic chemicals (inorganics are not compounds of carbon);
- Oils (not a significant source of air emissions based on low vapor pressure and primarily used for maintenance);
- Fuels used for combustion purposes (emissions from fuel combustion are reported for each combustion unit).

Furthermore, the following categories of chemicals were eliminated based on guidance from NMED (letter from Mary Uhl, NMED/AQB, dated January 30, 2001):

- Container sizes of 1 lb or less;
- Chemicals with vapor pressures less than 10 mmHg;
- Chemicals used to calibrate equipment;
- Maintenance chemicals;
- Use of office equipment and products;
- Chemicals used for boiler water treatment operations;
- Chemicals used for oxygen scavenging (deaeration) of water; and
- Chemicals used in bench-scale chemical analysis.*

After elimination of chemicals and categories of chemicals listed above, the remaining chemical inventory records were matched with a list of known VOCs by CAS number. For mixtures (chemicals without CAS numbers), material safety data sheets (MSDSs) were reviewed to determine if any VOCs were present and, if so, to determine the associated percent volatile. As a conservative estimate, VOCs identified in ChemLog records were assumed to be 100 percent emitted to air. Estimated emissions of VOCs from chemical use in 2007 totaled 12.2 tons.

2.11.2 HAP Emissions

Section 112(b) of the 1990 Clean Air Act Amendments listed 189 unique HAPs identified for potential regulation by EPA. In 1995, caprolactam was delisted as a HAP and methyl ethyl ketone

*This exemption was applied only to biological research solutions. Otherwise, this exemption was not applied (see Table 3.3-1).

was delisted in 2005. Of the remaining 187 listed HAPs, 17 are classes of compounds (e.g., nickel compounds). Use of the 187 listed chemicals in activities at the Laboratory was evaluated and quantified for the annual emissions inventory submittal to NMED.

The ChemLog inventory system 2007 dataset was analyzed to identify HAPs. The identification process was similar to that used for VOCs. Pure chemicals (i.e., chemicals with CAS numbers), classes of compounds, and mixtures were evaluated to determine if the chemicals themselves were HAPs or if they contained HAP constituents. For mixtures, MSDSs were reviewed to determine if any HAPs were present and, if so, to determine the associated HAP percentages. Listed below are certain chemical types or categories that were identified and removed from this analysis (refer to Section 2.11.1 and Table 3.3-1 for explanations on removal of these chemicals):

- Paints;
- Oils;
- Maintenance chemicals;
- Chemicals used to calibrate equipment;
- Container sizes of 1 lb or less;
- Chemicals used in bench-scale chemical analysis;
- Use of office equipment and products;
- Chemicals used for boiler water treatment operations; and
- Chemicals used for oxygen scavenging (deaeration) of water.

Total HAP emissions were estimated by summing 1) pure HAP chemicals, 2) classes of compounds that are HAPs, and 3) the HAP constituents from mixtures. The resulting total amount of HAPs from chemical use reported for 2007 was 5.8 tons.

The HAP emissions reported generally reflect quantities procured in the calendar year. In a few cases procurement values and operational processes were further evaluated so that actual air emissions could be reported instead of procurement quantities. Additional analyses for certain metals and acids were performed and are described below.

HAP Metals

Purchases of beryllium, chromium, lead, manganese, mercury, and nickel compounds were evaluated to determine usage and potential air emissions. Several of the purchases were identified as laboratory calibration standards containing only parts per million quantities of the metals. These were exempt from emissions inventory requirements because of their use as standards for calibrating laboratory equipment. Other purchasers of relatively large quantities of metal compounds that were contacted confirmed that the material was still in use or in storage and had not resulted in air emissions.

Hydrochloric Acid

In 2007, the largest purchases of hydrochloric acid (HCl) were made by a variety of operating groups within the Chemistry Division. The major users of HCl primarily purchased it in 2.5- or 4-liter

bottles of concentrated acid. This HCl was primarily used for cleaning labware and for certain analytical processes. The remaining procurements consisted of numerous small purchases from a variety of operating groups. Additional analysis of these numerous small purchases was not done. As a conservative assumption, all of this HCl was assumed to be emitted resulting in a reported total of 1.07 tons of HCl emissions.

2.12 Emissions Summary by Source

Table 2.12-1 provides a summary of LANL's 2007 actual emissions, as submitted for the annual emissions inventory. The table presents emissions by pollutant and by source, with a facility total at the bottom of the table. Attachment A provides detailed information on how emissions were calculated for each emission unit.

Table 2.12-1
Summary of LANL 2007 Reported Emissions for Annual Emissions Inventory

	NO _x (tons/yr)	SO _x (tons/yr)	PM ₁₀ (tons/yr)	PM _{2.5} (tons/yr)	CO (tons/yr)	VOC (tons/yr)	HAPs (tons/yr)
TA-3 Steam Plant Boilers	13.46	0.45	1.81	1.81	9.24	1.25	0.43
TA-21 Steam Plant Boilers	0.76	0.005	0.058	0.058	0.64	0.042	0.0144
Non-Exempt Boilers	5.2	0.033	0.48	0.48	3.61	0.3	0.1
Asphalt Plant	0.021	0.004	0.005	0.005	0.35	0.007	0.007
Data Disintegrator	n/a*	n/a	0.44	0.44	n/a	n/a	n/a
Degreaser	n/a	n/a	n/a	n/a	n/a	0.012	0.012
Carpenter Shops	n/a	n/a	0.066	0.066	n/a	n/a	n/a
Oil Storage Tanks	n/a	n/a	n/a	n/a	n/a	0.049	n/a
R&D Chemical Use	n/a	n/a	n/a	n/a	n/a	12.25	5.8
TA-33 Generator	0.0	0.0	0.0	n/a	0.0	0.0	0.0
TA-3 Turbine	0.159	0.011	0.021	0.021	0.033	0.007	0.0033
TOTAL	19.6	0.50	2.88	2.88	13.9	13.9	6.4

* n/a = Not Applicable.

Table 2.12-2 provides a summary of 2007 emissions as reported on the semiannual emissions reports required by the Title V Operating Permit. Attachment A provides detailed information on how emissions were calculated for each emission source category.

Table 2.12-2
Summary of LANL 2007 Semiannual Emissions as Reported Under
Title V Operating Permit Requirements

	NO_x (tons/yr)	SO_x (tons/yr)	PM₁₀ (tons/yr)	PM_{2.5} (tons/yr)	CO (tons/yr)	VOC (tons/yr)	HAPs (tons/yr)
TA-3 Steam Plant Boilers	13.46	0.45	1.81	1.81	9.24	1.25	0.43
TA-21 Steam Plant Boilers	<i>Emissions included in Small Boilers Source Category</i>						
All Small Boilers & Heaters	25.63	0.16	2.04	2.04	20.78	1.43	0.49
Asphalt Plant	0.021	0.004	0.005	0.005	0.346	0.007	0.007
Data Disintegrator	n/a ^a	n/a	0.44	0.44	n/a	n/a	n/a
Degreaser	n/a	n/a	n/a	n/a	n/a	0.012	0.012
Carpenter Shops	n/a	n/a	0.066	0.066	n/a	n/a	n/a
Oil Storage Tanks ^b	n/a	n/a	n/a	n/a	n/a	0.05	n/a
R&D Chemical Use	n/a	n/a	n/a	n/a	n/a	12.25	5.8
Stationary Standby Generators	12.75	.36	0.51	0.51	2.87	0.51	0.004
TA-33 Generator	0	0	0	n/a	0	0	0
TA-3 Turbine	0.159	0.011	0.021	0.021	0.033	0.007	1.07
TOTAL	52.0	0.97	4.85	4.8	33.36	15.6	6.7

^a n/a = Not Applicable.

^b Source category not included in Title V Operating Permit.

3.0 REPORTING EXEMPTIONS

Specific activities that are determined to be insignificant under NMED's Operating Permit program (20.2.70 NMAC) are exempt from reporting under the emissions inventory requirements (20.2.73.300 NMAC). NMED has designated exempt sources, activities, or thresholds in the following lists:

- List of Insignificant Activities, March 25, 2005 (NMED 2005) and
- List of Trivial Activities, January 10, 1996 (NMED 1996).

Laboratory sources and activities that qualify as insignificant or trivial as specified in these lists are not included in the annual emissions inventory. The following subsections of this report provide information and examples of the Laboratory's exempt activities as well as analyses performed to determine exempt status.

3.1 Boilers

The Laboratory's boiler inventory was evaluated against the List of Insignificant Activities. Specifically, boilers were exempted from emissions inventory reporting requirements if they met one of the following requirements:

- Fuel-burning equipment which uses gaseous fuel, has a design rate less than or equal to five million BTU per hour, and is used solely for heating buildings for personal comfort or for producing hot water for personal use, or
- Any emissions unit . . . that has the potential to emit no more than **one ton per year** of any regulated pollutant

Any boiler that was not used exclusively for comfort heating or hot water was evaluated for the one ton per year exemption. For purposes of determining exemptions, boiler design ratings were used to estimate potential to emit. Any boiler not qualifying for one of these two exemptions is included in the annual emissions inventory with its own unique equipment number.

For the semiannual emissions reports, emissions from all boilers and heaters were summed and reported for the entire source category.

3.2 Generators

The Laboratory maintains an inventory of approximately 125 portable generators. Portable generators are used at the Laboratory for temporary operations requiring remote power or to provide emergency backup power during power outages at various sites. The portable generators are fueled by gasoline and/or diesel fuel.

In addition to portable generators, the Laboratory maintains and operates approximately 45 stationary standby generators. Stationary generators are used on standby (emergency) status to provide power to critical systems at the Laboratory during power outages. The stationary generators are fueled by natural gas, gasoline, or diesel.

The insignificant activity exemptions applicable to the Laboratory's generators are the following:

- Portable engines and portable turbines that have a design capacity . . . less than or equal to
 - 200-horsepower engine if fueled by diesel or natural gas, and
 - 500-horsepower engine if fueled by gasoline.
- Emergency generators which on a temporary basis replace equipment used in normal operation, and which either have an allowable emission rate or potential to emit for each pollutant that is equal to or less than the equipment replaced, or which do not operate for a period exceeding 500 hours per calendar year.

On the basis of size, portable generators used for temporary power at remote locations are exempt from emissions inventory reporting requirements. Further, LANL's small portable generators are considered trivial activities and are not included in the Title V Operating Permit or semiannual emissions reports. All stationary generators are designated as standby equipment under the Operating Permit Program and are used solely to provide emergency backup power for less than 500 hours per

year. Therefore they are considered insignificant sources and are also exempt from annual emissions inventory reporting requirements. However, the stationary standby generators were voluntarily included as a source category in the Title V Operating Permit and are included in the semiannual emissions reports.

3.3 VOC Emissions

A number of insignificant and trivial activities were applicable for exempting materials from the VOC chemical use total in the emissions inventory. The basis of the exemptions and corresponding insignificant or trivial activities are explained in Table 3.3-1.

Table 3.3-1
Exemptions Applied for Chemical Use Activities

Basis of Exemption	Activity Type	Activity
Container sizes of 1 pound or less	Trivial	Paint or nonpaint materials dispensed from prepackaged aerosol cans of 16-oz. capacity or less.
Chemicals with vapor pressures less than 10 mmHg	Insignificant	Any emissions unit, operation, or activity that handles or stores a liquid with vapor pressure less than 10 mmHg or in quantities less than 500 gal.
Calibration chemicals	Trivial	Routine calibration and maintenance of laboratory equipment or other analytical instruments, including gases used as part of those processes.
Maintenance chemicals and oils	Trivial	Activities that occur strictly for maintenance of grounds or buildings, including lawn care; pest control; grinding; cutting; welding; painting; woodworking; sweeping; general repairs; janitorial activities; plumbing; re-tarring roofs; installing insulation; steam-cleaning and water-washing activities; and paving of roads, parking lots, and other areas. Activities for maintenance and repair of equipment, pollution-control equipment, or motor vehicles either inside or outside of a building.
Use of office equipment and products	Trivial	Use of office equipment and products, not including printers or businesses primarily involved in photographic reproduction.
Chemicals used for boiler water treatment	Trivial	Boiler water treatment operations, not including cooling towers.
Chemicals used for oxygen scavenging	Trivial	Oxygen scavenging (deaeration of water).
Chemicals used in bench-scale chemical analysis	Trivial	Bench-scale laboratory equipment used for physical or chemical analysis but not lab fume hoods or vents. <i>Note: This exemption was applied only to biological research solutions. Otherwise, this exemption was not applied.</i>

Fuels such as propane, kerosene, and acetylene were analyzed separately and are not listed in Table 3.3-1. When fuels are burned in an open flame, almost all of the fuels are consumed and emissions are minimal. Emissions from fuel combustion are accounted for using emission factors for each fuel-burning unit.

3.4 HAP Emissions

The HAP chemical use exemption analysis, similar to the VOC chemical use exemption analysis, resulted in application of several of the same exemptions from NMED/AQB List of Insignificant Activities (NMED 2005) and List of Trivial Activities (NMED 1996) (refer to Table 3.3-1).

3.5 Paints

An analysis of VOC and HAP emissions resulting from painting activities at the Laboratory was performed to determine if certain exemptions apply. Paint information for 2007 was gathered from the ChemLog chemical inventory system. These records were evaluated for applicability of exemptions for trivial and insignificant activities.

The following exemptions from NMED/AQB Operating Permit Program List of Trivial Activities (NMED 1996) were used in the paint analysis:

- Activities that occur strictly for maintenance of grounds or buildings, including the following: lawn care; pest control; grinding; cutting; welding; painting; woodworking; sweeping; general repairs; janitorial activities; plumbing; re-tarring roofs; installing insulation; steam-cleaning and water-washing activities; and paving of roads, parking lots, and other areas.
- Activities for maintenance and repair of equipment, pollution control equipment, or motor vehicles either inside or outside of a building.
- Paint or nonpaint materials dispensed from prepackaged aerosol cans of 16 oz. or less capacity.

The corresponding amounts of paint were totaled for painting activities that did not qualify for one of the trivial activity exemptions listed above. The paint total for 2007 was determined to be 3,427 pounds (1.71 tons), which further qualified for the following insignificant activity:

- Surface coating of equipment, including spray painting and roll coating, for sources with facility-wide total cleanup solvent and coating actual emissions of less than two tons per year.
- All emissions from paints and painting activities were exempt as insignificant or trivial activities and therefore were not included in the 2007 emissions inventory.

4.0 EMISSIONS SUMMARY

4.1 2007 Emissions Summary

Table 4.1-1 presents facility-wide actual emissions of criteria pollutants for 2007 as reported in the annual emissions inventory and the semiannual emissions reports. In addition, the Title V Operating Permit emissions limits are included. Table 4.1-2 presents actual emissions for HAPs from chemical use. Emission unit information and detailed emissions calculations are included in Attachment A. The 2007 emissions inventory report as submitted to NMED is presented in Attachment B. Attachment C includes semiannual emissions reports for 2007.

Table 4.1-1
LANL Facility-Wide Criteria Pollutant Emissions for 2007

Pollutant	Actual Emissions for Annual Emissions Reporting (tons/yr)	Actual Emissions for Semiannual Title V Operating Permit Reporting (tons/yr)	Title V Operating Permit Facility-Wide Emission Limits (tons/yr)
NO _x	19.6	52.1	245
SO _x	0.5	1.0	150
CO	13.9	33.2	225
PM	2.9	4.9	120
PM ₁₀	2.9	4.9	120
PM _{2.5}	2.9	4.9	—*
VOC	13.9	15.5	200

*No Title V Operating Permit facility-wide emission limits on PM_{2.5}.

Table 4.1-2
LANL HAP Emissions from Chemical Use for 2007

Pollutant	Chemical Use HAP Emissions* (tons/yr)
Top 5 HAPs	
Hydrochloric Acid	1.07
Methanol	0.67
Methylene Chloride	0.34
Nickel Compounds	0.34
Cyanide Compounds	0.27
Total HAPs	5.8

*HAP emissions from combustion sources are included in the emissions reports, however, they are negligible and do not contribute significantly to facility-wide HAP emissions.

HAP emissions from combustion sources are included in the emissions reports, however, they are negligible and do not contribute significantly to facility-wide HAP emissions.

Figure 4.1-1 shows criteria air pollutant emissions by source for 2007, excluding the very small emissions sources such as the paper shredder, degreasers, and carpenter shop. As the figure shows, the TA-3 steam plant and the sum of emissions from all small boilers and heaters were the largest sources of CO and NO_x emissions in 2007. R&D chemical use was the largest source of VOC emissions.

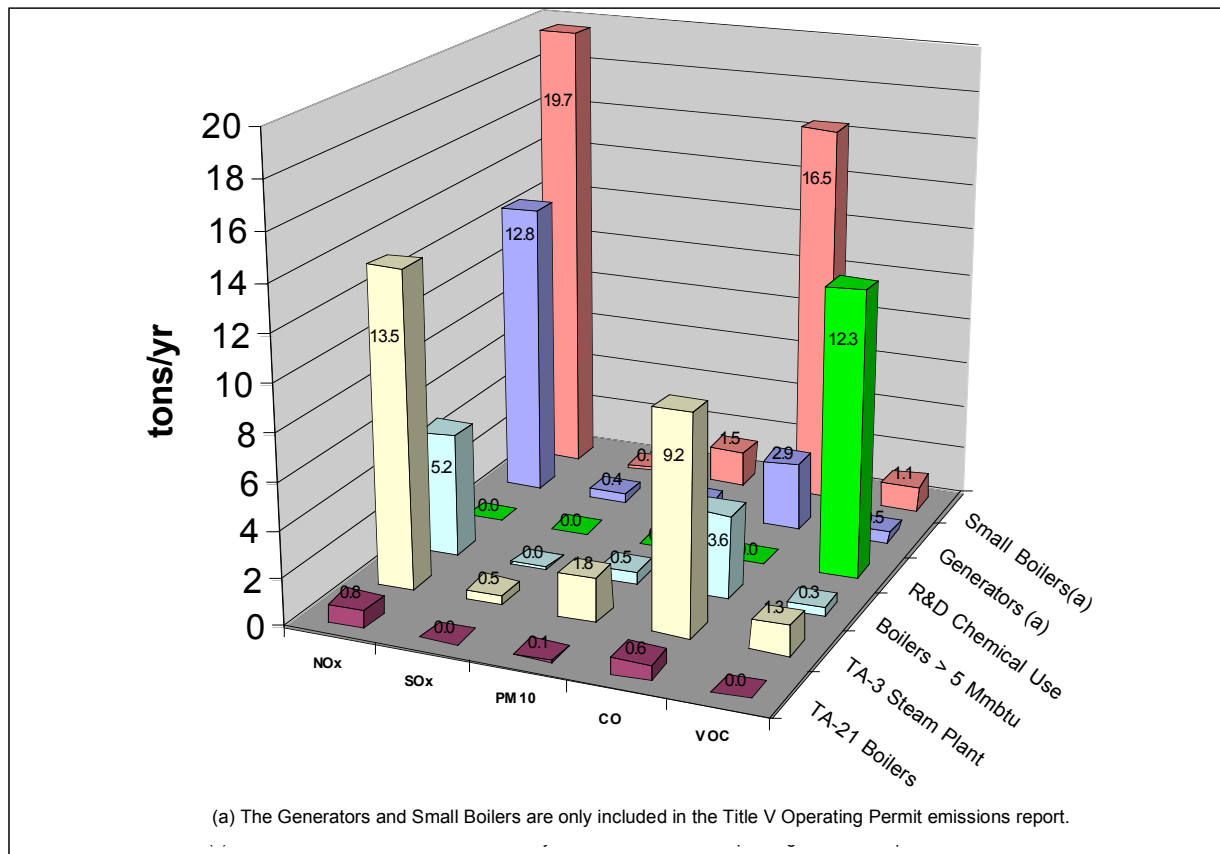


Figure 4.1-1 Emissions of criteria pollutants by source in 2007.

4.2 Emission Trends and Title V Permit Limits

A comparison of historical emissions to the facility-wide emission limits in the Title V Operating Permit is provided in the section below. It should be noted that the facility-wide emission limits in the Operating Permit include emissions from some sources that are not included in the annual emissions inventory, most notably small (insignificant) boilers and emergency standby generators. However, historical data are only available for emission sources that were included in the annual emissions inventory submittals.

Figure 4.1-2 provides a comparison of the past nine years' facility-wide emissions for criteria air pollutants as reported to NMED on the annual emissions inventory submittal. The facility-wide emission limits included in LANL's Title V Operating Permit are also shown on the graph.

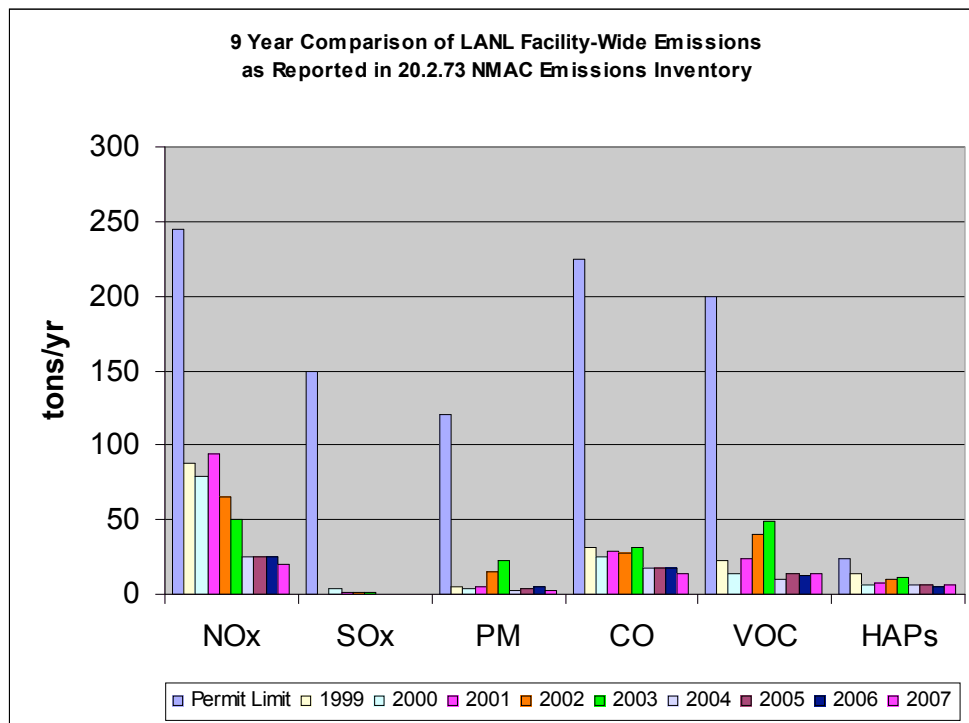


Figure 4.1-2 Comparison of facility-wide annual reported emissions from 1999–2007.

Figure 4.1-3 presents VOC and HAP emissions from chemical use activities for the last nine years. The continued fluctuation in both VOC and HAP emissions is due to both variations in actual chemical purchases and improvements the Laboratory has made to the chemical tracking system.

