LA-14309-SR
Status Report

Emissions Inventory Report Summary for Los Alamos National Laboratory for Calendar Year 2005

Los Alamos
NATIONAL LABORATORY
EST. 1943

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Ecology and Air Quality Group (ENV-EAQ)

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by

Ecology and Air Quality Group (ENV-EAQ)

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 Title V Operating Permit (Permit No. P-100) includes emission limits and operating limits for all regulated sources of air pollution at LANL. The Title V Operating Permit also requires semi-annual emissions reporting for all sources included in the permit. This report summarizes both the annual emissions inventory reporting and the semi-annual emissions reporting for LANL for calendar year 2005. LANL's 2005 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 (PM_{10});
        - 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).[1] 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 (NAAQS) 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 2005 emissions inventory reporting, NMED imported existing facility data from the AIRS database into spreadsheets and requested facilities to update the sheets with 2005 facility emissions information.

Additionally, on April 30, 2004, the Laboratory received their Title V Operating Permit (P-100) from the NMED/AQB[2] as required under 20.2.70 NMAC. A condition of the Title V Operating Permit is that LANL must submit semi-annual 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 semi-annual 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 2005 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 2005.

This annual emissions inventory submittal includes air pollutant data for PM, PM_{10}, CO, NO_x, sulfur oxides (SO_x), VOCs, beryllium, hazardous air pollutants (HAPs), and aluminum. Additionally, at the request of NMED, the 2005 report provides data on emissions from $PM_{2.5}$ and ammonia.

The requirement to provide $PM_{2.5}$ and ammonia emissions data stems from recent developments by EPA on a NAAQS for $PM_{2.5}$. States are developing a baseline for $PM_{2.5}$. As such, for the 2005 emissions inventory, NMED requested emissions information on $PM_{2.5}$. 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. Therefore, NMED also requested emissions information on ammonia.

In the 2005 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 PM_{10} 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 semi-annual emissions report includes 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 semi-annual Title V Operating Permit emissions reports.

2.0 REPORTED EMISSION SOURCES

Table 2-1 shows the emission sources included in the Laboratory's 2005 Annual Emissions Inventory[3] and the 2005 Semi-Annual Emissions reports.[4] The source categories and the methodology used to calculate emissions are described in the following sections.

The following subsections describe emission sources included in the 2005 emissions inventory and semi-annual 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 2.13). Attachment A includes worksheets showing detailed emission calculations for individual emissions sources. A copy of the 2005 Emissions Inventory as submitted to NMED is presented in Attachment B. The semi-annual emissions reports are included as Attachment C.

2.1 STEAM PLANTS

The Laboratory operates two steam plants, one located at Technical Area (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 2005 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.

Table 2-1. Sources Included in LANL's 2005 Annual Emissions Inventory and Semi-Annual Emissions Reports

Included in Annual Emissions Inventory	Included in Semi-Annual Emissions Reports	Comment
Steam Plants (TA-3 & TA-21)	Steam Plants (TA-3 & TA-21)	
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	
Degreasers	Degreasers	
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	
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	
Facility-wide Chemical Use	Facility-wide Chemical Use	
Process Generators (not yet operational)	Process Generators, and Stationary standby generators (approximately 45 units)	Stationary standby generators are exempt from annual emissions inventory requirements (see Section 3.2).

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.*[5] 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. The FGR equipment was operational for all of 2005. Figure 2-1 shows a picture of the TA-3 steam plant building and stacks.

Figure 2-1. Main steam plant at LANL TA-3.

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 2005 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 use 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 they are all 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.[5] Copies of spreadsheets showing fuel use and emission factors for each boiler are included in Attachment A.

For the semi-annual 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.[5] Total emissions of each pollutant from all boilers and heaters in this source category were then summed and reported on the semi-annual emissions reports.

2.3 ASPHALT PLANT

The new 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. The 2005 emissions from the asphalt plant include criteria pollutants and HAPs. The largest pollutant emitted from the asphalt plant was CO at 0.324 tons per year.

The new asphalt plant also includes an asphalt emulsion tank and the emissions from this tank were included for the first time in the 2005 Emissions inventory. Emissions from the tank were estimated using software developed by EPA for estimating emissions from storage tanks.[6] The TANKS 4.0 software requires inputs for tank parameters, site-specific meteorological conditions, and actual fuel throughputs. Calculated emissions from the asphalt emulsion tank were 6.1 lbs or 0.003 tons of VOCs in 2005.