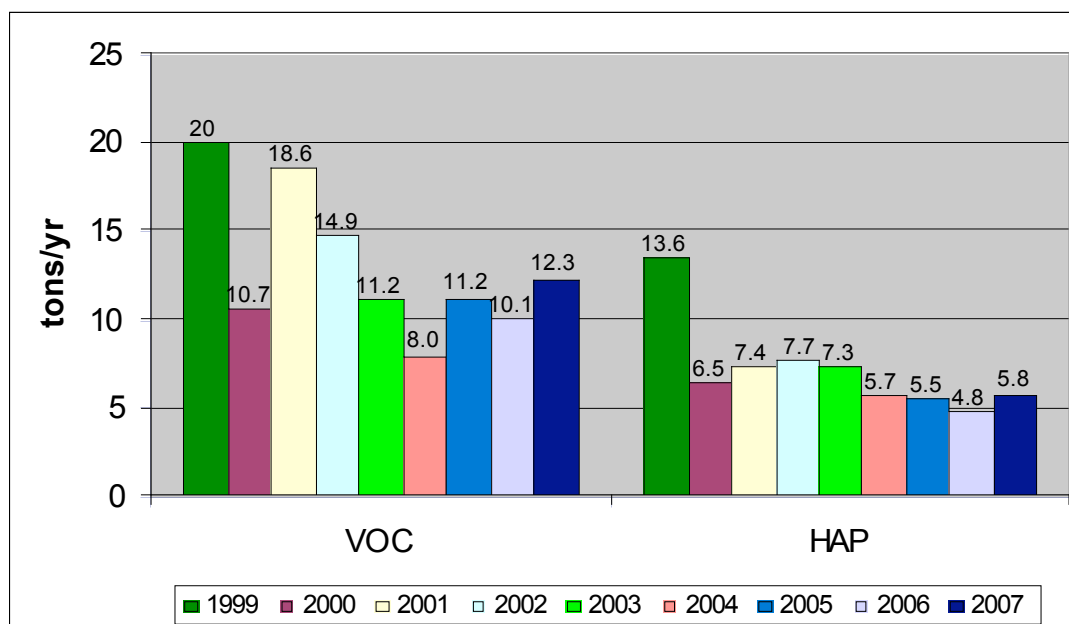


Figure 4.1-3 VOC and HAP emissions from chemical use, 1999–2007.

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Attachment A

Emission Calculation Worksheets for Individual Emission Units

2007 TA-60 BDM Asphalt Plant						
	Data Entry			Data Entry		
Month	Asphalt Produced (Tons)	12-Month Rolling Total	Month	Asphalt Produced (Tons)	12-Month Rolling Total	
January	41	1912	July	52	1273	
February	89	1674	August	75	1246	
March	162	1698	September	514	1617	
April	130	1685	October	278	1731	
May	119	1593	November	85	1713	
June	133	1459	December	52	1730	
6 mo. Total	674		6 mo. Total:	1,056		
Tons/Asphalt Produced:		1,730	12-Month Rolling Permit Limit is 13,000 Tons			
Emission Calculations						
Pollutant	Emission Factor (lb/ton)	Annual Emissions (tons)	Emissions (tons) Jan-June	Emissions (tons) July-Dec	Reference	
NOx	0.025	0.022	0.008	0.013	(a)	Reference
SOx	0.0046	0.004	0.002	0.002	(a)	
PM	0.0096	0.008	0.003	0.005	(b)	
PM-10	0.006	0.005	0.002	0.003	(c)	
PM-2.5	0.006	0.005	0.002	0.003	(c)	
CO	0.4	0.346	0.135	0.211	(a)	(a) AP-42, Sec. 11.1, HotMix Asphalt Plants, Table 11.1-5 & 11.1-6, Updated 4/2004 (b) Calculated using AP-42 uncontrolled emission factor and applying manufacturer's suggested control efficiencies for cyclone & baghouse. (c) PM-10 emission factor is calculated as 64% of the PM emission factor, using the same ratio of PM to PM-10 as provided in AP-42 Table 11.1-1. No data provided for PM-2.5, assume same as PM-10. (d) AP-42, Table 11.1-9, HotMix Asphalt Plants, Updated 4/2004 (e) AP-42, Table 11.1-11, HotMix Asphalt Plants, Updated 4/2004 (f) Assume all SOx is converted to sulfuric acid (g) EPCRA PAC Guidance Document EPA-260-B-01-03, June 2001, Table 2-3
VOC	0.0082	0.007	0.003	0.004	(a)	
HAPs						
Acetaldehyde	0.00032	0.000	0.000	0.000	(d)	
Benzene	0.00028	0.000	0.000	0.000	(d)	
EthylBenzene	0.0022	0.002	0.001	0.001	(d)	
Formaldehyde	0.00074	0.001	0.000	0.000	(d)	
Napthalene	0.000036	0.000	0.000	0.000	(d)	
POM	0.00011	0.0001	0.000	0.000	(d)	
Quinone	0.00027	0.000	0.000	0.000	(d)	
Toluene	0.001	0.001	0.000	0.001	(d)	
Xylene	0.0027	0.002	0.001	0.001	(d)	
TOTAL HAPs		0.007	0.003	0.004		
EPCRA 313			lbs./year			
Lead	8.90E-07	7.70E-07	0.0015		(e)	
Sulfuric Acid	0.0046	3.98E-03	7.96		(f)	
Mercury	4.10E-07	3.55E-07	0.0007		(e)	
PACs	2.70E-08	2.34E-08	4.67E-05		(d)	
Benzo(g,h,i) perylene	5.00E-10	4.33E-10	8.65E-07		(g)	

2007 TA-3 & TA-15 Carpenter Shops									
TA-3	Month	Data Entry	Data Entry						
		Hours of Operation ¹	Hours of Operation ¹						
	January	TA-3	TA-3						
	February	3.1	2.9						
	March	4.3	9.9						
	April	25.6	2.3						
	May	4.6	4.9						
	June	3.4	1.5						
	6 mo. Total	2.3	1.4						
	43.3	22.9							
TA-15	Month	Data Entry	Data Entry						
		Hours of Operation ¹	Hours of Operation ¹						
	January	TA-15	TA-15						
	February	9.4	12.3						
	March	17.4	10.3						
	April	47.2	8.8						
	May	13.6	10.2						
	June	20.6	13.0						
	6 mo. Total	8.9	4.8						
	117.1	59.4							
Saws, drills, shaping and sanding equipment shall each not operate in excess of 4368 hours per year.									
Reference									
1. Based on information provided monthly by the shop foreman from each shop.									

Carpenter Shop Emissions Calculations for 2008									
ANNUAL EMISSIONS									
Operation Parameters		TSP Prior to Cyclone	TSP Post Cyclone	PM Post Cyclone Emissions (tons/year)					
Exhaust Flow (ft3/min)	Hours of ⁽³⁾ Operation (hr/yr)	(tons/year)	tons/yr	(PM) (PM > 40 µm)	(PM 10) (PM 5-20 µm)	(PM 2.5) (PM <2.5 µm)			
TA-3-38	2706	7	0.007	0.002	0.001	0.001			
TA-15-563	2100	40	0.030	0.011	0.001	0.005			
January through June Emissions									
Operation Parameters		TSP Prior to Cyclone	TSP Post Cyclone	PM Post Cyclone Emissions (tons)					
Exhaust Flow (ft3/min)	Hours of ⁽³⁾ Operation (hr/period)	tons	tons	(PM) (PM > 40 µm)	(PM 10) (PM 5-20 µm)	(PM 2.5) (PM <2.5 µm)			
TA-3-38	2706	7	0.007	0.002	0.001	0.001			
TA-15-563	2100	40	0.030	0.011	0.001	0.005			
July through December Emissions									
Operation Parameters		TSP Prior to Cyclone	TSP Post Cyclone	PM Post Cyclone Emissions (tons)					
Exhaust ⁽¹⁾ Flow (ft3/min)	Hours of ⁽³⁾ Operation (hr/period)	tons	tons	(PM) (PM > 40 µm)	(PM 10) (PM 5-20 µm)	(PM 2.5) (PM <2.5 µm)			
TA-3-38	2706	0	0.000	0.000	0.000	0.000			
TA-15-563	2100	0	0.000	0.000	0.000	0.000			
Conversions:		lb/ton	min/hr	ton/lb	References:				
	2000	0.00014	60	0.0005	1.) Exhaust Rate calculated by Victor Martinez.				
Assumptions:					2.) Emission Factor obtained from AP-42, Section 10.4 Woodworking Waste Collection Operations, post cyclone emissions, Table 10.4.1, February 1980.				
					3.) Based on information provided monthly by the shop foreman.				
					4.) K. Wark & C.F. Warner, Air Pollution - Its Origin and Control, Table 5-9, pg 186 (1976).				
					5.) Emissions Inventory Improvement Program (EIP) Uncontrolled Emission Factor Listing for Criteria Air Pollutants, Volume II: Chapter 14, July 2001 And AP-42 Appendix B, Section 10.5 Woodworking Waste Collection Operations: Belt Sander Hood Exhaust Cyc				
Post Cyclone Emission Factor:									
grain/ft ³ ⁽²⁾									
0.03									
Maximum permitted exhaust flow rate is:		Shop Location		Flow Rate					
		TA-3-38		5000 cfm					
		TA-15-563		5471 cfm					
Allowable Emission Limits are:		3.07 tpy of PM10 for the TA-3-38 shop		2.81 tpy of PM10 for the TA-15-563 shop					

2007 TA-52 Data Disintegrator					
	Data Entry		Data Entry		
Month	Boxes (c) Shredded	12-Month Rolling Total	Month	Boxes (c) Shredded	12-Month Rolling Total
January	484	9257	July	1188	10900
February	542	8759	August	634	10066
March	2206	10199	September	977	10444
April	799	10293	October	535	10651
May	1719	10889	November	751	11387
June	992	10602	December	593	11420
6 mo. Total	6,742		6 mo. Total:	4,678	
Annual Boxes (2007):	11,420				
Emission Calculations					
	Emission (b) Factor	% In (e) Exhaust	Control (d) Efficiency (Cyclone)	Control (d) Efficiency (Baghouse)	
PM 2.5	15%	15%	0%	95.0%	
PM 10	15%	90%	75%	95.0%	
TSP	15%	100%	75%	95.0%	
					Average Box Weight (e) 45 Pounds
	Amount Processed (pounds)	PM-2.5 Emissions (pounds)	PM-2.5 Emissions (tons)	PM-10 Emissions (pounds)	PM-10 Emissions (tons)
Annual	513,900	578.1	0.29	867.2	0.43
January - June	303,390	341.3	0.17	512.0	0.26
July - December	210,510	236.8	0.12	355.2	0.18
Reference	(b). Emission Factor (percentage of material shredded that will enter into the exhaust) obtained from the manufacturer of the air handling system, AGET Manufacturing Co. 15% is also listed in the construction permit application.		(c). Information provided by the shredding operations personnel.		(d). Information on control equipment efficiencies was provided by the manufacturer (SEM) of the Data Disintegrator. Those values not given were extrapolated using manufacturer data. Efficiencies of 75% for the Cyclone and 95% for the bag house are list
(a). Estimated maximum box weight is 45 pounds. Information provided by shredding operations. Full box weight of tightly packed paper.					(e). Manufacturer provided info that the dust into the exhaust would be in the size range of 5-20 um. Conservative assumption that 15% is PM2.5, and 90% is PM10.
Maximum Annual emission rate	9.9 tpy or 2.3 lb/hr of Total Suspended Particulate (TSP) per year.				
	9.9 tpy or 2.3 lb/hr of Particulate Matter <10µm (PM-10) per year.				

2007 Small Boilers Data Entry / Gas Use											
Data Entry	Metered Boilers										
	TA-55 Boiler Gas Use (MSCF) (a)			TA-50-2 (b) (MSCF)			Total Gas Use (a)		Non-Metered Gas Use (MMSCF)	12-Month Rolling Total for all Small Boilers (MMSCF) (a)	
	BHW-7B (B-602)	BHW-2B (B-603)	BS-1	(MSCF)	(MMSCF)	(MMSCF)	(MMSCF)				
January	1	2657		81,782	81.78	79.12	502.42				
February	676	1261		66,101	66.10	64.16	508.94				
March	1609	1		54,352	54.35	52.74	505.10				
April	1248	797		44,215	44.22	42.17	513.53				
May	1379	1836		29,468	29.47	26.25	521.07				
June	348	379	0.1	13,530	13.53	12.80	518.20				
July	333	128		13,687	13.69	13.23	519.25				
August	415	1297		8,794	8.79	7.08	514.87				
September	345	1160		19,691	19.69	18.19	511.34				
October	345	1537		36,509	36.51	34.63	506.16				
November	702	798		54,213	54.21	52.71	502.26				
December	769	814	0.0	79,717	79.72	78.13	502.06				
TOTAL	8170	12665	0.1	502,059	502.06	481.22	Permit Limit = 870				
2007 Non Metered Boiler Pool Capacity: 304.3 MMBTU/hr (f)											
Estimated Gas-Use per MMBtu rating Jan-June: 0.91 MMBtu/MMBtu/hr											
Estimated Gas-Use per MMBtu rating July-Dec: 0.67 MMBtu/MMBtu/hr											
Estimated Gas-Use per MMBtu - Annual 1.58 MMBtu/MMBtu/hr											
Definitions: MMSCF = Million Standard Cubic Feet											
MSCF = Thousand Standard Cubic Feet											
Metered/Non-metered: Metered boilers are those units that have unit specific volumetric flow meters for the boiler(s) only.											
Gas Use Non-Metered (g) (MMSCF)											
AIRS Stack #	015	016	017	018	019	020	021	024	Insignificant Units (h)		
Location:	TA-48-1	TA-48-1	TA-48-1	TA-53-365	TA-53-365	TA-59-1	TA-59-1	TA-16-1484	Lab Wide		
ID:	BS-1	BS-2	BS-6	BHW-1	BHW-2	BHW-1	BHW-2	Plant 5	Various		
Design Rate (i)	5.336	5.335	7.140	7.115	7.115	5.335	5.335	12.700	249		
Calculated Gas Use-Jan-June	4.862	4.861	6.505	6.482	6.482	4.861	4.861	11.571	226.769		
Calculated Gas Use-July-Dec	3.577	3.576	4.786	4.769	4.769	3.576	3.576	8.513	166.826		
Calculated Gas Use-Annual	8.439	8.438	11.291	11.251	11.251	8.438	8.438	20.084	393.595		
REFERENCES											
(a) Information on non-metered boilers is provided as a data deliverable from KSL and contains all gas use at LANL minus those non-LANL sources which feed from the LANL main line and LANL sources that are individually metered. Total gas use does not include gas use from non-metered boilers.											
(b) TA-16 Boilers include 2 boilers in plant 5. Gas use was difficult to obtain, so, the boilers were included in the "boiler pool" to determine gas use. Plant 6 has been taken off line and is not expected to be reused or boilers relocated. The removal											
(c) The TA-55 has two boilers with separate AIRs numbers. Each boiler has a gas meter. The gas use information is provided monthly by the TA-55 facility personnel and is included in the KSL data deliverable.											
(d) The TA-50-RWTF boiler was added to EIR as a new source in 2003. This boiler is owned and operated by a contractor and has been operated at LANL since mid-2000. Originally planned as a temporary source, but current plans are to keep operating for see											
(e) The 12-month rolling average includes all gas use from all boilers listed in this spreadsheet. Boilers not included in this report due to their large size or design are TA-21 boilers & powerplant boilers at TA-3. A gas use limit of 870 MMBtu/yr. 12-month rolling average.											
(f) The non-metered boiler pool capacity is the sum of all active non-metered boilers design ratings (designated value, called design rating in boiler data base) in MMBTU. This number is used to estimate the gas use rate (total non-metered gas use divided by pool capacity).											
(g) The non-metered boilers gas use section provides estimates of gas use for each boiler. This is calculated using the non-metered gas rate, as discussed in reference (f). The individual boiler design rating is multiplied by the gas use rate to provide the non-metered boiler gas use.											
(h) NAMED List of Insignificant Activities (1995), Item (3) examples fuel burning equipment which uses gaseous fuel, has a design rate less than or equal to 5 MMBTU/hr, and is used for heating buildings for personal comfort or for producing hot water for p											
(i) The design rate for boilers includes a correction for elevation. LANL is at approximately 7,500 feet above sea level. Corrections are made for atmospheric boilers using 4% reduction (designated) for each 1,000 feet above sea level (4% x 7.5 = 30%). No											

Emission Factors (lb/MMscf)			
Criteria Pollutant	Small Uncontrolled Boilers ¹	TA-16 Low NOx Boilers ⁴	TA-55-6 Boilers ³
NOx	100	37.08	138
SOx	0.6	0.6	0.6
PM ²	7.6	7.6	14.2
PM-10 ²	7.6	7.6	14.2
PM-2.5 ²	7.6	7.6	14.2
CO	84	37.08	38.2
VOC	5.5	5.5	5.98
HAPs ⁵			
Arsenic	0.0002		
Benzene	0.0021		
BE	0.000012		
Cadmium	0.0011		
Chromium	0.0014		
Cobalt	0.000084		
Dichlorobenzene	0.0012		
Formaldehyde	0.075		
Hexane	1.8		
Lead	0.0005		
Manganese	0.00038		
Mercury	0.00026		
Napthalene	0.00061		
Nickel	0.0021		
POM	0.000088		
Selenium	0.000024		
Toluene	0.0034		

References for Emission Factors

- (1) AP-42, 7/98, Section 1.4, Natural Gas Combustion, Small Boilers.
- (2) Emission factors for natural gas of PM-10 and PM-2.5 are roughly equal to those of PM, Natural Gas Combustion, Table 1.4-2
- (3) AP-42, 7/98, Section 1.4, Natural Gas Combustion, Small Boilers for SOx. Stack test on 3/00 for NOx. Otherwise, Emission factors from Sellers Engineering Co.
- (4) AP-42, 7/98, Section 1.4, Natural Gas Combustion, Small Boilers; Emission factors for NOx and CO from Sellers Engineering Co (low-NOx boilers).
- (5) All HAP emission factors from AP-42 7/98, Section 1.4, Natural Gas Combustion, Tables 1.4-3, 1.4-4

2007 Small Boilers Emission Summary Title V Semi-Annual Reporting				
		Total Emissions (tons)		
Pollutant Criteria	Annual Emissions (Includes Insignificant Sources)	Jan-June (Includes Insignificant Sources)	July-Dec (Includes Insignificant Sources)	
NOx	24.867	14.340	10.527	
SOx	0.151	0.087	0.064	
PM	1.977	1.140	0.836	
PM-10	1.977	1.140	0.836	
PM-2.5	1.977	1.140	0.836	
CO	20.138	11.606	8.532	
VOC	1.386	0.799	0.587	
HAPs				
Arsenic	5.02E-05	2.89E-05	2.13E-05	
Benzene	5.27E-04	3.04E-04	2.23E-04	
BE	3.01E-06	1.74E-06	1.28E-06	
Cadmium	2.76E-04	1.59E-04	1.17E-04	
Chromium	3.51E-04	2.03E-04	1.49E-04	
Cobalt	2.11E-05	1.22E-05	8.93E-06	
Dichlorobenzene	3.01E-04	1.74E-04	1.28E-04	
Formaldehyde	1.88E-02	1.09E-02	7.97E-03	
Hexane	4.52E-01	2.61E-01	1.91E-01	
Lead	1.26E-04	7.24E-05	5.32E-05	
Manganese	9.54E-05	5.50E-05	4.04E-05	
Mercury	6.53E-05	3.76E-05	2.76E-05	
Napthalene	1.53E-04	8.83E-05	6.48E-05	
Nickel	5.27E-04	3.04E-04	2.23E-04	
POM	2.21E-05	1.27E-05	9.35E-06	
Selenium	6.02E-06	3.47E-06	2.55E-06	
Toluene	8.54E-04	4.92E-04	3.61E-04	
TOTAL HAPS	0.474	0.273	0.201	

2007 Small Boilers Emissions by Boiler for Annual EI Reporting (Tons/Year)

Pollutant Criteria	AI RS 015 TA-48-1 BS-1	AI RS 016 TA-48-1 BS-2	AI RS 017 TA-48-1 BS-6	AI RS 018 TA-53-365 BHW-1	AI RS 019 TA-53-365 BHW-2	AI RS 020 TA-59-1 BHW-1	AI RS 021 TA-59-1 BHW-2	AI RS 024 TA-16 Plant 5	AI RS 037 TA-55-6 BHW-1B	AI RS 038 TA-55-6 BHW-2B	AI RS New TA-50-2 BS-1	Total for Small Boilers
NOx	0.422	0.422	0.565	0.563	0.563	0.422	0.422	0.372	0.564	0.874	0.000	5.187
SOx	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.006	0.002	0.004	0.000	0.033
PM	0.032	0.032	0.043	0.043	0.043	0.032	0.032	0.076	0.058	0.090	0.000	0.481
PM-10	0.032	0.032	0.043	0.043	0.043	0.032	0.032	0.076	0.058	0.090	0.000	0.481
PM-2.5	0.032	0.032	0.043	0.043	0.043	0.032	0.032	0.076	0.058	0.090	0.000	0.481
CO	0.354	0.354	0.474	0.473	0.473	0.354	0.354	0.372	0.156	0.242	0.000	3.607
VOC	0.023	0.023	0.031	0.031	0.031	0.023	0.023	0.055	0.024	0.038	0.000	0.303
HAPS												
Arsenic	8.44E-07	8.44E-07	1.13E-06	1.13E-06	1.13E-06	8.44E-07	8.44E-07	2.01E-06	8.17E-07	1.27E-06	1.00E-11	1.08E-05
Benzene	8.86E-06	8.86E-06	1.19E-05	1.18E-05	1.18E-05	8.86E-06	8.86E-06	2.11E-05	8.58E-06	1.33E-05	1.05E-10	1.14E-04
BE	5.06E-08	5.06E-08	6.77E-08	6.75E-08	6.75E-08	5.06E-08	5.06E-08	1.21E-07	4.90E-08	7.60E-08	6.00E-13	6.51E-07
Cadmium	4.64E-06	4.64E-06	6.21E-06	6.19E-06	6.19E-06	4.64E-06	4.64E-06	1.10E-05	4.49E-06	6.97E-06	5.50E-11	5.97E-05
Chromium	5.91E-06	5.91E-06	7.90E-06	7.88E-06	7.88E-06	5.91E-06	5.91E-06	1.41E-05	5.72E-06	8.87E-06	7.00E-11	7.59E-05
Cobalt	3.54E-07	3.54E-07	4.74E-07	4.73E-07	4.73E-07	3.54E-07	3.54E-07	8.44E-07	3.43E-07	5.32E-07	4.20E-12	4.56E-06
Dichlorobenzene	5.06E-06	5.06E-06	6.77E-06	6.75E-06	6.75E-06	5.06E-06	5.06E-06	1.21E-05	4.90E-06	7.60E-06	6.00E-11	6.51E-05
Formaldehyde	3.16E-04	3.16E-04	4.23E-04	4.22E-04	4.22E-04	3.16E-04	3.16E-04	7.53E-04	3.06E-04	4.75E-04	3.75E-09	4.07E-03
Hexane	7.60E-03	7.59E-03	1.02E-02	1.01E-02	1.01E-02	7.59E-03	7.59E-03	1.81E-02	7.35E-03	1.14E-02	9.00E-08	9.76E-02
Lead	2.11E-06	2.11E-06	2.82E-06	2.81E-06	2.81E-06	2.11E-06	2.11E-06	5.02E-06	2.04E-06	3.17E-06	2.50E-11	2.71E-05
Manganese	1.60E-06	1.60E-06	2.15E-06	2.14E-06	2.14E-06	1.60E-06	1.60E-06	3.82E-06	1.55E-06	2.41E-06	1.90E-11	2.06E-05
Mercury	1.10E-06	1.10E-06	1.47E-06	1.46E-06	1.46E-06	1.10E-06	1.10E-06	2.61E-06	1.06E-06	1.65E-06	1.30E-11	1.41E-05
Napthalene	2.57E-06	2.57E-06	3.44E-06	3.43E-06	3.43E-06	2.57E-06	2.57E-06	6.13E-06	2.49E-06	3.86E-06	3.05E-11	3.31E-05
Nickel	8.86E-06	8.86E-06	1.19E-05	1.18E-05	1.18E-05	8.86E-06	8.86E-06	2.11E-05	8.58E-06	1.33E-05	1.05E-10	1.14E-04
POM	3.71E-07	3.71E-07	4.97E-07	4.95E-07	4.95E-07	3.71E-07	3.71E-07	8.84E-07	3.59E-07	5.57E-07	4.40E-12	4.77E-06
Selenium	1.01E-07	1.01E-07	1.35E-07	1.35E-07	1.35E-07	1.01E-07	1.01E-07	2.41E-07	9.80E-08	1.52E-07	1.20E-12	1.30E-06
Toluene	1.43E-05	1.43E-05	1.92E-05	1.91E-05	1.91E-05	1.43E-05	1.43E-05	3.41E-05	1.39E-05	2.15E-05	1.70E-10	1.84E-04
TOTAL HAPS/Unit	7.97E-03	7.97E-03	1.07E-02	1.06E-02	1.06E-02	7.97E-03	7.97E-03	1.90E-02	7.71E-03	1.20E-02	9.44E-08	0.10

EPCRA 313						
Chemical	Amount in Fuel^a		Boilers^b		Emissions (lbs)	
	Conc.	Pounds	Emission Factor (lbs/MMscf)			
Lead^c			5.0E-04		0.00	
Sulfuric Acid^d			0.6		0.00	
Mercury^c			2.6E-04		0.00	
PACs^e			8.69E-07		0.00E+00	
Benzo(g,h,i)			1.20E-06		0.00E+00	
References						
(a) Amount of EPCRA chemical in fuel is considered "otherwise used" for EPCRA 313 threshold determination mercury are lead compounds and mercury compounds.						
(c) Emission Factors from AP-42, Section 1.4, Natural Gas Combustion, Tables 1.4-2, 1.4-3 and 1.4-4, July 1998						
(d) Assume all SOx emissions are converted to sulfuric acid in the stack.						
(e) EPCRA PAC Guidance Document, Table 2-3						

Attachment A

DATA ENTRY						
TA-3-22 Power Plant ^b		TA-3-22 Power Plant ^b		TA-3-22 Power Plant ^b		Monthly Totals
Month	Natural Gas (MCF) ^a	Fuel Oil (gallons) ^a	Natural Gas (MCF) ^a	Fuel Oil (gallons) ^a	Natural Gas (MCF) ^a	Fuel Oil (gallons) ^a
January	11,719	319	31,832	0	31,733	75,284
February	36,598	0	21,940	347	611	59,149
March	38,858	438	4,328	212	8,387	51,573
April	9,160	0	3,101	603	29,807	42,068
May	362	27,893	10,074	438	24,198	34,634
June	0	0	0	0	0	0,000
July	25	0	0	0	0	0.025
August	15,215	0	146	0	0	15,361
September	24,466	438	1,230	0	88	25,784
October	19,297	384	17,033	0	1,124	37,454
November	2,830	274	40,509	24	2,446	45,785
December	1,475	384	60,327	0	2,709	64,511
Annual Totals:	160,005	30,130	190,520	1,624	101,103	451,628
Jan. - June	96,697	28,650	71,275	1,600	94,736	262,708
July - Dec.	63,308	1,480	119,245	24	6,367	188,920
12-Mo. Rolling Total Natural Gas (MMscf)		12-Mo. Rolling Total Fuel Oil (gallons)		Totals by Fuel Type		
Month					Natural Gas (MMscf)	Fuel Oil (Gallons)
January	615.3		21463			
February	616.0		21097		Annual Totals:	83334.00
March	609.8		21231		Jan. - June	80789.00
April	601.9		21456		July - Dec.	2545.00
May	602.6		99269			
June	573.2		98611		References	
July	546.3		97448		(a) A P-42, 7198, Section. 1.4, Natural Gas Combustion , Tables 1.4-1, 1.4-2	
August	534.6		97448		(b) Fuel usage obtained from Jerry Gonzales (FWO-U). Values are provided in a monthly data deliverable from KSL.	
September	526.9		97886			
October	482.3		98270			
November	463.3		82840			
December	451.6		83334			
Permit Limits:	2000	MMscf	500,000	gallons		

Emissions by Boiler 2007

Pollutant Criteria	Emission Factor		Unit Emissions Boiler #1, Stack 032				Unit Emissions Boiler #2, Stack 033				Unit Emissions Boiler #3, Stack 034			
			Annual Natl Gas (tons)		Jan-June Fuel Oil (tons)		July-Dec (gas&oil) (tons)		Annual Natl Gas (tons)		Jan-June Fuel Oil (tons)		July-Dec (gas&oil) (tons)	
	Natural Gas (lb/MMscf) ^(a)	Fuel Oil ^(b) Pounds/ 1000 gal	Annual Natl Gas (tons)	Annual Fuel Oil (tons)	Jan-June Fuel Oil (tons)	July-Dec (gas&oil) (tons)	Annual Natl Gas (tons)	Annual Fuel Oil (tons)	Jan-June Fuel Oil (tons)	July-Dec (gas&oil) (tons)	Annual Natl Gas (tons)	Annual Fuel Oil (tons)	Jan-June Fuel Oil (tons)	July-Dec (gas&oil) (tons)
Nox ^(c)	58	8.64	4.640	0.130	2.928	1.842	5.525	0.007	2.074	3.458	2.932	0.223	2.966	0.189
Sox ^(d)	0.6	7.4	0.048	0.111	0.135	0.024	0.057	0.006	0.027	0.036	0.030	0.190	0.215	0.006
PM ^(e)	7.6	3.3	0.608	0.050	0.415	0.243	0.724	0.003	0.273	0.453	0.384	0.085	0.443	0.026
PM-10 ^(f)	7.6	2.3	0.608	0.035	0.400	0.242	0.724	0.002	0.273	0.453	0.384	0.059	0.418	0.025
PM-2.5 ^(g)	7.6	1.55	0.608	0.023	0.390	0.242	0.724	0.001	0.272	0.453	0.384	0.040	0.399	0.025
CO ^(h)	40	5.0	3.200	0.075	2.006	1.270	3.810	0.004	1.430	2.385	2.022	0.129	2.021	0.130
VOC	5.5	0.2	0.440	0.0030	0.269	0.174	0.524	0.0002	0.196	0.328	0.278	0.005	0.266	0.018
HAPs ⁽ⁱ⁾														
Arsenic	0.0002	0.00055	1.60E-05	8.26E-06	1.75E-05	6.74E-06	1.91E-05	4.45E-07	7.57E-06	1.19E-05	1.01E-05	1.41E-05	2.33E-05	9.22E-07
Benzene	0.0021	-	1.68E-04	0.0	1.02E-04	6.65E-05	2.00E-04	0.0	7.48E-05	1.25E-04	1.06E-04	0.0	9.95E-05	6.69E-06
Beryllium	0.00012	0.00041	9.60E-07	6.19E-06	6.47E-06	6.84E-07	1.14E-06	3.34E-07	7.56E-07	7.20E-07	6.07E-07	1.06E-05	1.10E-05	2.52E-07
Cadmium	0.0011	0.00041	8.80E-05	6.19E-06	5.91E-05	3.51E-05	1.05E-04	3.34E-07	3.95E-05	6.56E-05	5.56E-05	1.06E-05	6.25E-05	3.72E-06
Chromium	0.0014	0.00041	1.12E-04	6.19E-06	7.36E-05	4.46E-05	1.33E-04	3.34E-07	5.02E-05	8.35E-05	7.08E-05	1.06E-05	7.67E-05	4.67E-06
Cobalt	0.000084	-	6.72E-06	0.0	4.06E-06	2.66E-06	8.00E-06	0.0	2.99E-06	5.01E-06	4.25E-06	0.0	3.98E-06	2.67E-07
Dichlorobenzene	0.0012	-	9.60E-05	0.0	5.80E-05	3.80E-05	1.14E-04	0.0	4.28E-05	7.15E-05	6.07E-05	0.0	5.68E-05	3.82E-06
Formaldehyde	0.075	0.048	6.00E-03	7.23E-04	4.31E-03	2.41E-03	7.14E-03	3.90E-05	2.71E-03	4.47E-03	3.79E-03	1.24E-03	4.77E-03	2.64E-04
Hexane	1.8	-	1.44E-01	0.0	8.70E-02	5.70E-02	1.71E-01	0.0	6.41E-02	1.07E-01	9.10E-02	0.0	5.53E-02	5.73E-03
Lead	0.0005	0.00123	4.00E-05	1.86E-05	4.18E-05	1.67E-05	4.76E-05	1.00E-06	1.88E-05	2.98E-05	2.53E-05	3.18E-05	5.48E-05	2.23E-06
Manganese	0.00038	0.00082	3.04E-05	1.24E-05	3.01E-05	1.26E-05	3.62E-05	6.67E-07	1.42E-05	2.27E-05	1.92E-05	2.12E-05	3.88E-05	1.64E-06
Mercury ^(j)	0.00026	0.00041	2.08E-05	6.19E-06	1.85E-05	8.53E-06	2.48E-05	3.34E-07	9.59E-06	1.55E-05	1.31E-05	1.06E-05	2.27E-05	1.04E-06
Naphthalene	0.00061	-	4.88E-05	0.0	2.95E-05	1.93E-05	5.81E-05	0.0	2.17E-05	3.64E-05	3.08E-05	0.0	2.89E-05	1.94E-06
Nickel	0.0021	0.00041	1.68E-04	6.19E-06	1.07E-04	6.68E-05	2.00E-04	3.34E-07	7.52E-05	1.25E-04	1.06E-04	1.06E-05	1.10E-04	6.90E-06
POM	0.000088	0.0033	7.04E-06	4.97E-05	5.15E-05	5.23E-06	8.38E-06	2.68E-06	5.78E-06	5.29E-06	4.45E-06	8.51E-05	8.76E-05	2.00E-06
Selenium	0.000024	0.00206	1.92E-06	3.10E-05	3.06E-05	2.28E-06	2.29E-06	1.67E-06	2.50E-06	1.46E-06	1.21E-06	5.30E-05	5.31E-05	1.15E-06
Toluene	0.0034	-	2.72E-04	0.0	1.64E-04	1.08E-04	3.24E-04	0.0	1.21E-04	2.03E-04	1.72E-04	0.0	1.61E-04	1.08E-05
TOTAL HAPS			1.51E-01	8.74E-04	9.21E-02	5.98E-02	1.80E-01	4.71E-05	6.73E-02	1.13E-01	9.55E-02	1.50E-03	9.09E-02	6.04E-03

Reference

- (a) AP-42, 7/98, Section. 1.4, *Natural Gas Combustion*, Tables 1.4-1, 1.4-2
- (b) Fuel usage obtained from Jerry Gonzales
- (c) Average of source tests conducted on all 3 boilers September 2002 burning natural gas after FGR installed. Assumed FGR resulted in similar NOx reduction for oil.
- (d) All PM from natural gas is assumed <1µ, so PM-10, PM-2.5 and total PM have equal EFs, AP-42, *Natural Gas Combustion*, Table 1.4-2. The PM emission factor for fuel oil is the sum of filterable and condensable PM.
- (e) AP-42, 1/95, Section. 1.4, *Natural Gas Combustion*, Table 1.4-2. Consistent with previous stack tests.
- (f) AP-42, 9/98, Section. 1.3, *Fuel Oil Combustion*, Table 1.3-1 with Errata, Table 1.3-3, and Table 1.3-6.
- (g) Boilers >100 MMBtu/hr: SOx Emission Factor (SO_x [142S] + SO_x [5.7S]) = 147.7 * S (from AP-42, Table 1.3-1 w/Errata) (S = weight % sulfur in oil)/(Sulfur content per analysis on oil in tanks in August 01', no new oil delivered in 02/03')
S(%) = 0.5
- (h) HAP emission factors for natural gas from AP-42, Tables 1.4-3 and 1.4-4, for fuel oil from AP-42 Tables 1.3-8 and 1.3-10.
- (i) AP-42, Table 1.4-2, 1.4-3, and 1.4-4, July 1998

12 Month Rolling Emissions 2007 (Tons)						
Pollutant	TSP	PM10	NOx	CO	VOC	SO ₂
Permit Limit (tons/yr)						
12-Month Rolling Average	8.4	8.2	60.2	41.3	5.6	7.9
January	2.374	2.363	17.937	12.360	1.694	0.264
February	2.376	2.365	17.956	12.373	1.696	0.263
March	2.352	2.341	17.775	12.248	1.679	0.261
April	2.323	2.312	17.548	12.092	1.657	0.260
May	2.454	2.404	17.905	12.301	1.667	0.547
June	2.341	2.291	17.047	11.710	1.586	0.536
July	2.237	2.188	16.264	11.170	1.512	0.524
August	2.192	2.144	15.925	10.936	1.480	0.520
September	2.164	2.115	15.704	10.783	1.459	0.520
October	1.995	1.946	14.413	9.893	1.336	0.508
November	1.897	1.856	13.795	9.474	1.282	0.445
December	1.854	1.812	13.457	9.241	1.250	0.443
Monthly Emission Totals (Tons)						
Pollutant	TSP	PM10	NOx	CO	VOC	SO ₂
January	0.287	0.286	2.185	1.506	0.207	0.024
February	0.225	0.225	1.717	1.184	0.163	0.019
March	0.198	0.197	1.500	1.034	0.142	0.019
April	0.161	0.161	1.223	0.843	0.116	0.015
May	0.261	0.222	1.343	0.889	0.103	0.300
June	0.000	0.000	0.000	0.000	0.000	0.000
July	0.000	0.000	0.001	0.001	0.000	0.000
August	0.058	0.058	0.445	0.307	0.042	0.005
September	0.099	0.098	0.750	0.517	0.071	0.009
October	0.144	0.143	1.090	0.751	0.103	0.014
November	0.175	0.175	1.330	0.917	0.126	0.016
December	0.246	0.246	1.874	1.292	0.177	0.022
Annual Totals	1.854	1.812	13.457	9.241	1.250	0.443

Emission Summary TA-3 Power Plant 2007

Pollutant Criteria	Emission Factor		Annual Emissions (Natural Gas + Fuel Oil) (tons)	Jan-June Emissions (Natural Gas + Fuel Oil) (tons)		July-Dec Emissions (Natural Gas + Fuel Oil) (tons)		Reference		Reference
	Natural Gas	Fuel Oil ¹ (lb/1000)						Gas	Oil	
NOX	58	8.64	13.457	7.968	5.490	(c)	(c)	(c)	(c)	(a) AP-42, 798, Section 1.4, Natural Gas Combustion, Tables
SOX	0.6	7.4	0.443	0.377	0.066	(a)(i)	(g)(i)	(a)(i)	(g)(i)	(b) Fuel usage obtained from Jerry Gonzales
PM	7.6	3.3	1.854	1.132	0.722	(d)	(d)	(d)	(d)	(c) Average of source tests conducted on all 3 boilers September 2002 burning natural gas after FGR installed. Assumed FGR resulted in similar NOx reduction for oil.
PM-10	7.6	2.3	1.812	1.091	0.721	(d)	(d)	(d)	(d)	
PM-2.5	7.6	1.55	1.781	1.061	0.720	(d)	(d)	(d)	(d)	(d) All PM from natural gas is assumed <1µ, so PM-10, PM-2.5 and total PM have equal EFs, AP-42, Natural Gas Combustion, Table 1.4-2. The PM emission factor for fuel oil is the sum of filterable and condensable PM.
CO	40	5.0	9.241	5.456	3.785	(b)	(g)	(b)	(g)	
VOC	5.5	0.2	1.250	0.731	0.520	(b)	(i)	(b)	(i)	
HAPs²										
Arsenic	0.0002	0.00055	6.80E-05	4.84E-05	1.96E-05	(a)	(k)	(a)	(k)	(e) AP-42, 195, Section 1.4, Natural Gas Combustion, Table 1.4-2. Consistent with previous stack tests.
Benzene	0.0021	-	4.74E-04	2.76E-04	1.98E-04	(c)	(k)	(c)	(k)	
Beryllium	0.00012	0.00041	1.98E-05	1.82E-05	1.66E-06	(c)	(k)	(c)	(k)	
Cadmium	0.0011	0.00041	2.66E-04	1.61E-04	1.04E-04	(c)	(k)	(c)	(k)	(f) AP-42, 998, Section 1.3, Fuel Oil Combustion, Table 1.3-1 with Errata, Table 1.3-3, and Table 1.3-6.
Chromium	0.0014	0.00041	3.33E-04	2.00E-04	1.33E-04	(c)	(k)	(c)	(k)	
Cobalt	0.00084	-	1.90E-05	1.10E-05	7.93E-06	(c)	(k)	(c)	(k)	
Dichlorobenzene	0.0012	-	2.71E-04	1.58E-04	1.13E-04	(c)	(k)	(c)	(k)	(g) Boilers >100 MMbtu/hr: SOx Emission Factor (SO ₂ (142S) + SO ₃ (57S)) = 147.7 * S (from AP-42, Table 1.3-1 w/Errata) (S = weight % sulfur in oil) (Sulfur content per analysis on oil in tanks in August 01', no new oil delivered in 02/03')
Formaldehyde	0.075	0.048	1.89E-02	1.18E-02	7.15E-03	(c)	(k)	(c)	(k)	
Hexane	1.8	-	4.06E-01	2.36E-01	1.70E-01	(c)	(k)	(c)	(k)	
Lead	0.0005	0.001233	1.64E-04	1.15E-04	4.88E-05	(c)	(k)	(c)	(k)	
Manganese	0.0038	0.000822	1.20E-04	8.31E-05	3.69E-05	(c)	(k)	(c)	(k)	
Mercury	0.0026	0.000411	7.58E-05	5.08E-05	2.51E-05	(i)(c)	(i)(k)	(i)(c)	(i)(k)	
Napthalene	0.00061	-	1.38E-04	8.01E-05	5.76E-05	(c)	(k)	(c)	(k)	
Nickel	0.0021	0.000411	4.91E-04	2.92E-04	1.99E-04	(c)	(k)	(c)	(k)	
POM	0.00088	0.0033	1.57E-04	1.45E-04	1.25E-05	(c)	(k)	(c)	(k)	(h) HAP emission factors for natural gas from AP-42, Tables 1.4-3 and 1.4-4, for fuel oil from AP-42 Tables 1.3-8 and 1.3-10.
Selenium	0.00024	0.002055	9.10E-05	8.62E-05	4.88E-06	(c)	(k)	(c)	(k)	
Toluene	0.0034	-	7.68E-04	4.47E-04	3.21E-04	(c)	(k)	(c)	(k)	(i) AP-42, Table 1.4-2, 1.4-3, and 1.4-4, July 1998
TOTAL HAPS			4.29E-01	2.50E-01	1.78E-01					
EPCRA 313				lbs./year						
Lead	0.0005	0.00123	1.64E-04	0.329		(c)	(i)(k)	(c)	(i)(k)	(j) Assume all SO ₃ is converted to sulfuric acid.
Sulfuric Acid	0.60	0.285	1.47E-01	294.73		(e)(i)	(e)(h)	(e)(i)	(e)(h)	(k) AP-42, Tables 1.3-9 and 1.3-10, September 1998.
Mercury	0.00026	0.00041	7.58E-05	0.152		(c)	(i)(k)	(c)	(i)(k)	
PACs	8.69E-07	1.65E-05	8.84E-07	1.77E-03		(f)(i)	(f)(i)	(f)(i)	(f)(i)	(l) EPCRA PAC Guidance Document, Table 2-3.
Benzo(g,h,i) perylene	1.20E-06	2.26E-06	3.65E-07	7.30E-04		(i)(k)(c)	(f)	(i)(k)(c)	(f)	
Zinc	-	0.00055	2.28E-05	4.57E-02		(k)	(k)	(k)	(k)	

2007 TA-21 Steam Plant Data Entry / Fuel Use									
DATA ENTRY									
Monthly Fuel									
TA-21-357									
Month	Natural Gas	Fuel Oil (gallons)	Converted Natural Gas	Month	Natural Gas Use 12-Month Rolling Total (MMscf)	Fuel Oil Use 12-Month Rolling Total (Gallons)			
January	3184	0	3.184	January	29.16	402			
February	2895	9	2.895	February	28.58	411			
March	2853	10	2.853	March	27.87	421			
April	2297	6	2.297	April	27.65	427			
May	2172	3	2.172	May	27.82	430			
June	1803	41	1.803	June	27.91	471			
July	0	0	0.000	July	26.21	137			
August	0	0	0.000	August	24.62	118			
September	0	0	0.000	September	22.91	118			
October	0	0	0.000	October	20.70	95			
November	0	0	0.000	November	18.20	75			
December	0	0	0.000	December	15.20	69			
Annual Totals:	15204	69	15.204						
Jan. - June	15204	69	15.204						
July - Dec.	0	0	0.000						
					Permit Limit = 60 MMScf/yr natural gas (12 month rolling total)				
					and 10,000 gal/yr fuel oil (12 month rolling total)				
In August, 2007, the TA-21 Steam Plant was placed on the D&D list and will no longer be operated. A letter was sent to NMED in October informing them that the plant has closed.									