2.4 DATA DISINTEGRATOR

The data disintegrator is included in the 2005 Emissions Inventory as Eqpt 89 and operation of this source started in August 2004. Emissions were calculated using the methodology described in the permit application dated June 23, 2003. Emissions of PM, PM_{10}, and $PM_{2.5}$ were 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 emissions inventory reporting. No specific PM size distribution data were available however; the manufacturer reported that dust in the exhaust would be in the size range of 5 to 20 ug. Based on visual observation and engineering judgment, a particle size distribution in the exhaust was estimated as follows:

$PM_{2.5}$ 15%

PM_{10} 90%

Total Suspended Particulates 100%

2.6 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, monthly tracking of solvent levels in the machine

are logged. Using a mass balance approach, emissions are estimated. LANL has two additional halogenated solvent cleaning machines registered with NMED (Eqpt 29 and 30). These units were not operational in 2005. The emissions from the TA-55 degreaser for this reporting period are 22 lbs or 0.01 tons per year. This source category is reported in both the annual emissions inventory and the semi-annual emissions report.

2.8 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 NMAC 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 semi-annual emissions report. Additionally, a carpenter shop located at TA-15 is included in the Operating Permit and began operations in June of 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.

2.9 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.[6] The TANKS 4.0 software requires inputs for tank parameters, site-specific meteorological conditions, and actual fuel throughputs.

The Laboratory included 14 smaller oil storage tanks in the November 2002 updated Title V Operating Permit application because they were subject to *New Source Performance Standards*, 40 CFR 60, Subpart Kb. These tanks store mineral oil, scintillation oil, or dielectric oil, which all have vapor pressures less than 0.01 mmHg. In 2003, EPA modified the applicability of Subpart Kb and these tanks are no longer subject to this regulation. Subsequently, they were not included in the Laboratory's Title V Operating Permit (Permit No. P-100) and, therefore, are not included in the semi-annual emissions reports.

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. 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.[6] 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.

2.10 PERMITTED BERYLLIUM-MACHINING OPERATIONS

The Laboratory operates under four 20.2.72 NMAC construction permits[**] for beryllium-machining operations that are subject to 40 CFR 61, Subpart C, "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. Emissions from the plutonium facility (Act 6 and Eqpt 5) are also 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 semi-annual emissions reports.

2.11 STATIONARY STANDBY GENERATORS

The Laboratory received a Construction Permit in October 2002 to install a process-related generator at TA-33. Due to a series of delays, this generator is not yet operational. The TA-33 generator is included in LANL's Title V Operating Permit. When this generator becomes operational, emissions will be included in both the annual emissions inventory and the semi-annual emissions reports.

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 semi-annual 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 semi-annual 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.[7] Emissions are then summed for each pollutant and reported on the semi-annual emissions reports for this source category.

2.12 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 2-2 shows a typical laboratory at LANL where chemicals are used.

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 semi-annual emissions report. The methods used to quantify emissions of VOC and HAPs from R&D activities are discussed below.

[**] Permit No. 632, issued December 26, 1985; Permit No. 632-M2, issued October 30, 1998; Permit No. 635, issued March 19, 1986; Permit No. 636, issued March 19, 1986; Permit No. 1080-M1-R2, issued March 11, 1998.

Figure 2-2. Example of chemical use in laboratory hood at LANL.

2.12.1 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, 2005, and December 31, 2005. This dataset included 47,564 separate line items of chemicals purchased.

The dataset was reviewed electronically to identify all VOCs purchased and received at LANL in 2005. 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

Purchasing = Use = Emissions.

From the dataset of chemicals purchased in 2005, 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 2005 totaled 11.2 tons.

2.12.2 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. Of the remaining 188 listed HAPs, 17 are classes of compounds (e.g., nickel compounds). Use of the 188 listed chemicals in activities at the Laboratory was evaluated and quantified for the annual emissions inventory submittal to NMED.

The ChemLog inventory system 2005 data set 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 2.12.1 and Table 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;

* This exemption was applied only to biological research solutions. Otherwise, this exemption was not applied. See Table 3-1.

- 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 2005 was 5.5 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

Facility and Waste Operations Division purchased multiple 14-gallon carboys of hydrochloric acid (HCl) totaling approximately 2,565 lb. This HCl was used for heat exchanger scale cleaning and for cleaning of electrodialysis reversal membranes. Emissions from these particular activities were estimated to be less than one pound based on specific process information and engineering calculations. This is also considered a routine maintenance activity and exempt from emissions inventory reporting. 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 0.95 tons of HCl emissions.