2007 TA-21 Steam Plant Emissions Calculations

Pollutant Criteria	Natural Gas					Fuel Oil					Reference
	Emission Factor (lb/MMscf)	Annual Emissions (tons)	Emissions (tons) Jan-June	Emissions (tons) July-Dec	Ref.	Emission Factor (lb/1000 gal)	Annual Emissions (tons)	Emissions (tons) Jan-June	Emissions (tons) July-Dec	Ref.	
Nox	100	0.760	0.760	0.000	(b)	20	6.90E-04	6.90E-04	0.00E+00	(g)	(a) Fuel usage obtained from Jerry Gonzales, FWO-UI
SOx	0.6	0.005	0.005	0.000	(b)	7.2	2.48E-04	2.48E-04	0.00E+00	(h)	(b) AP-42, 7/98, Section 1.4, Natural Gas Combustion, Tables 1.4-1, 1.4-2.
PM	7.6	0.058	0.058	0.000	(b)	3.3	1.14E-04	1.14E-04	0.00E+00	(g)	(c) AP-42 7/98, Section 1.4, Natural Gas Combustion, Tables 1.4-3, 1.4-4.
PM-10	7.6	0.058	0.058	0.000	(d)	2.3	7.94E-05	7.94E-05	0.00E+00	(j)	(d) PM-10 and PM-2.5 for natural gas combustion roughly equal to PM, per AP-42, Natural Gas Combustion, Table 1.4-2.
PM-2.5	7.6	0.058	0.058	0.000	(d)	1.55	5.35E-05	5.35E-05	0.00E+00	(j)	(e) Assume all SOx is converted to sulfuric acid.
CO	84	0.639	0.639	0.000	(b)	5.0	1.73E-04	1.73E-04	0.00E+00	(g)	(f) EPCRA PAC Guidance Document, Table 2-3.
VOC	5.5	0.042	0.042	0.000	(b)	0.2	6.90E-06	6.90E-06	0.00E+00	(i)	(g) AP-42, 9/98, Section 1.3, Fuel Oil Combustion, Table 1.3-1 with Errata. The PM emission factor is the sum of filterable and condensable PM.
HAPs											(h) S = weight % sulfur in oil (Title V Application, December 1995) Boilers <100 MMBtu/hr: SOx Emission Factor = 144 * S
Arsenic	0.0002	1.52E-06	1.52E-06	0.00E+00	(c)	0.00055	1.89E-08	1.89E-08	0.00E+00	(k)	(i) AP-42, 9/98, Section 1.3, Fuel Oil Combustion, Table 1.3-3 NMTOC.
Benzene	0.0021	1.60E-05	1.60E-05	0.00E+00	(c)						(j) AP-42 9/98, Section 1.3, Fuel Oil Combustion, Table 1.3-6. The PM emission factor is the sum of filterable and condensable PM.
Beryllium	0.000012	9.12E-08	9.12E-08	0.00E+00	(c)	0.00041	1.42E-08	1.42E-08	0.00E+00	(k)	(k) AP-42, 9/98, Section 1.3, Fuel Oil Combustion, Tables 1.3-8 - 1.3-10.
Cadmium	0.0011	8.36E-06	8.36E-06	0.00E+00	(c)	0.00041	1.42E-08	1.42E-08	0.00E+00	(k)	
Chromium	0.0014	1.06E-05	1.06E-05	0.00E+00	(c)	0.00041	1.42E-08	1.42E-08	0.00E+00	(k)	
Cobalt	0.000084	6.39E-07	6.39E-07	0.00E+00	(c)						
Dichlorobenzene	0.0012	9.12E-06	9.12E-06	0.00E+00	(c)						
Formaldehyde	0.075	5.70E-04	5.70E-04	0.00E+00	(c)	0.048	1.66E-06	1.66E-06	0.00E+00	(k)	
Hexane	1.8	1.37E-02	1.37E-02	0.00E+00	(c)						
Lead	0.0005	3.80E-06	3.80E-06	0.00E+00	(c)	0.00123	4.25E-08	4.25E-08	0.00E+00	(k)	
Manganese	0.00038	2.89E-06	2.89E-06	0.00E+00	(c)	0.00082	2.84E-08	2.84E-08	0.00E+00	(k)	
Mercury	0.00026	1.98E-06	1.98E-06	0.00E+00	(c)	0.00041	1.42E-08	1.42E-08	0.00E+00	(k)	
Napthalene	0.00061	4.64E-06	4.64E-06	0.00E+00	(c)						
Nickel	0.0021	1.60E-05	1.60E-05	0.00E+00	(c)	0.00041	1.42E-08	1.42E-08	0.00E+00	(k)	
POM	0.000088	6.69E-07	6.69E-07	0.00E+00	(c)	0.0033	1.14E-07	1.14E-07	0.00E+00	(k)	
Selenium	0.000024	1.82E-07	1.82E-07	0.00E+00	(c)	0.00206	7.09E-08	7.09E-08	0.00E+00	(k)	
Toluene	0.0034	2.58E-05	2.58E-05	0.00E+00	(c)						
TOTAL HAPS		1.44E-02	1.44E-02	0.00E+00			2.00E-06	2.00E-06	0.00E+00		
EPCRA 313			lbs./year					lbs./year			
Lead	0.0005	3.80E-06	0.008		(c)	0.00123	4.25E-08	8.51E-05		(k)	
Sulfuric Acid	0.60	4.56E-03	9.122		(e)	0.0	0.00E+00	0.000		(e)/(h)	
Mercury	0.00026	1.98E-06	3.95E-03		(c)	0.00041	1.42E-08	2.84E-05		(k)	
PACs	8.69E-07	6.61E-09	1.32E-05		(f)	1.65E-05	5.69E-10	1.14E-06		(f)	
perylene	1.20E-06	9.12E-09	1.82E-05		(c)	2.26E-06	7.80E-11	1.56E-07		(f)	

2007 Generator Hours					Previous					First 6 Month Readings				Second 6 Month Readings			
TA	Bldg	Manufacturer	MODEL	KW	Fuel Type	Previous Reading Date	Previous Reading	6 Month Reading Date	6 Month Reading	Hours Run	12 Month Reading Date	12 Month Reading	Hours Run				
3	38	Onan Sons	H1750DSG15	175	Diesel	Dec-06	3054.4	May-07	3057.0	2.6	Nov-07	3070	13				
3	38	Onan Sons	350DF CC	350	Diesel	Dec-06	2619.4	May-07	2629.4	10.0	Nov-07	2636.5	7.1				
3	38	Cummins	150DGF A	150	Diesel	Dec-06	1147.0	May-07	1158.9	11.9	Nov-07	1170.6	11.7				
3	40	Onan Sons	1500DVE15R31374B	150	Diesel	Dec-06	3.2	May-07	6.1	2.9	Dec-07	6.6	0.5				
3	223	Onan Sons	45 OEM-15R/10742D	45	Nat. Gas	Dec-06	478.0	May-07	481.1	3.1	Dec-07	489.5	8.4				
3	440	Cummins	500FDR6051	260	Diesel	Dec-06	121.8	May-07	121.8	0.0	Dec-07	121.8	121.8				
3	440	Cummins	DF GA-5005210	500	Diesel	Dec-06	69.5	May-07	74.8	5.3	Dec-07	81.8	7				
3	1076	Cummins	DG BB-5601289	35	Diesel	Dec-06	101.2	Jun-07	116.7	15.5	Dec-07	129.7	13				
3	1400	Cummins	DF EH-5699616	400	Diesel	Apr-07	14.0	May-07	14.1	0.1	Dec-07	33	18.9				
3	1404	Cummins	DF LC-5554001	1250	Diesel	Dec-05	287.9	Jun-07	324.2	36.3	Dec-07	336.5	12.3				
3	1498	Caterpillar	SR-4	600	Diesel	Nov-05	303.0	May-07	315.0	12.0	Dec-07	326	11				
3	2322	Onan Sons	DG DA-5005757	80	Diesel	Nov-05	329.1	May-07	336.8	7.7	Nov-07	339.8	3				
16	980	Cummins	KTA50-G2	1100	Diesel	Dec-05	226.3	Jun-07	276.2	49.9	Dec-07	293.4	17.2				
16	1374	Onan Sons	60ENA	60	Nat. Gas	Nov-05	1039.4	May-07	1058.9	19.5	Dec-07	1092.9	34				
18	31	Onan Sons	275DFML29807N	275	Diesel	Dec-05	173.4	Jun-07	180.8	7.4	Dec-07	180.8	0				
21	357	Caterpillar	SR-4	125	Diesel	Nov-05	497.5	May-07	541.0	43.5	Aug-07	558.2	17.2				
33	20	Kohler	30ROZ	30	Diesel	Nov-05	919.0	Jun-07	919.0	0.0	Dec-07	926.6	7.6				
33	Point	Onan Sons	80DG10A	80	Diesel	Nov-05	7643.1	Jun-07	7643.1	0.0	Dec-07	7643.1	0				
35	2	Onan Sons	100DGB	100	Diesel	Dec-05	115.5	Jun-07	115.3	0.0	Dec-07	115.5	0.2				
35	402	Cummins	DG CB-5674244	60	Diesel	Jun-07	107.4	Jun-07	107.4	0.0	Dec-07	138.4	31				
43	1	Cummins	4B T3.9-GC	50	Diesel	Nov-05	369.4	May-07	379.0	9.6	Dec-07	383.9	4.9				
43	1	Onan Sons	DVE	150	Diesel	Nov-05	562.6	May-07	589.1	26.5	Dec-07	620.2	31.1				
46	335	Onan Sons	300DEF CB	300	Diesel	Nov-05	873.8	May-07	900.4	26.6	Dec-07	959.5	59.1				
48	45	Onan Sons	DF CB-5740130	300	Diesel	Nov-05	16.0	May-07	24.9	8.9	Nov-07	53.5	28.6				
50	37	Cummins	680FDR6059F	500	Diesel	Nov-05	485.1	May-07	489.1	4.0	Nov-07	502.9	13.8				
50	184	Onan Sons	DGFA-568741	150	Diesel	Nov-05	153.6	May-07	209.7	56.1	Dec-07	212.7	3				
50	188	Onan Sons	L940563879	1250	Diesel	Nov-05	149.0	Jun-07	149.0	0.0	Dec-07	149	0				
53	1	Onan Sons	60ENA	60	Nat. Gas	Nov-05	1165.4	May-07	1195.1	29.7	Dec-07	1234.1	39				
53	2	Kato Eng.	Kamag-14	50	Diesel	Nov-05	194.3	May-07	194.3	0.0	Dec-07	194.3	0				
53	M	Onan Sons	12.5JC-18R/16095AA	12.5	Nat. Gas	Nov-05	581.5	May-07	581.5	0.0	Dec-07	581.5	0				
54	412	Olympian	95M-07874F	500	Diesel	Nov-05	292.0	May-07	306.1	14.1	Dec-07	317.9	11.8				
55	5	Kohler	100RZ71	100	Nat. Gas	Dec-05	71.3	May-07	74.4	3.1	Nov-07	79.3	4.9				
55	8	Delco/Detroit	E7014DD	600	Diesel	Dec-05	805.3	Jun-07	814.3	9.0	Dec-07	822.2	7.9				
55	364	Onan Sons	1250DF LC-4987	1250	Diesel	Dec-05	52.6	Jun-07	62.0	9.4	Dec-07	82.8	20.8				
55	28	Onan Sons	40DL6T	40	Diesel	Dec-05	47.3	Jun-07	47.3	0.0	Dec-07	66.5	19.2				
55	47	Onan Sons	1465	200	Diesel	Nov-05	515.6	May-07	526.6	11.0	Nov-07	540	13.4				
55	142	Cummins	DFEB-4963414	400	Diesel	Dec-05	88.8	May-07	96.1	7.3	Dec-07	105	8.9				
59	1	Allis Chalmers	2884-0703	90	Diesel	Nov-05	749.3	Jun-07	750.0	0.7	Dec-07	750	0				
60	yard	Cummins	DFHD-4964979	1000	Diesel	Feb-07	272.4	Jul-07	293.9	21.5	Dec-07	648.4	354.5				
63	Yard	Murphy	3166-0084	30	Diesel	Nov-05	715.9	Jun-07	715.9	0.0	Dec-07	716	0.1				
64	1	Onan Sons	250DVG	250	Diesel	Nov-05	148.0	May-07	153.1	5.1	Nov-07	166.9	13.8				
84	39	Onan Sons	20 DDL4-15R	20	Diesel	Dec-05	189.9	Jun-07	189.9	0.0	Dec-07	189.9	0				
89	33	Cummins	DF LC-5568730	1250	Diesel	Nov-05	53.2	May-07	62.5	9.3	Dec-07	71.3	8.8				
43 Generators in use					TOTAL	14378		TOTAL	479.6		TOTAL	978.5					
					First half average hours per unit			11.2	Second half average hours per unit			22.8					
					Annual Average of hours per unit					17.0							

2007 TA-33 Generator Emission Factors						
EMISSION FACTORS	NOx (a) lb/kw-hr	CO (a) lb/kw-hr	SOx (b) lb/kw-hr	PM (b) lb/kw-hr	PM₁₀ (b) lb/kw-hr	VOC (a) lb/kw-hr
Large Diesel fired	0.027	0.022	0.004	0.0009	0.0009	0.0005
(a) Manufacturer supplied emission factor						
(b) Emission factors from AP-42, Table 3.3-1 & Table 3.4-1						
References:						
447 kw is the size limit for determining large vs. small diesel fired generator. This information was taken from the operating permit application.						
(a) The AP-42 (fifth edition) emissions factor uses units of lb/hp-hr. There are 1.341 hp-hrs in a kwh. Therefore, take pounds/hp-hr x 1.341 hp-hr/kwh to obtain the emission factor in lb/kwh.						
(b) Emission factors for large diesel fired boilers were taken from AP-42 (fifth edition) Tables 3.4-1, 3.4-2, 3.4-3, and 3.4-4.						

2007 Generator Emissions																							
Location	First 6 Month Emissions										Second 6 Month Emissions												
	NOx (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM (lb/yr)	VOC (lb/yr)	HAPs (lb/yr)	NOx (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM (lb/yr)	VOC (lb/yr)	HAPs (lb/yr)	NOx (lb/yr)	CO (lb/yr)	SOx (lb/yr)	PM (lb/yr)	VOC (lb/yr)	HAPs (lb/yr)					
3-38	19.1	4.1	1.4	1.4	1.4	6.2E-03	95.6	20.5	6.8	6.8	6.8	3.1E-02	95.6	20.5	6.8	6.8	6.8	3.1E-02					
3-38	147.0	31.5	10.5	10.5	10.5	4.7E-02	104.4	22.4	7.5	7.5	7.5	3.4E-02	104.4	22.4	7.5	7.5	7.5	3.4E-02					
3-38	75.0	16.1	5.4	5.4	5.4	2.4E-02	73.7	15.8	5.3	5.3	5.3	2.4E-02	73.7	15.8	5.3	5.3	5.3	2.4E-02					
3-40	18.3	3.9	1.3	1.3	1.3	5.9E-03	3.2	0.7	0.2	0.2	0.2	1.0E-03	3.2	0.7	0.2	0.2	0.2	1.0E-03					
3-223	1.1	1.8	0.0	0.0	0.0	1.6E-02	3.0	4.9	0.0	0.0	0.0	4.3E-02	3.0	4.9	0.0	0.0	0.0	4.3E-02					
3-440	0.0	0.0	0.0	0.0	0.0	0.0E+00	1330.1	285.0	95.0	95.0	95.0	4.3E-01	1330.1	285.0	95.0	95.0	95.0	4.3E-01					
3-440	84.8	18.6	1.4	2.7	2.7	1.5E-02	112.0	24.5	1.9	3.5	3.5	2.0E-02	112.0	24.5	1.9	3.5	3.5	2.0E-02					
3-1076	22.8	4.9	1.6	1.6	1.6	7.3E-03	19.1	4.1	1.4	1.4	1.4	6.2E-03	19.1	4.1	1.4	1.4	1.4	6.2E-03					
3-1400	1.7	0.4	0.1	0.1	0.1	5.4E-04	317.5	68.0	22.7	22.7	22.7	1.0E-01	317.5	68.0	22.7	22.7	22.7	1.0E-01					
3-1404	1452.0	317.6	24.5	45.4	45.4	2.6E-01	492.0	107.6	8.3	15.4	15.4	8.9E-02	492.0	107.6	8.3	15.4	15.4	8.9E-02					
3-1498	230.4	50.4	3.9	7.2	7.2	4.2E-02	211.2	46.2	3.6	6.6	6.6	3.8E-02	211.2	46.2	3.6	6.6	6.6	3.8E-02					
3-2322	25.9	5.5	1.8	1.8	1.8	8.3E-03	10.1	2.2	0.7	0.7	0.7	3.2E-03	10.1	2.2	0.7	0.7	0.7	3.2E-03					
16-980	1756.5	384.2	29.6	54.9	54.9	3.2E-01	605.4	132.4	10.2	18.9	18.9	1.1E-01	605.4	132.4	10.2	18.9	18.9	1.1E-01					
16-1374	9.4	15.2	0.0	0.0	0.1	1.3E-01	16.3	26.5	0.0	0.1	0.2	2.3E-01	16.3	26.5	0.0	0.1	0.2	2.3E-01					
18-31	85.5	18.3	6.1	6.1	6.1	2.8E-02	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00					
21-357	228.4	48.9	16.3	16.3	16.3	7.4E-02	90.3	19.4	6.5	6.5	6.5	2.9E-02	90.3	19.4	6.5	6.5	6.5	2.9E-02					
33-20	0.0	0.0	0.0	0.0	0.0	0.0E+00	9.6	2.1	0.7	0.7	0.7	3.1E-03	9.6	2.1	0.7	0.7	0.7	3.1E-03					
33-Point	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00					
35-2	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.8	0.2	0.1	0.1	0.1	2.7E-04	0.8	0.2	0.1	0.1	0.1	2.7E-04					
35-402	0.0	0.0	0.0	0.0	0.0	0.0E+00	78.1	16.7	5.6	5.6	5.6	2.5E-02	78.1	16.7	5.6	5.6	5.6	2.5E-02					
43-1	20.2	4.3	1.4	1.4	1.4	6.5E-03	10.3	2.2	0.7	0.7	0.7	3.3E-03	10.3	2.2	0.7	0.7	0.7	3.3E-03					
43-1	167.0	35.8	11.9	11.9	11.9	5.4E-02	195.9	42.0	14.0	14.0	14.0	6.3E-02	195.9	42.0	14.0	14.0	14.0	6.3E-02					
46-335	335.2	71.8	23.9	23.9	23.9	1.1E-01	744.7	159.6	53.2	53.2	53.2	2.4E-01	744.7	159.6	53.2	53.2	53.2	2.4E-01					
48-45	112.1	24.0	8.0	8.0	8.0	3.6E-02	360.4	77.2	25.7	25.7	25.7	1.2E-01	360.4	77.2	25.7	25.7	25.7	1.2E-01					
50-37	64.0	14.0	1.1	2.0	2.0	1.2E-02	220.8	48.3	3.7	6.9	6.9	4.0E-02	220.8	48.3	3.7	6.9	6.9	4.0E-02					
50-184	353.4	75.7	25.2	25.2	25.2	1.1E-01	18.9	4.1	1.4	1.4	1.4	6.1E-03	18.9	4.1	1.4	1.4	1.4	6.1E-03					
50-188	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00					
53-1	14.3	23.2	0.0	0.1	0.2	2.0E-01	18.7	30.4	0.0	0.1	0.2	2.6E-01	18.7	30.4	0.0	0.1	0.2	2.6E-01					
53-2	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00					
53-M	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00					
54-412	225.6	49.4	3.8	7.1	7.1	4.1E-02	188.8	41.3	3.2	5.9	5.9	3.4E-02	188.8	41.3	3.2	5.9	5.9	3.4E-02					
55-5	2.5	4.0	0.0	0.0	0.0	3.5E-02	3.9	6.4	0.0	0.0	0.0	5.5E-02	3.9	6.4	0.0	0.0	0.0	5.5E-02					
55-8	172.8	37.8	2.9	5.4	5.4	3.1E-02	151.7	33.2	2.6	4.7	4.7	2.8E-02	151.7	33.2	2.6	4.7	4.7	2.8E-02					
55-364	376.0	82.3	6.3	11.8	11.8	6.8E-02	832.0	182.0	14.0	26.0	26.0	1.5E-01	832.0	182.0	14.0	26.0	26.0	1.5E-01					
55-28	0.0	0.0	0.0	0.0	0.0	0.0E+00	32.3	6.9	2.3	2.3	2.3	1.0E-02	32.3	6.9	2.3	2.3	2.3	1.0E-02					
55-47	92.4	19.8	6.6	6.6	6.6	3.0E-02	112.6	24.1	8.0	8.0	8.0	3.6E-02	112.6	24.1	8.0	8.0	8.0	3.6E-02					
55-142	122.6	26.3	8.8	8.8	8.8	3.9E-02	149.5	32.0	10.7	10.7	10.7	4.8E-02	149.5	32.0	10.7	10.7	10.7	4.8E-02					
59-1	2.6	0.6	0.2	0.2	0.2	8.5E-04	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00					
60-Yard	688.0	150.5	11.6	21.5	21.5	1.3E-01	1134.0	248.15	19.4	35.45	35.45	2.1E+00	1134.0	248.15	19.4	35.45	35.45	2.1E+00					
63-Yard	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.1	0.0	0.0	0.0	0.0	4.1E-05	0.1	0.0	0.0	0.0	0.0	4.1E-05					
64-1	53.5	11.5	3.8	3.8	3.8	1.7E-02	144.9	31.1	10.4	10.4	10.4	4.7E-02	144.9	31.1	10.4	10.4	10.4	4.7E-02					
64-39	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00	0.0	0.0	0.0	0.0	0.0	0.0E+00					
69-33	372.0	81.4	6.3	11.6	11.6	6.8E-02	352.0	77.0	5.9	11.0	11.0	6.4E-02	352.0	77.0	5.9	11.0	11.0	6.4E-02					
Total Emissions	7331.9	1633.7	226.0	304.0	304.3	2.0	18453.8	4078.4	523.6	732.3	732.7	4.5	18453.8	4078.4	523.6	732.3	732.7	4.5					
lbs/6 months	3.7	0.8	0.1	0.2	0.2	9.9E-04	9.2	2.0	0.3	0.4	0.4	2.2E-03	9.2	2.0	0.3	0.4	0.4	2.2E-03					
Tons/6 months	3.7	0.8	0.1	0.2	0.2	9.9E-04	9.2	2.0	0.3	0.4	0.4	2.2E-03	9.2	2.0	0.3	0.4	0.4	2.2E-03					
YEARLY TOTAL	12.89	2.86	0.37	0.52	0.52	0.003																	
Tons/Year	12.89	2.86	0.37	0.52	0.52	0.003																	

2007 Emissions Factors (lb/kwh)			HAPs (lbs)																	
Natural Gas Diesel (small)	Diesel (large)	Location	Benzene		Toluene		Xylenes		1,3-Butadiene		Formaldehyde		Acetaldehyde		Acrolein		Naphthalene			
			1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half		
5.40E-06	3.19E-06		1.45E-03	7.25E-03	6.38E-04	3.18E-03	4.43E-04	2.21E-03	6.08E-05	3.04E-04	1.83E-03	9.17E-03	1.19E-03	5.96E-03	1.44E-04	7.19E-04	1.32E-04	6.59E-04		
2.65E-06			1.12E-02	7.92E-03	4.89E-03	3.47E-03	3.41E-03	2.42E-03	4.67E-04	3.32E-04	1.41E-02	1.00E-02	9.17E-03	6.51E-03	1.11E-03	7.85E-04	1.01E-03	7.20E-04		
			5.69E-03	5.59E-03	2.49E-03	2.45E-03	1.74E-03	1.71E-03	2.38E-04	2.34E-04	7.19E-03	7.07E-03	4.68E-03	4.60E-03	5.54E-04	5.17E-04	5.08E-04	5.08E-04		
			1.39E-03	2.39E-04	6.08E-04	1.05E-04	4.23E-04	7.30E-05	5.81E-05	1.00E-05	1.75E-03	3.02E-04	1.14E-03	1.96E-04	1.37E-04	2.37E-05	1.26E-04	2.17E-05		
			7.53E-04	2.04E-03	2.66E-04	7.20E-04	9.29E-05	2.52E-04	3.16E-04	8.96E-04	9.77E-03	2.65E-02	1.33E-03	3.60E-03	1.25E-03	3.40E-03	4.63E-05	1.25E-04		
			0.00E+00	1.01E-01	0.00E+00	4.42E-02	0.00E+00	3.08E-02	0.00E+00	4.23E-03	0.00E+00	1.28E-01	0.00E+00	8.30E-02	0.00E+00	1.00E-02	0.00E+00	9.17E-03		
			7.02E-03	9.28E-03	2.54E-03	3.36E-03	1.75E-03	2.31E-03	7.14E-04	9.43E-04	2.28E-04	9.43E-04	2.28E-04	3.01E-04	7.13E-05	9.42E-05	1.18E-03	1.55E-03		
			1.73E-03	1.45E-03	7.98E-04	6.36E-04	5.28E-04	4.43E-04	7.24E-05	6.08E-05	2.19E-03	1.83E-03	1.42E-03	1.19E-03	1.71E-04	1.44E-04	1.57E-04	1.32E-04		
			1.27E-04	2.41E-02	5.59E-05	1.06E-02	3.89E-05	7.36E-03	5.34E-06	1.01E-03	1.61E-04	3.05E-02	1.05E-04	1.98E-02	1.26E-05	2.39E-03	1.16E-05	2.19E-03		
			1.20E-01	4.07E-02	4.35E-02	1.48E-02	2.99E-02	1.01E-02	0.00E+00	0.00E+00	1.22E-02	4.14E-03	3.91E-03	1.32E-03	1.22E-03	4.14E-04	2.01E-02	6.83E-03		
			1.91E-02	1.75E-02	6.91E-03	6.33E-03	4.75E-03	4.35E-03	0.00E+00	0.00E+00	1.94E-03	1.78E-03	6.20E-04	5.68E-04	1.94E-04	1.78E-04	3.20E-03	2.93E-03		
			1.98E-03	7.65E-04	8.60E-04	3.35E-04	6.00E-04	2.34E-04	8.23E-05	3.20E-05	2.48E-03	9.67E-04	1.61E-03	6.29E-04	1.95E-04	7.58E-05	1.78E-04	6.95E-05		
			1.45E-01	5.01E-02	5.27E-02	1.82E-02	3.62E-02	1.25E-02	0.00E+00	0.00E+00	1.48E-02	5.10E-03	4.72E-03	1.63E-03	1.48E-03	5.09E-04	2.44E-02	8.40E-03		
			6.31E-03	1.10E-02	2.23E-03	3.89E-03	7.79E-04	1.36E-03	2.65E-03	4.62E-03	8.19E-02	1.43E-01	1.11E-02	1.94E-02	1.05E-02	1.83E-02	3.88E-04	6.77E-04		
			6.48E-03	0.00E+00	2.84E-03	0.00E+00	1.98E-03	0.00E+00	2.72E-04	0.00E+00	8.20E-03	0.00E+00	5.33E-03	0.00E+00	6.43E-04	0.00E+00	5.89E-04	0.00E+00		
			1.73E-02	6.85E-03	7.60E-03	3.00E-03	5.29E-03	2.09E-03	7.26E-04	2.87E-04	2.19E-02	8.66E-03	1.42E-02	5.63E-03	1.72E-03	6.79E-04	1.57E-03	6.23E-04		
			0.00E+00	7.27E-04	0.00E+00	3.18E-04	0.00E+00	0.00E+00	0.00E+00	3.04E-05	0.00E+00	9.19E-04	0.00E+00	5.97E-04	0.00E+00	7.20E-05	0.00E+00	6.60E-05		
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
			0.00E+00	6.37E-05	0.00E+00	2.79E-05	0.00E+00	1.95E-05	0.00E+00	2.67E-06	0.00E+00	8.06E-05	0.00E+00	5.24E-05	0.00E+00	6.32E-06	0.00E+00	5.79E-06		
			0.00E+00	5.93E-03	0.00E+00	2.60E-03	0.00E+00	1.81E-03	0.00E+00	2.48E-04	0.00E+00	7.50E-03	0.00E+00	4.87E-04	0.00E+00	5.88E-04	0.00E+00	5.39E-04		
			1.53E-03	7.81E-04	6.70E-04	3.42E-04	4.67E-04	2.38E-04	6.41E-05	3.27E-05	1.93E-03	9.87E-04	1.26E-03	6.42E-04	1.52E-04	7.74E-05	1.39E-04	7.10E-05		
			1.27E-02	1.49E-02	5.55E-03	6.52E-03	3.87E-03	4.54E-03	5.31E-04	6.23E-04	1.60E-02	1.88E-02	1.04E-02	1.22E-02	1.26E-03	1.47E-03	1.15E-03	1.35E-03		
			2.54E-02	5.65E-02	1.11E-02	2.48E-02	7.77E-03	1.73E-02	1.07E-03	3.27E-03	3.22E-02	7.15E-02	2.09E-02	4.64E-02	2.52E-03	5.60E-03	2.31E-03	5.13E-03		
			8.51E-03	2.73E-02	3.73E-03	1.20E-02	2.60E-03	8.35E-03	3.57E-04	1.15E-03	1.08E-02	3.46E-02	6.99E-02	2.25E-02	8.43E-04	2.71E-03	7.73E-04	2.48E-03		
			5.30E-03	1.83E-02	1.92E-03	6.62E-03	1.32E-03	4.55E-03	0.00E+00	0.00E+00	5.39E-04	1.86E-03	1.72E-04	5.94E-04	5.38E-05	1.86E-04	8.88E-04	3.06E-03		
			2.68E-02	1.43E-03	1.18E-02	6.29E-04	8.19E-03	4.38E-04	1.12E-03	6.01E-06	3.39E-02	1.81E-03	2.20E-02	1.18E-03	2.68E-03	1.42E-04	2.44E-03	1.30E-04		
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
			9.62E-03	1.26E-02	3.40E-03	4.48E-03	1.19E-03	1.56E-03	4.04E-03	5.30E-03	1.25E-01	1.64E-01	1.70E-02	2.23E-02	1.60E-02	2.10E-02	5.91E-04	7.76E-04		
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
			1.87E-02	1.56E-02	6.77E-03	5.68E-03	4.65E-03	3.89E-03	0.00E+00	0.00E+00	1.90E-03	1.59E-03	6.07E-04	5.08E-04	1.90E-04	1.59E-04	3.13E-03	2.62E-03		
			1.67E-03	2.64E-03	5.91E-04	9.34E-04	2.06E-04	3.26E-04	7.02E-04	1.11E-03	2.17E-02	3.43E-02	2.95E-03	4.67E-03	2.78E-03	4.40E-03	1.03E-04	1.62E-04		
			1.43E-02	1.26E-02	5.18E-03	4.55E-03	3.56E-03	3.12E-03	0.00E+00	0.00E+00	1.46E-03	1.28E-03	4.65E-04	4.65E-04	1.45E-04	1.28E-04	2.40E-03	2.10E-03		
			3.11E-02	6.89E-02	1.13E-02	2.50E-02	7.75E-03	1.71E-02	0.00E+00	0.00E+00	3.17E-03	7.01E-03	1.01E-03	2.24E-03	3.16E-04	7.00E-04	5.22E-03	1.15E-02		
			0.00E+00	2.45E-03	0.00E+00	1.07E-03	0.00E+00	0.00E+00	0.00E+00	1.03E-04	0.00E+00	3.10E-03	0.00E+00	2.01E-03	0.00E+00	2.43E-04	0.00E+00	2.22E-04		
			7.01E-03	8.54E-03	3.07E-03	3.74E-03	2.14E-03	2.61E-03	2.94E-04	3.58E-04	8.87E-03	1.08E-02	5.76E-03	7.02E-03	6.95E-04	8.47E-04	6.37E-04	7.76E-04		
			9.30E-03	1.13E-02	4.08E-03	4.97E-03	2.84E-03	3.47E-03	3.90E-04	4.75E-04	1.18E-02	1.43E-02	7.65E-03	9.33E-03	9.22E-04	1.12E-03	8.46E-04	1.03E-03		
			2.01E-04	0.00E+00	8.80E-05	0.00E+00	6.13E-05	0.00E+00	8.41E-06	0.00E+00	2.54E-03	1.21E-05	0.00E+00	1.65E-04	0.00E+00	1.99E-05	0.00E+00	1.82E-05		
			5.70E-02	9.40E-01	2.06E-02	3.40E-01	1.42E-02	2.34E-01	0.00E+00	0.00E+00	5.79E-03	9.55E-02	1.85E-03	3.05E-02	5.79E-04	9.54E-03	9.55E-03	1.57E-01		
			0.00E+00	9.56E-06	0.00E+00	4.19E-06	0.00E+00	2.92E-06	0.00E+00	4.01E-07	0.00E+00	1.21E-05	0.00E+00	7.86E-06	0.00E+00	9.48E-07	0.00E+00	8.69E-07		
			4.06E-03	1.10E-02	1.78E-03	4.82E-03	1.24E-03	3.36E-03	1.70E-04	4.61E-04	5.14E-03	1.39E-02	3.34E-03	9.04E-03	4.03E-04	1.09E-03	3.69E-04	9.99E-04		
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
			3.08E-02	2.92E-02	1.12E-02	1.06E-02	7.66E-03	7.25E-03	0.00E+00	0.00E+00	3.13E-03	2.96E-03	1.00E-03	9.47E-04	3.13E-04	2.96E-04	5.16E-03	4.88E-03		
Total Emissions lbs			6.10E-01	1.53E+00	2.32E-01	5.75E-01	1.58E-01	3.93E-01	1.37E-02	2.43E-02	4.64E-01	8.64E-01	1.64E-01	3.32E-01	4.93E-02	8.87E-02	8.93E-02	2.30E-01		
Tons/Half/HAP			3.05E-04	7.63E-04	1.16E-04	2.87E-04	7.88E-05	1.96E-04	6.84E-06	1.21E-05	2.32E-04	4.32E-04	8.22E-05	1.66E-04	2.46E-05	4.43E-05	4.47E-05	1.15E-04		
Tons/year/HAP			1.07E-03		4.03E-04		2.75E-04		1.90E-05		6.64E-04		2.48E-04		6.90E-05		1.60E-04			
Emission Factors from AP-42, Volume 1, Fifth Edition (Small Diesel Engines Table 3.3-2, Large Diesel Engines Table 3.4-4, Natural Gas 4-Stroke Engines Table 3.2-3)																				

Attachment A

2007 Emissions Factors (lb/kwh)			HAPs (lbs)						Individual Generator HAP Emissions (lbs)			
Natural Gas Diesel (small) Diesel (large)	Methylene Chloride		PAH		Styrene		Toluene			Vinyl Chloride		
	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half		1st Half	2nd Half	
			1.41E-07		4.82E-07 5.74E-07 7.24E-07		4.06E-08		1.91E-06		2.45E-08	
	Location											
			1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half
	3-38			2.61E-04	1.31E-03						6.15E-03	3.08E-02
	3-38			2.01E-03	1.43E-03						4.73E-02	3.36E-02
	3-38			1.02E-03	1.01E-03						2.41E-02	2.37E-02
	3-3-40			2.50E-04	4.30E-05						5.88E-03	1.01E-03
	3-223	1.98E-05	5.32E-05	6.72E-05	1.82E-04	5.67E-06	1.54E-05	2.66E-04	7.20E-04	3.42E-06	9.27E-06	4.28E-02
	3-440			0.00E+00	1.82E-02						0.00E+00	4.28E-01
	3-440			1.92E-03	2.53E-03						1.54E-02	2.04E-02
	3-1076			3.11E-04	2.61E-04						7.33E-03	6.19E-03
	3-3-1400			2.30E-05	4.34E-03						5.41E-04	1.02E-01
	3-1404			3.29E-02	1.11E-02						2.64E-01	8.95E-02
	3-1498			5.21E-03	4.78E-03						4.19E-02	3.84E-02
	3-2322			3.53E-04	1.38E-04						8.33E-03	3.24E-03
	16-980			3.97E-02	1.37E-02						3.19E-01	1.10E-01
	16-1374	1.65E-04	2.87E-04	5.63E-04	9.82E-04	4.76E-05	8.29E-05	2.23E-03	3.89E-03	2.87E-05	5.00E-05	1.32E-01
	18-31			1.17E-03	0.00E+00							2.75E-02
	21-357			3.12E-03	1.23E-03							7.35E-02
	33-20			0.00E+00	1.31E-04							0.00E+00
	33-Point			0.00E+00	0.00E+00							0.00E+00
	35-2			0.00E+00	1.15E-05							0.00E+00
	35-402			0.00E+00	1.07E-03							0.00E+00
	43-1			2.75E-04	1.41E-04							6.49E-03
	43-1			2.28E-03	2.68E-03							5.37E-02
	46-335			4.58E-03	1.02E-02							1.08E-01
	48-45			1.53E-03	4.92E-03							3.61E-02
	50-37			1.45E-03	5.00E-03							1.16E-02
	50-164			4.83E-03	2.58E-04							1.14E-01
	50-188			0.00E+00	0.00E+00							0.00E+00
	53-1	2.51E-04	3.29E-04	8.58E-04	1.13E-03	7.24E-05	9.51E-05	3.40E-03	4.46E-03	4.37E-05	5.74E-05	2.01E-01
	53-2			0.00E+00	0.00E+00							0.00E+00
	53-M	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	54-412			5.10E-03	4.27E-03							4.10E-02
	55-5	4.36E-05	6.89E-05	1.49E-04	2.36E-04	1.26E-05	1.99E-05	5.91E-04	9.34E-04	7.60E-06	1.20E-05	3.49E-02
	55-8			3.91E-03	3.43E-03							3.14E-02
	55-364			8.51E-03	1.88E-02							6.84E-02
	55-28			0.00E+00	4.41E-04							0.00E+00
	55-47			1.26E-03	1.54E-03							2.97E-02
	55-142			1.68E-03	2.04E-03							3.95E-02
	59-1			3.61E-05	0.00E+00							8.52E-04
	60-yard			1.56E-02	2.57E-01							1.25E-01
	63-Yard			0.00E+00	1.72E-06							0.00E+00
	64-1			7.32E-04	1.98E-03							1.72E-02
	64-39			0.00E+00	0.00E+00							0.00E+00
	69-33			8.42E-03	7.96E-03							6.77E-02
	Total Emissions lbs	4.79E-04	7.38E-04	1.50E-01	3.84E-01	1.38E-04	2.13E-04	6.48E-03	1.00E-02	8.34E-05	1.29E-04	1.98E+00
	Tons/Half/HAP	2.39E-07	3.69E-07	7.50E-05	1.92E-04	6.91E-08	1.07E-07	3.24E-06	5.00E-06	4.17E-08	6.43E-08	
	Tons/year/HAP	6.09E-07		2.67E-04		1.76E-07		8.24E-06		1.06E-07		
Emission Factors from AP-42, Volume 1, Fifth Edition (Small Diesel Engines Table 3.3-2, Large Diesel Engines Table 3.4-4, Natural Gas 4-Stroke Engines Table 3.2-3)												

Emission Factors from AP-42, Volume 1, Fifth Edition (Small Diesel Engines Table 3.3-2, Large Diesel Engines Table 3.4-4, Natural Gas 4-Stroke Engines Table 3.2-3)

2007 Usage Data for TA-55 Trichloroethylene Degreaser Operations						
Date Measured	Initial Solvent Level (inches)	Volume Added (liters)	Level Added (inches)	Volume Removed (liters)	Level Removed (inches)	
Jan-17-2007	7	0.98	0.5	0	0	0
Feb-06-2007	7.5	0	0	14.74	14.74	7.5
Feb-14-2007	0	14.74	7.5	0	0	0
Mar-21-2007	7.2	0.3	0.15	0	0	0
Apr-04-2007	7	0.98	0.5	0	0	0
Apr-18-2007	7.5	0	0	14.74	14.74	7.5
Apr-30-2007	0	15.73	8	0	0	0
May-30-2007	8	0	0	0	0	0
Jun-26-2007	7.2	15.53	7.9	14.15	14.15	7.2
Jul-16-2007	7.4	0	0	14.55	14.55	7.4
Jul-23-2007	0	14.74	7.5	0	0	0
Aug-27-2007	7.5	0	0	1	1	0.5
Sep-27-2007	6.5	0	0	0	0	0
Oct-24-2007	6.5	0	0	0	0	0
Nov-27-2007	6.5	0	0	0	0	0
Dec-18-2007	6	0	0	0	0	0

Attachment B

2007 Annual Emissions Inventory Submittal to NMED



Environmental Protection Division
P.O. Box 1663, MS J978
Los Alamos, New Mexico 87545
(505) 667-2211/FAX: (505) 665-8858

Date: March 21, 2008
Refer to: ENV-DO:08-005

Mr. Ron Duffy
New Mexico Environment Department
Air Quality Bureau
1301 Siler Rd. Bld. B
Santa Fe, NM 87507

**IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY
2007 EMISSIONS INVENTORY REPORT REQUIRED UNDER 20.2.73 NMAC**

Dear Mr. Duffy:

Enclosed is the 2007 Emissions Inventory Update for Los Alamos National Laboratory (LANL or Laboratory), required by Title 20, Chapter 2, Part 73 of the New Mexico Administrative Code (20.2.73 NMAC), Notice of Intent and Emissions Inventory Requirements.

We have updated the Excel worksheets that you provided, using the guidance in your instructions for the *2007 New Mexico Emissions Inventory Update*. All changes made to the worksheets are highlighted in yellow (additions).

In general, criteria pollutant emissions from LANL sources in 2007 are similar to emissions reported last year. Additionally, please note the following for our inventory for 2007:

- From the NMED 2007 Emissions Inventory instructions, we are directed to "Report actual emissions of individual (speciated) hazardous air pollutants (HAPs) that are equal to or greater than 0.5 tons per year per emission unit." Therefore, for each source, LANL has only reported HAPs that are equal to or greater than 0.5 tons per year.
- Emissions of radionuclides other than radon from Laboratory operations, as reported to EPA under 40 CFR 61 Subpart H, resulted in a maximum offsite dose of 0.47 mrem during 2006. For 2007, this offsite dose is estimated to be 0.5 mrem. A final dose for 2007 will be reported to EPA in June 2008.

This submittal includes a diskette (Attachment 1) containing electronic copies of the updated spreadsheets and a signed certification statement (Attachment 2). We have also included a summary report that was prepared at the completion of the Emissions

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Mr. Ron Duffy
ENV-DO:08-005
LA-UR:08-1529

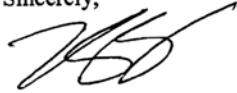
-2-

March 21, 2007

Inventory submittal for 2006 (Attachment 3). We followed the same methodology in preparing the 2007 emissions inventory updates as described in this report.

If you have any questions regarding this report, please contact Steve Story (665-2169) or Walt Whetham (665-8885), in the Laboratory's Ecology and Air Quality Group.

Sincerely,



Victoria A. George
Division Leader
Environmental Protection Division

VAG:alb

Enc: a/s

Cy:

V. Bynum, PADOPS, w/o enc., A102
R. Watkins, ADESH&Q, w/o enc., K491
S. Fong, DOE-LA-SO, w/o enc., A316
P. Wardwell, LC-ESH, w/o enc., A187
D. Wilburn, ENV-EAQ, w/o enc., J978
D. Janecky, ENV-EAQ, w/o enc., J978
S. Story, ENV-EAQ, w/o enc., J978
M. Stockton, ENV-EAQ, w/o enc., J978
D. Fuehne, ENV-EAQ, w/o enc., J978
W. Whetham, ENV-EAQ, w/o enc., J978
IRM-RM550, w/o enc., A150
ENV-EAQ Emissions Inventory File
ENV-EAQ File
ENV-DO File

LA-UR-08-1529

*Approved for public release;
distribution is unlimited.*

Title: 2007 Emissions inventory Report

Author(s): Walter Whetham

Intended for: Ron Duffy, New Mexico Environmental Department



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Form 836 (7/06)

2007 Emissions Inventory Certification

I, Victoria A. George, hereby certify on behalf of
Los Alamos National Security, LLC (LANS),
that the information and data submitted in the 2007 Emissions Inventory for
Los Alamos National Laboratory with
Permit Number P100M2 (IDEA/Tempo ID No. 856) are as complete, true and
accurate as possible, to the best of my personal knowledge and professional expertise and
experience.

Signed this twenty-first day of March, 2008, upon my
oath of affirmation, before a notary of the State of New Mexico.

[Signature] 3/17/08 505-667-2211
SIGNATURE (Responsible Company Official) DATE PHONE

Victoria A. George Division Leader LANS
PRINTED NAME TITLE COMPANY

Subscribed and sworn to before me on this 17th day of March, 2008.

My authorization as a Notary of the State of New Mexico expires on the 10th
day of June, 2008.

[Signature] 3/17/08
NOTARY'S SIGNATURE DATE

Taylor Valdez _____
NOTARY'S PRINTED NAME NOTARY SEAL

2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_ALIT	ALTERNATE_SI_ID	AQB-Steel/Local ID	006	Not Applicable
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_OP_TIME	OP_TIME_151G	Actual Percent of Operation During Winter	25	percent of time
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_OP_TIME	OP_TIME_171G	Actual Percent of Operation During Spring	25	percent of time
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_OP_TIME	OP_TIME_141G	Actual Percent of Operation During Summer	25	percent of time
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_OP_TIME	OP_TIME_161G	Actual Percent of Operation During Fall	25	percent of time
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_OP_TIME	OP_TIME_1923	Actual Operating Time in Hours Per Day	5	h/d
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_OP_TIME	OP_TIME_1905	Actual Operating Time in Days Per Week	5	d/week
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_OP_TIME	OP_TIME_192D	Actual Operating Time in Weeks Per Year	52	weeks/yr
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_OP_TIME	OP_TIME_19HR	Actual Operating Time in Hours Per Year	1300	hr/yr
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_ATTRIBUTE	ATTRIB_E45B17	Actual Input Materials Processed	516	Metal
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_SCC	SCC_CODE	Standard Classification (SCC) Code	30903004	Industrial Processes, Fabricated Metal Products, Machining Operations.
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_QUANTITIES	OUTPUT_003084	Actual Beryllium in tons per year	2.00E-08	tons/yr
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_QUANTITIES	QUANTITY_METHOD_CODE_003084	Actual Beryllium calculation method	es	Estimate
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_QUANTITIES	TOTAL_EFFICIENCY_003084	Beryllium Actual total efficiency controlled by Fabric Filter Medium Temp ie 180F-T<250F	99.95	percent
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_QUANTITIES	OUTPUT_002114	Actual Particulate Matter (total suspended)	2.00E-08	tons/yr
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_QUANTITIES	QUANTITY_METHOD_CODE_002114	Actual Particulate Matter (total suspended) calculation method	2	Engineer Calculation
2007	856	Los Alamos National Laboratory	350280001	ACT	ACFR	2	006	Be Machining T335 Bldg213	SUBJ_ITEM_QUANTITIES	TOTAL_EFFICIENCY_002114	Particulate Matter (total suspended) Actual total efficiency controlled by Fabric Filter Medium Temp ie 180F-T<250F	99.95	percent

856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	AQB-State/Local ID	007	Not Applicable
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Operating Time in Hours Per Year	8736	h/y
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Input Materials Processed	516	Metal
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Standard Classification (SCC) Code	30903004	Industrial Processes, Fabricated Metal Products, Machining Operations,
							Specify Material**
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Beryllium in tons per year	7.71E-09	tons/y
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Beryllium calculation method		
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Beryllium Actual total efficiency controlled by	99.95	1 Continuous Emissions Monitoring percent
					Fabric Filter-Medium Temp ie 180F <T<250F		
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Particulate Matter (total suspended)	7.71E-09	tons/y
					in tons per year		
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Actual Particulate Matter (total suspended)	es	Estimate
					calculation method		
856	Los Alamos National Laboratory	350280001	007	Be Machining Ta3 Bldg 141	Particulate Matter (total suspended)Actual total	99.95	percent
					efficiency controlled by Fabric Filter-Medium		
					Temp ie 180F <T<250F		

856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	AQB-State/Local ID	010	Not Applicable
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Operating Time in Hours Per Day	8	h/d
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Operating Time in Hours Per Year	2912	h/y
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Input Materials Processed	516	Metal
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Output Materials Processed		
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Standard Classification (SCC) Code	309030004	Industrial Processes, Fabricated Metal Products, Machining Operations, Specify Material**
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Aluminum in tons per year	3.21E-06	tons/y
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Aluminum/Actual total efficiency controlled by Fabric Filter-N	ap 99.95	EPA emission factors (e.g., AP-42) percent
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Actual Beryllium in tons per year	3.21E-06	tons/y
856	Los Alamos National Laboratory	350280001	010	Be Cutting & Bead Dressing Ta-55-4	Beryllium/Actual total efficiency controlled by Fabric Filter-Mi	ap 99.95	EPA emission factors (e.g., AP-42) percent

Emissions Inventory Report Summary for LANL for Calendar Year 2007

856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	AQB-Start/Local ID	031	Not Applicable
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Operating Time in Hours Per Day	24	hr/d
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Operating Time in Days Per Week	7	dw/week
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Operating Time in Weeks Per Year	52	weeks/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Operating Time in Hours Per Year	8736	hr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Fuel Consumption		
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Fuel Heating Value		
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Fuel Type		
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Percent Sulfur of Fuel		
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Percent Ash of Fuel		
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Input Materials Processed		
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Standard Classification (SCC) Code	315030001	Industrial Processes, Photographic Equipment/Health Care/Laboratories, Laboratories, Bench Scale Reagents: Research
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acetaldehyde; (Ethyl aldehyde) in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acetaldehyde; (Ethyl aldehyde) calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acetonitrile; (Methyl cyanide) in tons per year	0.5	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acetonitrile; (Methyl cyanide) calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acetophenone in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acetophenone calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acrylonitrile in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acrylonitrile calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acrylonitrile in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Acrylonitrile calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Ammonia in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Ammonia calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Aniline in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Aniline calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Antimony in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Antimony calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Antimony compounds in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Antimony compounds calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Arsenic Compounds in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Arsenic Compounds calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Benzene in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Benzene calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Benzyl Chloride in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Benzyl Chloride calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Biphenyl in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Biphenyl calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Bromoform; (Trichloromethane) in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Bromoform; (Trichloromethane) calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Butadiene(1,3-) in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Butadiene(1,3-) calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Cadmium in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Cadmium calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Cadmium compounds in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Cadmium compounds calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Carbon Disulfide in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Carbon Disulfide calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Carbon tetrachloride; (Tetrachloromethane) in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Carbon tetrachloride; (Tetrachloromethane) calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Carbonyl sulfide in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Carbonyl sulfide calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Catechol (Pyrocatechol) in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Catechol (Pyrocatechol) calculation method	rb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Chlorine in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Chlorine calculation method	rb	Material balance

856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Selenium compounds in tons per year	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Selenium compounds calculation method	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Selenium compounds calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Styrene in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Styrene calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual TCE; (Trichloroethylene); (Trichloroethene) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual TCE; (Trichloroethylene); (Trichloroethene) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Tetrachloroethane(1,1,2,2) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Tetrachloroethane(1,1,2,2) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Titanium tetrachloride in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Titanium tetrachloride calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Toluene diisocyanate(2,4) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Toluene diisocyanate(2,4) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Toluene; (Methyl benzene) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Toluene; (Methyl benzene) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Total HAP in tons per year	5.8	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Total HAP calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Total HAP Actual total efficiency controlled by Uncontrolled	0	percent
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Trichloroethane(1,1,1) (Methyl Chloroform) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Trichloroethane(1,1,1) (Methyl Chloroform) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Trichloroethane(1,1,2) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Trichloroethane(1,1,2) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Triethylamine in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Triethylamine calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Trimethylpentane(2,2,4) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Trimethylpentane(2,2,4) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Urethane; (Ethyl carbamate) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Urethane; (Ethyl carbamate) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Vinyl acetate; (Vinyl acetate monomer) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Vinyl acetate; (Vinyl acetate monomer) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Volatile Organic Compounds (VOC) in tons per year	12.3	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Volatile Organic Compounds (VOC) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Xylene(m); (1,3-Dimethylbenzene); (meta-Xylene) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Xylene(m); (1,3-Dimethylbenzene); (meta-Xylene) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Xylene(o); (1,2-Dimethylbenzene); (ortho-Xylene) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Xylene(o); (1,2-Dimethylbenzene); (ortho-Xylene) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Xylene(p); (1,4-Dimethylbenzene); (para-Xylene) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Xylene(p); (1,4-Dimethylbenzene); (para-Xylene) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Xylenes (total); (Xylo) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Xylenes (total); (Xylo) calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Zirconium in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual Zirconium calculation method	mb	Material balance
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual bis(2-ethylhexyl) phthalate; (DEHP) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	031	R & D Activities - Labwide	Actual bis(2-ethylhexyl) phthalate; (DEHP) calculation method	mb	Material balance

856	Los Alamos National Laboratory	350280001	Agency Interest	Los Alamos National Laboratory	Standard Industrial Classification (SIC) Code	9711	National security
856	Los Alamos National Laboratory	350280001	Agency Interest	Los Alamos National Laboratory	North American Industry Classification (NAIC) Code	92811	National Security

856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Percent of Operation During Winter	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Percent of Operation During Spring	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Percent of Operation During Summer	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Percent of Operation During Fall	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Operating Time in Hours Per Day	12	hr
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Operating Time in Days Per Week	7	week
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Operating Time in Weeks Per Year	52	weekly
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Operating Time in Hours Per Year	4368	hr
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Fuel Consumption		
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Fuel Heating Value		
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Fuel Type		
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Percent Sulfur of Fuel		
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Percent Ash of Fuel	15	Wood
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Input Materials Processed	15	Wood
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Standard Classification (SCC) Code	30703096	Industrial Processes, Pulp and Paper and Wood Products, Miscellaneous Wood Working Operations, Sanding/Planing Operations: Specify
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (10 microns or less) in tons per year	0.022	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Particulate Matter (10 microns or less) actual total efficiency controlled by Single Cyclone	65	percent
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (2.5 microns or less) in tons per year	0.01	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Particulate Matter (2.5 microns or less) actual total efficiency controlled by Single Cyclone	45	percent
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (total suspended) in tons per year	0.023	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Particulate Matter (total suspended) actual total efficiency controlled by Single Cyclone	95	percent
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-38	Carpenter Shop - General Construction	Actual Volatile Organic Compounds (VOC) calculation method	2	Engineer Calculation

856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Percent of Operation During Winter	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Percent of Operation During Spring	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Percent of Operation During Summer	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Percent of Operation During Fall	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Operating Time in Hours Per Day	12	hr/d
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Operating Time in Hours Per Year	4368	hr/y
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Input Materials Processed	15	Wood
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Standard Classification (SCC) Code	30703096	Industrial Processes, Pulp and Paper and Wood Products, Miscellaneous Wood Working Operations, Sanding/Planing Operations: Specify
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (10 microns or less) in tons per year	0.044	tons/y
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (10 microns or less) calculation method	dc	Design Calculation
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (2.5 microns or less) in tons per year	0.022	tons/y
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (2.5 microns or less) calculation method	dc	Design Calculation
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (total suspended) in tons per year	0.048	tons/y
856	Los Alamos National Laboratory	350280001	TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (total suspended) calculation method	dc	Design Calculation

856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	AQB-State/Local ID	004	Not Applicable
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Percent of Operation During Winter	35	percent of time
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Percent of Operation During Spring	50	percent of time
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Percent of Operation During Summer	15	percent of time
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Percent of Operation During Fall	0	percent of time
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Operating Time in Hours Per Day	24	hr/d
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Operating Time in Weeks Per Year	52	weekly
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Operating Time in Hours Per Year	8736	hr/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Fuel Consumption	15	MM SCF/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Percent Sulfur of Fuel	0.006	percent
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Carbon Monoxide in tons per year	0.84	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Formaldehyde in tons per year	0	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Hexane in tons per year	0	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Nitrogen Dioxide in tons per year	0.76	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (10 microns or less) in tons per year	0.06	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (2.5 microns or less) in tons per year	0.06	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (total suspended) in tons per year	0.06	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Sulfur Dioxide in tons per year	0.005	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Sulfur Dioxide calculation method	es	Estimate
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Sulfur Dioxide Actual total efficiency controlled by Uncontrolled	0.04	percent
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Volatile Organic Compounds (VOC) in tons per year	0.04	tons/y
856	Los Alamos National Laboratory	35028001	TA-21-357-1	Steam Plant Boiler (k3) Ta21 Bldg357 Nat Gas	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Emissions Inventory Report Summary for LANL for Calendar Year 2007

856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	AQB-State/Local ID	005	Not Applicable
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Percent of Operation During Winter	0	percent of time
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Percent of Operation During Spring	0	percent of time
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Percent of Operation During Fall	0	percent of time
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Operating Time in Hours Per Day	0	hr/d
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Operating Time in Days Per Week	0	d/week
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Operating Time in Weeks Per Year	0	weeks/y
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Operating Time in Hours Per Year	0	hr/y
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Fuel Consumption	0	MM SCF/y
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Fuel Heating Value	0	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Percent Sulfur of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Input Materials Processed		
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers <100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Carbon Monoxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Carbon Monoxide calculation method	es	Estimate
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Carbon Monoxide Actual total efficiency controlled by Uncontrolled	0	percent
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Nitrogen Dioxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Nitrogen Dioxide calculation method	es	Estimate
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Nitrogen Dioxide Actual total efficiency controlled by Uncontrolled	0	percent
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Particulate Matter (total suspended) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Particulate Matter (total suspended) calculation method	es	Estimate
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Particulate Matter (total suspended) Actual total efficiency controlled by Uncontrolled	0	percent
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Actual Volatile Organic Compounds (VOC) calculation method	es	Estimate
856	Los Alamos National Laboratory	350280001	005	Td Site Boiler Not Built	Volatile Organic Compounds (VOC) Actual total efficiency controlled by Uncontrolled	0	percent

856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	AQB-State/Local ID	011	Not Applicable
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Operating Time in Hours Per Day	8	h/d
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Operating Time in Hours Per Year	2912	h/y
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Fuel Consumption		MM SCF/y
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Fuel Heating Value		MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Fuel Type		percent
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Percent Ash of Fuel		Metal
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Input Materials Processed	516	Industrial Processes, Fabricated
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Standard Classification (SCC) Code	30900303	Metal Products, Abrasive Cleaning of Metal Parts, Polishing
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Aluminum in tons per year	1.60E-06	tons/y
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Aluminum calculation method	es	Estimate
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	AluminumActual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Beryllium in tons per year	1.60E-06	tons/y
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	Actual Beryllium calculation method	es	Estimate
856	Los Alamos National Laboratory	350280001	011	Metallography Ta55-4 North Stack	BerylliumActual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent

856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	AQB-State/Local ID	015	Not Applicable
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Percent of Operation During Winter	40	percent of time
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Percent of Operation During Fall	40	percent of time
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Operating Time in Weeks Per Year	33	weeks/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Operating Time in Hours Per Year	5544	h/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Fuel Consumption	8.4	MM SCF/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric
							Generation, Natural Gas,
							Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Carbon Monoxide in tons per year	0.35	tons/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Hexane in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Nitrogen Dioxide in tons per year	0.42	tons/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Particulate Matter (10 microns or less) in tons per year	0.03	tons/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Particulate Matter (2.5 microns or less) in tons per year	0.03	tons/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Particulate Matter (total suspended) in tons per year	0.03	tons/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Sulfur Dioxide in tons per year	0.003	tons/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Volatile Organic Compounds (VOC) in tons per year	0.023	tons/y
856	Los Alamos National Laboratory	350280001	015	Boiler (1a-48-1) Bs-1	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	AQB-State/Local ID	016	Not Applicable
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Percent of Operation During Winter	40	percent of time
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Percent of Operation During Fall	40	percent of time
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Operating Time in Weeks Per Year	33	weeks/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Operating Time in Hours Per Year	5544	h/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Fuel Consumption	8.4	MM SCF/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric
							Generation, Natural Gas,
							Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Carbon Monoxide in tons per year	0.35	tons/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Hexane in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Nitrogen Dioxide in tons per year	0.42	tons/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Particulate Matter (10 microns or less) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Particulate Matter (2.5 microns or less) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Particulate Matter (total suspended) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Sulfur Dioxide in tons per year	0.003	tons/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Volatile Organic Compounds (VOC) in tons per year	0.023	tons/y
856	Los Alamos National Laboratory	350280001	016	Boiler (1a-48-1) Bs-2	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	AQB-State/Local ID	017	Nd	Applicable
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Percent of Operation During Winter	40	percent of time	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Percent of Operation During Spring	20	percent of time	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Percent of Operation During Fall	40	percent of time	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Operating Time in Hours Per Day	24	h/d	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Operating Time in Days Per Week	7	d/week	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Operating Time in Weeks Per Year	33	weeks/y	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Operating Time in Hours Per Year	5544	h/y	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Fuel Consumption	11.3	MM SCF/y	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Fuel Heating Value	1030	MM BTU/MM SCF	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Fuel Type	209	Natural Gas	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Percent Ash of Fuel	0	percent	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Input Materials Processed	209	Natural Gas	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas,	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Carbon Monoxide in tons per year		Boilers < 100 Million Btu/hr except Tangential	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Carbon Monoxide calculation method	0.47	tons/y	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Formaldehyde in tons per year	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Formaldehyde calculation method		0	tons/y
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Hexane in tons per year	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Hexane calculation method		0	tons/y
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Nitrogen Dioxide in tons per year	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Nitrogen Dioxide calculation method		0.57	tons/y
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (10 microns or less) in tons per year	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (10 microns or less) calculation method		0.043	tons/y
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (2.5 microns or less) in tons per year	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (2.5 microns or less) calculation method		0.043	tons/y
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (total suspended) in tons per year	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (total suspended) calculation method		0.043	tons/y
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Sulfur Dioxide in tons per year	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Sulfur Dioxide calculation method		0.003	tons/y
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Volatile Organic Compounds (VOC) in tons per year	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Volatile Organic Compounds (VOC) calculation method		0.031	tons/y
856	Los Alamos National Laboratory	350280001	017	Boiler (Ta-48-1) Bs-6	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)	

856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	AQB-State/Local ID	018	Not Applicable
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Percent of Operation During Winter	40	percent of time
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Percent of Operation During Fall	40	percent of time
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Operating Time in Weeks Per Year	33	weeks/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Operating Time in Hours Per Year	5544	h/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Fuel Consumption	11.3	MM SCF/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Carbon Monoxide in tons per year	0.47	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Formaldehyde in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Hexane in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Nitrogen Dioxide in tons per year	0.56	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (10 microns or less) in tons per year	0.043	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (2.5 microns or less) in tons per year	0.043	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (total suspended) in tons per year	0.043	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Sulfur Dioxide in tons per year	0.003	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Volatile Organic Compounds (VOC) in tons per year	0.031	tons/y
856	Los Alamos National Laboratory	350280001	018	Boiler (Ta-53-365) Bhw-1	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	AQB-State/Local ID	019	Not Applicable
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Percent of Operation During Winter	40	percent of time
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Percent of Operation During Fall	40	percent of time
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Operating Time in Hours Per Day	24	hr/d
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Operating Time in Weeks Per Year	33	weeks/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Operating Time in Hours Per Year	5544	hr/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Fuel Consumption	11.3	MM SCF/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Carbon Monoxide in tons per year	0.47	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Formaldehyde in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Hexane in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Nitrogen Dioxide in tons per year	0.56	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (10 microns or less) in tons per year	0.043	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (2.5 microns or less) in tons per year	0.043	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (total suspended) in tons per year	0.043	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Sulfur Dioxide in tons per year	0.003	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Volatile Organic Compounds (VOC) in tons per year	0.031	tons/y
856	Los Alamos National Laboratory	350280001	019	Boiler (Ta-53-365) Bhw-2	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	AQB-State/Local ID	020	Not Applicable
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Percent of Operation During Winter	40	percent of time
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Percent of Operation During Fall	40	percent of time
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Operating Time in Weeks Per Year	33	weeks/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Operating Time in Hours Per Year	5544	h/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Fuel Consumption	8.4	MM SCF/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas,
856	Los Alamos National Laboratory						Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Carbon Monoxide in tons per year	0.35	tons/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Hexane in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Nitrogen Dioxide in tons per year	0.42	tons/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (10 microns or less) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (2.5 microns or less) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (total suspended) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Sulfur Dioxide in tons per year	0.003	tons/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Volatile Organic Compounds (VOC) in tons per year	0.023	tons/y
856	Los Alamos National Laboratory	350280001	020	Boiler (Ta-59-1) Bhw-1	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	AQB-State/Local ID	021	Not Applicable
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Percent of Operation During Winter	40	percent of time
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Percent of Operation During Fall	40	percent of time
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Operating Time in Weeks Per Year	33	weeks/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Operating Time in Hours Per Year	5544	h/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Fuel Consumption	8.4	MM SCF/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric
							Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Carbon Monoxide in tons per year	0.35	tons/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Hexane in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Nitrogen Dioxide in tons per year	0.42	tons/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Particulate Matter (10 microns or less) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Particulate Matter (2.5 microns or less) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Particulate Matter (total suspended) in tons per year	0.032	tons/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Sulfur Dioxide in tons per year	0.003	tons/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Volatile Organic Compounds (VOC) in tons per year	0.023	tons/y
856	Los Alamos National Laboratory	350280001	021	Boiler (1a-59-1) Bhw-2	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	AQB-State/Local ID	024	Not Applicable
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Operating Time in Hours Per Day	24	hr/d
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Operating Time in Weeks Per Year	52	weekly
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Operating Time in Hours Per Year	8736	hr/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Fuel Consumption	20.1	MM SCF/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas,
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Carbon Monoxide in tons per year	0.37	Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Carbon Monoxide calculation method	11	tons/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Formaldehyde in tons per year	0	Manufacturer Specification
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Formaldehyde calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Hexane in tons per year	0	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Hexane calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Nitrogen Dioxide in tons per year	0.37	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Nitrogen Dioxide calculation method	11	tons/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Nitrogen Dioxide total efficiency controlled by Low NOX Burners	63	Manufacturer Specification
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (10 microns or less) in tons per year	0.076	percent
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (10 microns or less) calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (2.5 microns or less) in tons per year	0.076	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (2.5 microns or less) calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (total suspended) in tons per year	0.076	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (total suspended) calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Sulfur Dioxide in tons per year	0.006	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Sulfur Dioxide calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Volatile Organic Compounds (VOC) in tons per year	0.055	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Volatile Organic Compounds (VOC) calculation method	ap	tons/yr

856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	AQB-State/Local ID	028	Not Applicable
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Operating Time in Hours Per Day	4	h/d
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Operating Time in Days Per Week	1	d/week
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Operating Time in Hours Per Year	208	h/y
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Input Materials Processed	952	Solvents: All
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Standard Classification (SCC) Code	40100255	Petroleum and Solvent Evaporation,
							Degreasing, Trichloroethylene: General
							Degreasing Units
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual TOE: (Trichloroethylene); (Trichloroethene)	0.012	tons/y
					in tons per year		
856	Los Alamos National Laboratory	350280001	028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual TOE: (Trichloroethylene); (Trichloroethene)	mb	Material balance
					calculation method		

856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	AQB-State/Local ID	002	Not Applicable
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Winter	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Summer	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Fall	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Weeks Per Year	52	weeks/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Year	8736	h/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Consumption	160	MM SCF/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Heating Value	1030	MM Btu/MM SCF
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Standard Classification (SCC) Code	10100601	External Combustion Boilers, Electric Generation, Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide in tons per year	3.2	Boilers > 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde in tons per year	0	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Hexane in tons per year	0	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Hexane calculation method	ap	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide in tons per year	4.64	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide calculation method	st	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Nitrogen Dioxide Actual total efficiency controlled by Flue Gas Recirculation	64	A actual stack test
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) in tons per year	0.61	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.61	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) in tons per year	0.61	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide in tons per year	0.048	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Toluene, (Methyl benzene) in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Toluene, (Methyl benzene) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) in tons per year	0.44	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	AQB-State/Local ID	002	Not Applicable
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Winter	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Summer	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Fall	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Weeks Per Year	52	weeks/year
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Year	8736	h/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Consumption	190.5	MM SCF/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Standard Classification (SCC) Code	10100601	External Combustion Boilers, Electric Generation, Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide in tons per year	3.81	Bolers > 100 Million Btu/hr except Tangential tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Hexane in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide in tons per year	5.53	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Nitrogen Dioxide Actual total efficiency controlled by Flue Gas Recirculation	64	percent
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) in tons per year	0.72	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.72	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) in tons per year	0.72	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide in tons per year	0.06	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) in tons per year	0.52	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-222	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	AQB-State/Local ID	002	Not Applicable
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Percent of Operation During Winter	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Percent of Operation During Summer	20	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Percent of Operation During Fall	30	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Operating Time in Hours Per Day	24	hr/d
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Operating Time in Weeks Per Year	52	weeks/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Operating Time in Hours Per Year	8736	hr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Fuel Consumption	101	MM SCF/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Standard Classification (SCC) Code	10100601	External Combustion Boilers, Electric Generation, Natural Gas
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Carbon Monoxide in tons per year	2.02	Boilers > 100 Million Btu/hr except Tangential tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Formaldehyde in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Hexane in tons per year	0	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Nitrogen Dioxide in tons per year	2.83	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Nitrogen Dioxide/Actual total efficiency controlled by Flue Gas Recirculation	64	percent
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Particulate Matter (10 microns or less) in tons per year	0.38	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.38	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Particulate Matter (total suspended) in tons per year	0.38	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Sulfur Dioxide in tons per year	0.03	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP 42)
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Volatile Organic Compounds (VOC) in tons per year	0.28	tons/yr
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (gph, Natural Gas)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP 42)

856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	AQB-State/Local ID	035	Not Applicable
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Fuel Consumption	8736	h/y
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Input Materials Processed	83334	gall/y
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Standard Classification (SCC) Code	58	Distillate Oil (No. 2)
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)		39090004	Industrial Processes, In-process Fuel Use, Fuel Storage - Fixed Roof Tanks,
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Volatile Organic Compounds (VOC) in tons per year		Distillate Oil (No. 2): Working Loss
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)	Actual Volatile Organic Compounds (VOC) calculation method	0.008	tons/y
856	Los Alamos National Laboratory	350280001	035	Tank 03-026 (No. 2 Fuel Oil)		ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	AQB-State/Local ID	036	Not Applicable
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Operating Time in Hours Per Year	8736	h/y
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Fuel Consumption	83334	gal/y
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Input Materials Processed	58	Distillate Oil (No. 2)
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Standard Classification (SCC) Code	39090004	Industrial Processes, In-process Fuel Use, Fuel Storage - Fixed Roof Tanks,
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Volatile Organic Compounds (VOC) in tons per year	0.034	Distillate Oil (No. 2): Working Loss
856	Los Alamos National Laboratory	350280001	036	Tank 03-779 (No. 2 Fuel Oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	tons/y EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	AQB-State/Local ID	037	Not Applicable	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Percent of Operation During Winter	40	percent of time	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Percent of Operation During Spring	20	percent of time	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Percent of Operation During Summer	0	percent of time	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Percent of Operation During Fall	40	percent of time	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Operating Time in Hours Per Day	24	h/d	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Operating Time in Days Per Week	7	d/week	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Operating Time in Weeks Per Year	33	weekly	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Operating Time in Hours Per Year	5544	h/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Fuel Consumption	8.2	MM SCF/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Fuel Heating Value	1030	MM BTU/MM SCF	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Fuel Type	209	Natural Gas	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Fuel Type	0.006	Percent	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Percent Sulfur of Fuel	209	Natural Gas	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Percent Ash of Fuel			
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Input Materials Processed			
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Output Materials Processed			
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas,	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Carbon Monoxide in tons per year		Boilers < 100 Million Btu/hr except Tangential	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Carbon Monoxide calculation method	11	tons/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Hexane in tons per year		Manufacturer Specification	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Hexane calculation method	ap	0 tons/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Nitrogen Dioxide in tons per year		EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Nitrogen Dioxide calculation method	st	0.56 tons/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Particulate Matter (10 microns or less) in tons per year		Actual stack test	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Particulate Matter (10 microns or less) calculation method	11	0.058 tons/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Particulate Matter (2.5 microns or less) in tons per year		Manufacturer Specification	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Particulate Matter (2.5 microns or less) calculation method	11	0.058 tons/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Particulate Matter (total suspended) in tons per year		Manufacturer Specification	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Particulate Matter (total suspended) calculation method	11	0.058 tons/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Sulfur Dioxide in tons per year		Manufacturer Specification	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Sulfur Dioxide calculation method	ap	0.002 tons/y	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Volatile Organic Compounds (VOC) in tons per year		EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	037	Sellers Boiler Bhw-1b(Ta 55, Bldg, P16)	Actual Volatile Organic Compounds (VOC) calculation method	11	0.024 tons/y	

856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	AQB-State/Local ID	038	Not Applicable
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Percent of Operation During Winter	40	percent of time
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Percent of Operation During Spring	20	percent of time
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Percent of Operation During Fall	40	percent of time
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Operating Time in Weeks Per Year	33	weekly
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Operating Time in Hours Per Year	5544	h/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Fuel Consumption	12.7	MMBtu/MM SCF
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Fuel Heating Value	1030	MMBtu/MM SCF
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Fuel Type	0.006	Percent
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Percent Sulfur of Fuel	209	Natural Gas
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Percent Ash of Fuel	10100602	External Combustion Boilers, Electric Generation, Natural Gas,
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Input Materials Processed		Boilers < 100 Million Btu/hr except Tangential
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Output Materials Processed		tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Standard Classification (SCC) Code	0.24	Manufacturer Specification
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Carbon Monoxide in tons per year	11	0 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Formaldehyde in tons per year	ap	0 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Hexane in tons per year	11	0 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Hexane calculation method	st	Manufacturer Specification
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Lead in tons per year	11	0.09 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Lead calculation method	11	0.09 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Nitrogen Dioxide in tons per year	11	0.09 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Nitrogen Dioxide calculation method	11	0.09 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Particulate Matter (10 microns or less) in tons per year	11	0.09 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Particulate Matter (10 microns or less) calculation method	11	0.09 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Particulate Matter (2.5 microns or less) in tons per year	11	0.09 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Particulate Matter (2.5 microns or less) calculation method	11	0.09 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Sulfur Dioxide in tons per year	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Sulfur Dioxide calculation method	11	0.038 tons/yr
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Volatile Organic Compounds (VOC) in tons per year	11	Manufacturer Specification
856	Los Alamos National Laboratory	350280001	038	Sellers Boiler Bhw-2b(Ta 55, Bldg. P16)	Actual Volatile Organic Compounds (VOC) calculation method		

856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Operating Time in Days Per Week	2	d/week
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Operating Time in Weeks Per Year	12	weeks/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Operating Time in Hours Per Year	576	h/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Fuel Consumption	0.1	MM SCF/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Fuel Heating Value	1030	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Percent Sulfur of Fuel	0.006	Percent
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Percent Ash of Fuel		
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Input Materials Processed	209	Natural Gas
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Standard Classification (SCC) Code	10100604	External Combustion Boilers, Electric Generation, Natural Gas, Tangentially Fired Units
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Carbon Monoxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Hexane in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Lead in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Lead calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Nitrogen Dioxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Particulate Matter (10 microns or less) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Particulate Matter (2.5 microns or less) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Particulate Matter (total suspended) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Sulfur Dioxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	044	BoilerTA-50 RLWTF	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Percent of Operation During Winter	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Percent of Operation During Spring	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Percent of Operation During Fall	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Operating Time in Hours Per Day	0	h/d
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Operating Time in Days Per Week	0	d/week
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Operating Time in Weeks Per Year	0	weeks/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Operating Time in Hours Per Year	0	h/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Fuel Consumption	0	M gal/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Fuel Heating Value	138	MM BTU/M gal
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Fuel Type	44	Diesel
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Percent Sulfur of Fuel	0.006	percent
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Percent Ash of Fuel	0.01	percent
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Input Materials Processed	44	Diesel
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Output Materials Processed		
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Standard Classification (SCC) Code	20100102	Internal Combustion Engines, Electric Generation, Distillate Oil (Diesel), Reciprocating
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Carbon Monoxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Carbon Monoxide calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Lead in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Lead calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Nitrogen Dioxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Nitrogen Dioxide calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (10 microns or less) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (10 microns or less) calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (2.5 microns or less) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (2.5 microns or less) calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (total suspended) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (total suspended) calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Sulfur Dioxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Sulfur Dioxide calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-33-G-1	Diesel Fired Generator	Actual Volatile Organic Compounds (VOC) calculation method	dc	Design calculation

856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	AQB-State/Local ID	035	Not Applicable
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Operating Time in Days Per Week	7	d/week
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Operating Time in Hours Per Year	8736	h/y
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Fuel Consumption	23383	gal/y
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Input Materials Processed	647	Asphalt
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Standard Classification (SCC) Code	A2501985000	Storage and Transport, Petroleum and Petroleum Product Storage, All Storage
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Volatile Organic Compounds (VOC) in tons per year	0.003	Types: Working Loss, Total: All Products
856	Los Alamos National Laboratory	350280001	TA-60	Tank (Asphalt Emulsion)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Operating Time in Hours Per Day	7	h/d
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Operating Time in Days Per Week	5	d/week
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Operating Time in Hours Per Year	1820	h/y
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Input Materials Processed	226	Paper
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Output Materials Processed		
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Standard Classification (SCC) Code	A.2650000002	Waste Disposal, Treatment, and Recovery, Scrap and Waste Materials, Shredding
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Particulate Matter (10 microns or less) in tons per year	0.43	tons/y
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Particulate Matter (10 microns or less) calculation method	11	Manufacturer Specification
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Particulate Matter (10 microns or less) Actual total efficiency	95	percent
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	controlled by Single Cyclone, Fabric Filter		
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Particulate Matter (2.5 microns or less) in tons per year	0.29	tons/y
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Particulate Matter (2.5 microns or less) calculation method	11	Manufacturer Specification
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Particulate Matter (2.5 microns or less) Actual total efficiency	95	percent
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	controlled by Single Cyclone, Fabric Filter		
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Particulate Matter (total suspended) in tons per year	0.48	tons/y
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Actual Particulate Matter (total suspended) calculation method	11	Manufacturer Specification
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	Particulate Matter (total suspended) Actual total efficiency	95	percent
856	Los Alamos National Laboratory	350280001	Ta-52-11	Data Disintegrator/Industrial Shredder	controlled by Single Cyclone, Fabric Filter		

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856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Percent of Operation During Spring	25	percent of time
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Percent of Operation During Summer	25	percent of time
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Percent of Operation During Fall	25	percent of time
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Operating Time in Days Per Week	5	d/week
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Operating Time in Weeks Per Year	52	weeks/y
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Operating Time in Hours Per Year	8736	h/y
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Fuel Consumption	5	MM SCF/y
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Input Materials Processed	216	Oil
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Input Materials Processed		
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Standard Classification (SCC) Code	39090004	Industrial Processes, In-process Fuel Use, Fuel Storage - Fixed Roof Tanks,
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Volatile Organic Compounds (VOC)		Distillate Oil (No. 2): Working Loss tons/y
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	in tons per year	0.007	
856	Los Alamos National Laboratory	350280001	043	Composite Mineral Oil Tank	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	AQB-State/Local D	002	Not Applicable
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Winter	5	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Spring	90	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Fall	5	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Day	24	h/d
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Days Per Week	2	d/week
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Weeks Per Year	12	weeks/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Year	576	h/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Consumption	30.1	M gal/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Heating Value	137	MM BTU/M gal
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Type	44	Diesel
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Ash of Fuel	<0.01	percent
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Input Materials Processed	44	Diesel
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Standard Classification (SCC) Code	10100501	External Combustion Boilers,
							Electric Generation, Distillate Oil,
							Grades 1 and 2 Oil
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide in tons per year	0.075	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide in tons per year	0.13	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) in tons per year	0.035	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.023	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) in tons per year	0.05	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide in tons per year	0.111	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) in tons per year	0.003	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

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856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	AQB-State/Local ID	002	Not Applicable
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Winter	25	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Spring	75	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Fall	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Day	24	hrd
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Days Per Week	2	dweek
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Weeks Per Year	12	weeks/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Year	576	hr
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Consumption	1.6	Mgal/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Heating Value	137	MMBTU/Mgal
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Type	44	Diesel
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Ash of Fuel	<0.01	percent
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Input Materials Processed	44	Diesel
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Output Materials Processed		
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Standard Classification (SCC) Code	10100501	External Combustion Boilers, Electric Generation, Distillate Oil, Grades 1 and 2 Oil
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide in tons per year	0.004	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide in tons per year	0.007	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) in tons per year	0.002	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.001	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) in tons per year	0.003	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide in tons per year	0.006	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) in tons per year	0.0002	tons/y
856	Los Alamos National Laboratory	350280001	TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	AQB-State/Local ID	002	Not Applicable	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Winter	2	percent of time	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Spring	95	percent of time	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Summer	0	percent of time	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Fall	3	percent of time	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Day	24	h/d	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Days Per Week	2	d/week	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Weeks Per Year	12	weeks/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Year	576	h/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Consumption	51.6	M gal/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Heating Value	137	MM BTU/M gal	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Type	44	Diesel	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Ash of Fuel	<0.01	percent	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Input Materials Processed	44	Diesel	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Output Materials Processed			
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Standard Classification (SCC) Code	10100501	External Combustion Boilers, Electric Generation, Distillate Oil,	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)			Grades 1 and 2 Oil	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide in tons per year	0.13	tons/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead in tons per year	0	tons/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead calculation method	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide in tons per year	0.22	tons/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide calculation method	st	Actual stack test	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) in tons per year	0.069	tons/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.04	tons/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) in tons per year	0.085	tons/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide in tons per year	0.19	tons/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide in tons per year	0.005	tons/y	
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) in tons per year			
856	Los Alamos National Laboratory	350280001	TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)	

856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent of Operation During Winter	0 percent of time
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent of Operation During Spring	0 percent of time
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent of Operation During Summer	0 percent of time
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent of Operation During Fall	100 percent of time
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Operating Time in Hours Per Day	6 h/d
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Operating Time in Days Per Week	7 d/week
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Operating Time in Weeks Per Year	2 weeks/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Fuel Consumption	84 h/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Fuel Heating Value	6.3 MM SCF/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Fuel Type	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent Sulfur of Fuel	0.006 percent
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent Ash of Fuel	0 percent
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Input Materials Processed	Natural Gas
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Standard Classification (SCC) Code	20100201
					Internal Combustion Engines,	
					Electric Generation,	
					Natural Gas, Turbine	
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Carbon Monoxide in tons per year	0.033 tons/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Carbon Monoxide calculation method	Actual stack test
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Lead in tons per year	0 tons/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Lead calculation method	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Nitrogen Dioxide in tons per year	0.16 tons/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Nitrogen Dioxide calculation method	Actual stack test
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (10 microns or less) in tons per year	0.021 tons/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (10 microns or less) calculation method	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.021 tons/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (2.5 microns or less) calculation method	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (total suspended) in tons per year	0.021 tons/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter calculation method	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Sulfur Dioxide in tons per year	0.011 tons/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Sulfur Dioxide calculation method	EPA emission factors (e.g., AP-42)
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Volatile Organic Compounds (VOC) in tons per year	0.007 tons/y
856	Los Alamos National Laboratory	350280001	CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Volatile Organic Compounds (VOC) calculation method	Manufacturer Specification

856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Percent of Operation During Winter	5 percent of time
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Percent of Operation During Spring	10 percent of time
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Percent of Operation During Summer	85 percent of time
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Percent of Operation During Fall	0 percent of time
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Operating Time in Hours Per Day	h/d
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Operating Time in Days Per Week	d/week
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Operating Time in Weeks Per Year	weeks/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Operating Time in Hours Per Year	h/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Fuel Consumption	0.07 M gal/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Fuel Heating Value	
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Fuel Type	Diesel
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Fuel Type	MM B TU/M gal
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Percent Sulfur of Fuel	137
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Percent Ash of Fuel	
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Input Materials Processed	
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Output Materials Processed	
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Standard Classification (SCC) Code	10100501
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Carbon Monoxide in tons per year	0.0002 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Carbon Monoxide calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Formaldehyde in tons per year	0 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Formaldehyde calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Hexane in tons per year	0 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Hexane calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Nitrogen Dioxide in tons per year	0.0007 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Nitrogen Dioxide calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Particulate Matter (10 microns or less) in tons per year	0.00008 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Particulate Matter (10 microns or less) calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Particulate Matter (2.5 microns or less) in tons per year	0.00005 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Particulate Matter (2.5 microns or less) calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Particulate Matter (total suspended) in tons per year	0.0001 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Particulate Matter (total suspended) calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Sulfur Dioxide in tons per year	0.0002 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Sulfur Dioxide calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Sulfur Dioxide actual total efficiency controlled by Uncontrolled	0 percent
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Volatile Organic Compounds (VOC) in tons per year	0.000007 tons/y
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Volatile Organic Compounds (VOC) calculation method	ap
856	Los Alamos National Laboratory	350280001	TA-21-357-1b	Steam Plant Boiler (x3) Ta21 B10g357 No. 2 Fuel	Actual Volatile Organic Compounds (VOC) calculation method	ap

856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Percent of Operation During Winter	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Percent of Operation During Spring	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Percent of Operation During Fall	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Operating Time in Hours Per Day	0	hr/d
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Operating Time in Days Per Week	0	d/week
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Operating Time in Weeks Per Year	0	weeks/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Operating Time in Hours Per Year	0	hr/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Fuel Consumption	0	MM SCF/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Fuel Heating Value	0	MM BTU/MM SCF
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Fuel Type	209	Natural Gas
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Percent Sulfur of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Percent Ash of Fuel	0	percent
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Input Materials Processed	647	Asphalt
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Standard Classification (SCC) Code	30500255	Industrial Processes, Mineral Products, Asphalt Concrete, Drum Mix Plant
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Carbon Monoxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Carbon Monoxide calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Lead in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Lead calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Nitrogen Dioxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Nitrogen Dioxide calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Particulate Matter (10 microns or less) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Particulate Matter (10 microns or less) calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Particulate Matter (2.5 microns or less) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Particulate Matter (2.5 microns or less) calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Particulate Matter (total suspended) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Particulate Matter (total suspended) calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Sulfur Dioxide in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Sulfur Dioxide calculation method	dc	Design calculation
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-60-BDM	Asphalt Plant Dryer Nat Gas	Actual Volatile Organic Compounds (VOC) calculation method	dc	Design calculation

856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent of Operation During Winter	10 percent of time	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent of Operation During Spring	25 percent of time	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent of Operation During Summer	15 percent of time	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent of Operation During Fall	50 percent of time	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Operating Time in Hours Per Day	h/d	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Operating Time in Days Per Week	d/week	8
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Operating Time in Weeks Per Year	weeks/y	26
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Operating Time in Hours Per Year	h/y	1040
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Fuel Consumption	MMBTU/MM SCF	1730
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Fuel Heating Value	MMBTU/MM SCF	91.2
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Fuel Type	Propane	255
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent Sulfur of Fuel	percent	0
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent Ash of Fuel	percent	0
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Output Materials Processed	Asphalt	647
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Standard Classification (SCC) Code	Industrial Processes, Mineral Products, Asphalt Concrete, Drum Mix Plant	30500255
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Carbon Monoxide in tons per year	tons/y	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Carbon Monoxide calculation method	ap	0.35
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Lead in tons per year	0 tons/y	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Lead calculation method	ap	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Nitrogen Dioxide in tons per year	0.022 tons/y	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Nitrogen Dioxide calculation method	ap	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (10 microns or less) in tons per year	EPA emission factors (e.g., AP-42)	0.005
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (10 microns or less) calculation method	11	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (2.5 microns or less) in tons per year	Manufacturer Specification	0.005
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (2.5 microns or less) calculation method	11	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (total suspended) in tons per year	Manufacturer Specification	0.008
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (total suspended) calculation method	11	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Sulfur Dioxide in tons per year	Manufacturer Specification	0.004
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Sulfur Dioxide calculation method	ap	
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Volatile Organic Compounds (VOC) in tons per year	EPA emission factors (e.g., AP-42)	0.007
856	Los Alamos National Laboratory	350280001	TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Volatile Organic Compounds (VOC) calculation method	ap	

856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Percent of Operation During Winter	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Percent of Operation During Spring	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Percent of Operation During Summer	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Percent of Operation During Fall	0	percent of time
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Operating Time in Hours Per Day	0	h/d
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Operating Time in Days Per Week	0	d/week
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Operating Time in Weeks Per Year	0	weeks/y
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Operating Time in Hours Per Year	0	h/y
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Standard Classification (SCC) Code	30622201	Industrial Processes, Petroleum
							Industry, , Underground Storage and
							Other Remediation: Vapor Extract
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
856	Los Alamos National Laboratory	350280001	TA-54-SVE	Soil Vapor Extraction	Actual Volatile Organic Compounds (VOC) calculation method	dc	Design calculation

Attachment C

*2007 Semiannual Emissions Reports Submitted
Under Title V Operating Permit Requirements*



Environmental Protection Division
P.O. Box 1663, MS J978
Los Alamos, New Mexico 87545
(505) 667-2211/FAX: (505) 665-8858

Date: September 17, 2007
Refer to: ENV-DO-07-019

Ms. Debra McElroy
Compliance & Enforcement Section
New Mexico Environment Department
Air Quality Bureau
2048 Galisteo Street
Santa Fe, NM 87505

**IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)
OPERATING PERMIT NO: P180M1
SEMI-ANNUAL EMISSIONS REPORT – JANUARY 1, 2007 TO JUNE 30, 2007**

Dear Ms. McElroy:

Enclosed is Los Alamos National Laboratory's (LANL) semi-annual emissions report for the period January 1, 2007 through June 30, 2007. This report is required by permit condition 4.1 and is submitted within 90 days from the end of the reporting period as required by permit condition 4.3.

The semi-annual emissions report includes actual emissions from permitted sources included in section 2.0 of LANL's Operating Permit. Emissions are also reported from insignificant boiler and generator sources. These sources are included to demonstrate that LANL has not exceeded Prevention of Significant Deterioration (PSD) applicability thresholds. In this report, actual emissions are listed along with the emission limits for ease in comparing and verifying compliance. No annual emission limits were exceeded during this reporting period.

Should you have any questions or comments regarding the information provided in this report, please contact Steve Story at (505) 665-2169.

Sincerely,

A handwritten signature in black ink, appearing to read 'V. George'.

Victoria A. George
Division Leader
Environmental Protection Division

The World's Greatest Science Protecting America
An Equal Opportunity Employer / Operated by the University of California for DOE/NSA

Ms. Debra McElroy
ENV-DO-07-019
LA-UR:07-5846

-2-

September 17, 2007

VAG:alb

Enclosures

Cy:

V. Bynum, PADOPS, A102
R. Watkins, ADESH&Q, K491
S. Fong, DOE-LA-AQ, A316
P. Wardwell, LC-ESII, A187
D. Wilburn, ENV-EAQ, J978
D. Janecy, ENV-EAQ, J978
S. Story, ENV-EAQ, J978
M. Stockton, ENV-EAQ, J978
W. Whetham, ENV-EAQ, J978
J. Stanton, SSS-AF-V02, A199
IRM-RM550, A150
ENV-EAQ Title V Emissions Report File
ENV-EAQ Reading File
ENV-DO Reading File

LA-UR-07-5846

Approved for public release;
distribution is unlimited.

Title:	Semi-Annual Emissions Report - Operating Permit Number P100M1 January - June 2007
Author(s):	Walt Whetham
Intended for:	New Mexico Environmental Department



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Form 836 (7/06)

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ENCLOSURE

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**New Mexico Environment Department
Air Quality Bureau
Compliance and Enforcement Section
2048 Gallateo
Santa Fe, NM 87505
Phone (505) 827-1494
Fax (505) 427-1623**



Version 11/22/06

REPORTING SUBMITTAL FORM

NMED USE ONLY

Staff _____

Admin _____

PLEASE NOTE: * Indicates required field

SECTION I - GENERAL COMPANY AND FACILITY INFORMATION					
* Company Name: Los Alamos National Security			* Facility Name: Los Alamos National Laboratory		
* Company Address: P.O. Box 1683 MS J878			* Facility Address: Same as Company		
* City: Los Alamos	* State: NM	* Zip: 87545	* City:	* State:	* Zip:
* Company Environmental Contact: Dianne Wilburn			* Facility Contact: Steve Story		
* Title: EAO Group Leader			* Title: Team Leader - Compliance		
* Phone Number: 505 667 6962		* Fax Number: 505 665 8858	* Phone Number: 505 665 2186		* Fax Number: 505 665 9858
* Email Address: dianne@lanl.gov		* Email Address: story@lanl.gov			
* Responsible Official: (Title V only): Richard S. Watkins		* Title: Associate Director BSH&O		* Phone Number: 505 667 4218	
* Fax Number: 505 665 3611		* Title V Permit Number: P100M1			
* Title V Permit Issue Date: June 15, 2006		* NSR Permit Number: 2185		* NSR Permit Issue Date: Various	
* Date of Submittal: September 17, 2007		* Reporting Period: January 1, 2007 - June 30, 2007		* Proposed Test Date: OR Actual Test Date:	
SECTION II - TYPE OF SUBMITTAL (check one that applies)					
A. ☐	Title V Annual Compliance Certification	Permit Condition(s):	Description:		
B. ☐	Title V Semi-annual Monitoring Report	Permit Condition(s):	Description:		
C. ☐	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:	
		Test Protocol ☐	Test Report ☐	Other ☐	
D. ☐	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:	
		Test Protocol ☐	Test Report ☐	Other ☐	
E. ☐	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:	
		Test Protocol ☐	Test Report ☐	Other ☐	
F. ☒	Permit Requirement	Permit No.: P100M1	Condition(s): 4.1	Description: Type V Semi-Annual Emissions Report	
		Test Protocol ☐	Test Report ☐	Other ☒	
G. ☐	Requirement of a Settlement Agreement or Compliance Order	NOV or SFO No.:	Section(s):	Description:	
		Test Protocol ☐	Test Report ☐	Other ☐	
SECTION III - CERTIFICATION					
After reasonable inquiry, I, <u>Victoria A. George</u> certify that the information in this submittal is true, accurate and complete.					
* Signature of Reporting Official:		* Title: Environmental Protection Division Leader	* Date: 9/12/07	* Responsible Official for Title V?	
				☐ Yes ☒ No	

Reviewed By: _____

Date Reviewed: _____

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ENCLOSURE

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Title V Operating Permit Semi-Annual Emission Report

January 1, 2007 – June 30, 2007

SECTION 1: General Information	
Source Name: <u>Los Alamos National Laboratory</u>	County: <u>Los Alamos</u>
Source Address: City: <u>Los Alamos</u> State: <u>NM</u> Zip Code: <u>87545</u>	
Responsible Official: <u>Victoria A. George</u> Ph No. <u>(505) 665-2711</u> Fax No. <u>(505) 665-8858</u> Technical Contact: <u>Steven L. Story</u> Ph No. <u>(505) 665-2169</u> Fax No. <u>(505) 665-8858</u> Principal Company Product or Business: <u>National Security and Nuclear Weapons Research</u> Primary SIC Code: <u>9711</u>	
Permit No.: <u>P100M1</u> (IDEA/Tempo ID No. 856) Permit Issued Date: <u>June 15, 2006</u>	
SECTION 2: Certification of Truth, Accuracy, and Completeness	
I, <u>Victoria A. George</u> certify that, based on information and belief formed after reasonable inquiry, the statements and information in the attached semi-annual emission report are true, accurate, and complete.	
Signature: 	Date: <u>9/12/07</u>
Title: <u>Division Leader, Environmental Protection Division</u>	

ENCLOSURE

3

**Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007**

This report is being provided to meet the requirement set forth in permit condition 4.1 of the Los Alamos National Laboratory (LANL) Operating Permit Number P100M1. The emissions were calculated using operating data recorded during the first six months of 2007.

Facility Emissions

The following table displays the actual facility-wide emissions compared with the Facility Wide Emission Limits specified in permit condition 2.10.1 of the Operating Permit. These emissions include insignificant sources, which are included to demonstrate that facility-wide emissions are below all PSD applicability threshold limits. Hazardous Air Pollutant (HAP) and Volatile Organic Compound (VOC) emissions from chemical use include point source and fugitive emissions (see permit condition 4.1).

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2007 Annual Emissions (tons)	Facility Wide Emission Limits (Permit Condition 2.10.1) (tons per year)
Nitrogen Oxides (NO _x)	26.8			245
Sulfur Dioxide (SO ₂)	0.6			150
Particulate Matter (PM)	2.7			120
Carbon Monoxide (CO)	18.7			225
Volatile Organic Compounds (VOCs)	7.3			200
Hazardous Air Pollutants (HAPs)	3.6			24 combined
Jan-June Highest Individual HAP (Hydrochloric Acid)	0.5			8 individual

Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007

Source Emissions

The following are the actual emissions from permitted sources listed in permit condition 2.0 of the operating permit for the six month reporting period. Included with these emissions are the source specific emission limits if applicable.

Permit Condition/Source**2.1 Asphalt Production - Asphalt Plant located at TA-60**

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.1.2) (tons per year)
NO _x	0.008			1.0
SO ₂	0.002			1.0
PM	0.003			*35.4 lb/hr
CO	0.135			2.8
VOC	0.003			1.0
HAPs	0.003			No Source Permit Limit

Note: * The Asphalt Plant does not have an annual limit for PM. The hourly emissions were demonstrated during the initial source compliance test conducted on August 25th & 26th, 2005 and submitted to NMED.

Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007

2.2 Beryllium Activities

Source	Pollutant	January - June Emissions (grams)	July - December Emissions (grams)	Annual Emissions (grams)	Permit Limits (Permit Condition 2.2.2)
Beryllium Test Facility TA-3-141 ⁽¹⁾	Beryllium	< 0.0033			3.5 gm/yr
Target Fabrication Facility TA-35-213 ⁽²⁾	Beryllium	< 0.00944			0.36 gm/yr
Plutonium Facility TA-55-PF4 ⁽³⁾ Machining Operation Foundry Operation ⁽⁴⁾					
	Beryllium	< 1.495			2.99 gm/yr
	Aluminum	< 1.495			2.99 gm/yr
	Beryllium	0			8.73 x 10 ⁻⁴ gm/yr
	Aluminum	0			8.73 x 10 ⁻⁴ gm/yr
Beryllium Total ⁽⁵⁾ (tons) =		< 1.66E-06			
Aluminum Total (tons) =		< 1.65E-06			

Notes: ⁽¹⁾ Emission values shown for the Beryllium Technology Facility are from actual stack emission measurements which are submitted to NMED quarterly. ⁽²⁾ Emissions for the Target Fabrication Facility are from initial compliance testing of that source and calculated based on a conservative assumption of 8 hour work days. Log books were checked to verify that work days were much less than 8 hours. ⁽³⁾ Emissions for the Plutonium Facility are calculated based on permitted throughputs. Log books were checked to verify that throughputs were much less than permitted values. ⁽⁴⁾ The Plutonium Facility foundry operations did not operate during the first six months of 2007. ⁽⁵⁾ Other Beryllium activities listed in section 2.2 of the permit do not require reporting in the Semi-Annual Emissions Report.

2.3 Boilers and Heaters

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.3.2) (tons per year)
NOx	15.10			80
SO ₂	0.09			50
PM	1.20			50
PM-10	1.20			50
CO	12.25			80
VOCs	0.84			50
HAPs	0.29			No Source Limit

Note: The emissions shown in this table include significant and insignificant sources. This section does not include the TA-3-22 Power Plant boilers. These can be found under Section 2.8 of this report. The TA-21 steam plant boilers are included in this table.

Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007

2.4 Carpenter Shops

Shop	Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Permit Condition 2.4.2) (tons per year)
TA-3-38	PM ₁₀	0.014			3.07
TA-15-563	PM ₁₀	0.029			2.81

2.5 Chemical Usage

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.5.3.1)
VOCs	5.0			Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	3.0			
Highest Individual HAP for the first six months (Hydrochloric Acid)	0.5			

2.6 Degreasers

Degreaser TA-55-DG-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.6.2.1) (tons per year)
VOCs	0.005			Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	0.005			

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used from January 1 to June 30, 2007. These degreasers are not expected to be used in the near future and are in storage.

Los Alamos National Laboratory
Semi-Annual Emissions Report
 January 1, 2007 through June 30, 2007

2.7 Internal Combustion Sources

Generator TA-33-G-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.7.2) (tons per year)
NO _x	0.000			18.1
SO _x	0.000			2.5
TSP	0.000			0.6
PM ₁₀	0.000			0.6
CO	0.000			15.2
VOC	0.000			0.3
HAPs	0.00E+00			No Source Limit

Note: This generator did not run during the first six months of 2007.

Standby Generators	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NO _x	3.52			No Source Specific Emission Limits for Standby Generators
SO _x	0.10			
TSP	0.14			
PM ₁₀	0.14			
CO	0.83			
VOC	0.14			
HAPs	1.40E-03			

Note: Standby Generators are insignificant sources.

2.8 Data Disintegrator

Emission Unit TA-52-11	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.8.2) (tons per year)
TSP	0.28			9.9
PM ₁₀	0.28			9.9

**Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007**

2.9 Power Plant Boilers at Technical Area 3 (TA-3-22)

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Permit Condition 2.9.2) (tons per year)
NO _x	8.0			60.2
SO ₂	0.4			7.9
TSP	1.1			8.4
PM ₁₀	1.1			8.2
CO	5.5			41.3
VOC	0.7			5.6
HAPs	0.3			No Source Limit



Environmental Protection Division
P.O. Box 1663, MS J978
Los Alamos, New Mexico 87545
(505) 667-2211/FAX: (505) 665-8858

Date: March 21, 2008
Refer to: ENV-DO:08-006

Ms. Debra McElroy
Compliance & Enforcement Section
New Mexico Environment Department
Air Quality Bureau
1301 Siler Rd. Bld. B
Santa Fe, NM 87507

IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)
OPERATING PERMIT NO: P100M2
SEMI-ANNUAL EMISSIONS REPORT – JULY 1, 2007 TO DECEMBER 31, 2007

Dear Ms. McElroy:

Enclosed is Los Alamos National Laboratory's (LANL) semi-annual emissions report for the period July 1, 2007 through December 31, 2007. This report is required by permit condition 4.1 and is submitted within 90 days from the end of the reporting period as required by permit condition 4.3.

The semi-annual emissions report includes actual emissions from permitted sources included in section 2.0 of LANL's Operating Permit. Emissions are also reported from insignificant boiler and generator sources. These sources are included to demonstrate that LANL has not exceeded Prevention of Significant Deterioration (PSD) applicability thresholds. In this report, actual emissions are listed along with the emission limits for ease in comparing and verifying compliance. No annual emission limits were exceeded during this reporting period.

This submittal includes a signed certification statement (Attachment 1) and the semi-annual emissions report for the period July 1, 2007 through December 31, 2007 (Attachment 2).

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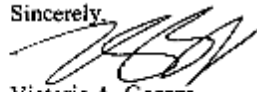
Ms. Debra McElroy
ENV-DO:08-006
LA-UR:08-1528

-2-

March 21, 2008

Should you have any questions or comments regarding the information provided in this report, please contact Steve Story at (505) 665-2169.

Sincerely,



Victoria A. George
Division Leader
Environmental Protection Division

VAG:alb

Cy:

V. Bynum, PADOPS, A102
R. Watkins, ADESH&Q, K491
S. Fong, DOE-LA-AO, A316
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M. Stockton, ENV-EAQ, J978
W. Whetham, ENV-EAQ, J978
J. Stanton, SSS-AF-V02, A199
IRM-RM550, A150
ENV-EAQ Title V Emissions Report File
ENV-EAQ Reading File
ENV-DO Reading File

LA-UR-08-1528

Approved for public release;
distribution is unlimited.

Title:	Semi-Annual Emissions Report - Operating Permit Number P100M2 July - December 2007
Author(s):	Walt Whetham
Intended for:	New Mexico Environmental Department



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Form 836 (7/06)

Attachment 1
Certification Statement

Title V Operating Permit Semi-Annual Emission Report

July 1, 2007 - December 31, 2007

Identifying Information	
Source Name: <u>Los Alamos National Laboratory</u>	County: <u>Los Alamos</u>
Source Address:	
City: <u>Los Alamos</u>	State: <u>NM</u> Zip Code: <u>87565</u>
Responsible Official: <u>Victoria A. George</u> Ph No. <u>(505) 667-2211</u> Fax No. <u>(505) 665-8858</u>	
Technical Contact: <u>Steven L. Story</u> Ph No. <u>(505) 665-2169</u> Fax No. <u>(505) 665-8858</u>	
Principal Company Product or Business: <u>National Security and Nuclear Weapons Research</u> Primary SIC Code: <u>2711</u>	
Permit No. <u>P100M2 (IDEA Template No. 856)</u> Permit Issued Date: <u>July 16, 2007</u>	
Certification of Truth, Accuracy, and Completeness	
I, <u>Victoria A. George</u> , certify that, based on information and belief formed after reasonable inquiry, the statements and information in the attached semi-annual emission report are true, accurate, and complete.	
Signature: 	Date: <u>3/17/08</u>
Title: <u>Division Leader, Environmental Protection Division</u>	

Attachment 2
Semi-Annual Emissions Report
July 1, 2007 to December 31, 2007

Los Alamos National Laboratory 2007 Semi-Annual Emissions Report (July through December)

This report is being provided to meet the requirement set forth in permit condition 4.1 of the Los Alamos National Laboratory (LANL) Operating Permit Number P100M2. The emissions were calculated using operating data recorded during the second six months of 2007. The emissions from the first six months of 2007 were submitted in the previous Semi-Annual Emissions Report, but are included here to calculate annual emissions.

Facility Emissions

The following table displays the actual facility-wide emissions compared with the Facility Wide Emission Limits specified in permit condition 2.10.1 of the Operating Permit. These emissions include insignificant sources, which are included to demonstrate that facility-wide emissions are below all PSD applicability threshold limits. Hazardous Air Pollutant (HAP) and Volatile Organic Compound (VOC) emissions from chemical use include point source and fugitive emissions (see permit condition 4.1).

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2007 Annual Emissions (tons)	Facility Wide Emission Limits (Permit Condition 2.10.1) (tons per year)
Nitrogen Oxides (NO _x)	26.6	25.4	52.0	245
Sulfur Dioxide (SO ₂)	0.6	0.4	1.0	150
Particulate Matter (PM)	2.7	2.2	4.9	120
Carbon Monoxide (CO)	18.7	14.8	33.3	225
Volatile Organic Compounds (VOCs)	7.3	8.1	15.4	200
Hazardous Air Pollutants (HAPs)	3.6	3.2	6.8	24 combined
Highest Individual HAP (Hydrochloric Acid)	0.51	0.54	1.05	8 individual

Los Alamos National Laboratory 2007 Semi-Annual Emissions Report (July through December)

Source Emissions

The following are the actual emissions from permitted sources listed in permit condition 2.0 of the operating permit for the six month reporting period. Included with these emissions are the source specific emission limits if applicable.

Permit Condition/Source

2.1 Asphalt Production

Asphalt Plant TA-60-BDM	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.1.2) (tons per year)
NO _x	0.008	0.013	0.021	1.0
SO ₂	0.002	0.002	0.004	1.0
PM	0.003	0.005	0.008	*35.4 lb/hr
CO	0.135	0.211	0.346	2.6
VOC	0.003	0.004	0.007	1.0
HAPs	0.003	0.004	0.007	No Source Permit Limit

Note: * The Asphalt Plant does not have an annual limit for PM. The hourly emissions were demonstrated during the initial source compliance test conducted on August 25th & 26th, 2005 and submitted to NMED.

Los Alamos National Laboratory
2007 Semi-Annual Emissions Report
(July through December)

2.2 Beryllium Activities

Source	Pollutant	January - June Emissions	July - December Emissions	Annual Emissions	Permit Limits (Condition 2.2.2)
Beryllium Test Facility TA-3-141 ⁽¹⁾	Beryllium (grams)	< 0.0033	< 0.0033	< 0.007	3.5 gm/yr
Target Fabrication Facility TA-35-213 ⁽²⁾	Beryllium (grams)	< 0.00044	< 0.009	< 0.018	0.36 gm/yr
Plutonium Facility TA-55-PF4 ⁽³⁾ Machining Operation	Beryllium (grams)	< 1.495	< 1.41	< 2.91	2.99 gm/yr
	Aluminum (grams)	< 1.495	< 1.41	< 2.91	2.99 gm/yr
Plutonium Facility TA-55-PF4 Foundry Operation ⁽⁴⁾	Beryllium (grams)	0	0	0.00	8.73 x 10 ⁻⁴ gm/yr
	Aluminum (grams)	0	0	0.00	8.73 x 10 ⁻⁴ gm/yr
Beryllium Total ⁽⁵⁾ (tons) =		< 1.66E-06	< 1.57E-06	< 3.23E-06	
Aluminum Total (tons) =		< 1.65E-06	< 1.55E-06	< 3.30E-06	

Notes: ⁽¹⁾ Emission values shown for the Beryllium Technology Facility are from actual stack emission measurements which are submitted to NMED quarterly. ⁽²⁾ Emissions for the Target Fabrication Facility are from initial compliance testing of that source and calculated based on a conservative assumption of 8 hour work days. Log books were checked to verify that work days were much less than 8 hours. ⁽³⁾ Emissions for the Plutonium Facility are calculated based on permitted throughputs. Log books were checked to verify that throughputs were much less than permitted values. ⁽⁴⁾ The Plutonium Facility foundry operations did not operate during 2007. ⁽⁵⁾ Other Beryllium activities listed in section 2.2 of the permit do not require reporting in the Semi-Annual Emissions Report.

**Los Alamos National Laboratory
2007 Semi-Annual Emissions Report
(July through December)**

2.3 Boilers and Heaters

Boilers and Heaters	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.3.2) (tons per year)
NO _x	15.10	10.53	25.63	80
SO ₂	0.09	0.08	0.15	50
PM	1.20	0.84	2.04	50
PM-10	1.20	0.84	2.04	50
CO	12.25	8.53	20.78	80
VOCs	0.84	0.59	1.43	50
HAPs	0.29	0.20	0.49	No Source Limit

Note: The emissions shown in this table include significant and insignificant sources. This section does not include the TA-3-22 Power Plant boilers which can be found under Section 2.9 of this report. The TA-21 steam plant boilers are included in this table.

2.4 Carpenter Shops

Shop	Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.4.2) (tons per year)
TA-3-38	PM ₁₀	0.014	0.008	0.022	3.07
TA-15-563	PM ₁₀	0.029	0.015	0.044	2.81

**Los Alamos National Laboratory
2007 Semi-Annual Emissions Report
(July through December)**

2.5 Chemical Usage

Chemical Usage LANL-FW-CHEM	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.5.3.1)
VOCs	5.83	6.82	12.25	Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	2.97	2.83	5.80	
Highest Individual HAP for the first six months (Hydrochloric Acid)	0.51	0.54	1.05	

2.6 Degreasers

Degreaser TA-55-DG-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.6.2.1) (tons per year)
VOCs	0.005	0.007	0.012	Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	0.005	0.007	0.012	

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used from January 1 to December 31, 2007. These degreasers are not expected to be used in the near future and are in storage.

**Los Alamos National Laboratory
2007 Semi-Annual Emissions Report
(July through December)**

2.7 Internal Combustion Sources

Generator TA-33-G-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.7.2) (tons per year)
NO _x	0.00	0.00	0.0	18.1
SO _x	0.00	0.00	0.0	2.5
TSP	0.00	0.00	0.0	0.6
PM ₁₀	0.00	0.00	0.0	0.6
CO	0.00	0.00	0.0	15.2
VOC	0.00	0.00	0.0	0.3
HAPs	0.00	0.00	0.0	No Source Limit

Note: This generator did not run in 2007.

Stationary Standby Generators	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NO _x	3.52	0.23	12.75	No Source Specific Emission Limits for Standby Generators
SO _x	0.10	0.28	0.36	
TSP	0.14	0.37	0.51	
PM ₁₀	0.14	0.37	0.51	
CO	0.83	2.04	2.87	
VOC	0.14	0.37	0.51	
HAPs	1.40E-03	2.24E-03	3.64E-03	

Note: Standby Generators are insignificant sources.

Los Alamos National Laboratory
2007 Semi-Annual Emissions Report
(July through December)

2.8 Data Disintegrator

Data Disintegrator TA-52-11	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.8.2) (tons per year)
TSP	0.28	0.20	0.48	9.9
PM10	0.26	0.18	0.44	9.9

**Los Alamos National Laboratory
2007 Semi-Annual Emissions Report
(July through December)**

2.9 Power Plant at Technical Area 3 (TA-3-22)

Boilers TA_3-22-1, TA-3-22-2 TA-3-22-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Condition 2.9.2) (tons per year)
NO _x	7.97	5.49	13.46	60.2
SO ₂	0.38	0.07	0.45	7.9
TSP	1.13	0.72	1.85	8.4
PM ₁₀	1.09	0.72	1.81	8.2
CO	5.46	3.78	9.24	41.3
VOC	0.73	0.52	1.25	5.6
HAPs	0.25	0.18	0.43	No Source Limit

Combustion Turbine TA-3-22 CT-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Condition 2.9.2) (tons per year)
NO _x	0.00	0.16	0.16	33.2
SO ₂	0.00	0.01	0.01	1.9
TSP	0.00	0.02	0.02	2.3
PM ₁₀	0.00	0.02	0.02	2.3
CO	0.00	0.03	0.03	19.8
VOC	0.00	0.01	0.01	No TPY Limit
HAPs	0.00	3.34E-03	3.34E-03	No Source Limit

Note: The combustion turbine began operation on September 23, 2007.

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