2.13 Emissions Summary by Source

Table 2-2 provides a summary of LANL's 2005 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 2-2. Summary of LANL 2005 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	16.23	0.17	2.13	2.13	11.19	1.54	0.53
TA-21 Steam Plant Boilers	1.58	0.01	0.12	0.12	1.33	0.09	0.03
Non-Exempt Boilers	6.69	0.04	0.62	0.62	4.64	0.39	0.13
Asphalt Plant	0.02	0.004	0.008	0.005	0.324	0.007	0.006
Data Disintegrator	NA*	NA	0.29	0.19	NA	NA	NA
Degreaser	NA	NA	NA	NA	NA	0.01	0.01
Carpenter Shops	NA	NA	0.09	0.04	NA	NA	NA
Oil Storage Tanks	NA	NA	NA	NA	NA	0.05	NA
Beryllium-Machining Operations							
R&D Chemical Use	NA	NA	NA	NA	NA	11.2	5.4
TOTAL	24.50	0.17	3.26	3	17.5	13.3	6.1

*Not applicable.

Table 2-3 provides a summary of 2005 emissions as reported on the semi-annual 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 2-3. Summary of LANL 2005 Semi-Annual Emissions as Reported Under Title V Operating Permit Requirements

	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	16.23	0.17	2.13	2.13	11.19	1.54	0.53
TA-21 Steam Plant Boilers	Emissions included in Small Boilers Source Category						
All Small Boilers and Heaters	27.23	0.17	2.18	2.18	21.9	1.52	0.52
Asphalt Plant	0.02	0.004	0.008	0.005	0.324	0.007	0.006
Data Disintegrator	NA*	NA	0.29	0.19	NA	NA	NA
Degreaser	NA	NA	NA	NA	NA	0.01	0.01
Carpenter Shops	NA	NA	0.09	0.04	NA	NA	NA
Oil Storage Tanks[(a)]	NA	NA	NA	NA	NA	0.05	NA
R&D Chemical Use	NA	NA	NA	NA	NA	11.2	5.4
Stationary Standby Generators	6.95	1.55	0.32	0.3	1.66	0.35	0.003
TOTAL	50.4	1.97	5.0	4.82	35.1	14.7	6.5

* NA = Not Applicable
(a) 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,[8] and
- "List of Trivial Activities," January 10, 1996.[9]

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 (5) 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 (1) 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 (1) 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 semi-annual 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 replaces equipment used in normal operation, and which either has an allowable emission rate or potential to emit for each fee pollutant that is equal to or less than the equipment replaced, or which does 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 semi-annual 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 semi-annual emissions reports.

The Laboratory is installing a process-related generator at TA-33 to support research activities. NMED issued a construction permit in October 2002 for installation of this generator (Permit No. 2195-F), and this unit is included in LANL's Title V Operating Permit. However, installation is not yet complete and the generator did not operate in 2005. Therefore, this unit is not included in the 2005 emissions inventory.

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 3-1.

Fuels such as propane, kerosene, and acetylene were analyzed separately and are not listed in Table 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"[8] and "List of Trivial Activities"[9] (refer to Table 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 2005 was gathered from work control databases and the ChemLog chemical inventory system. These records were evaluated for applicability of exemptions for trivial and insignificant activities.

Table 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. *Note: This exemption was applied only to biological research solutions. Otherwise, this exemption was not applied.*

The following exemptions from NMED/AQB Operating Permit Program "List of Trivial Activities"[9] 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 2005 was determined to be 3,545 lb (1.77 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 (2) tons per year.*

All emissions from paints and painting activities were exempt as insignificant or trivial activities and therefore were not included in the 2005 emissions inventory.

4.0 EMISSIONS SUMMARY

4.1 2005 EMISSIONS SUMMARY

Table 4-1 presents facility-wide actual emissions of criteria pollutants for 2005 as reported in the annual emissions inventory and the semi-annual emissions reports. The Title V Operating Permit emissions limits are also included. Table 4-2 presents actual emissions for HAPs from chemical use. Emission unit information and detailed emissions calculations are included in Attachment A. The 2005 Emissions Inventory Report as submitted to NMED is presented in Attachment B. Attachment C includes semi-annual emissions reports for 2005.

Table 4-1. LANL Facility-Wide Criteria Pollutant Emissions for 2005

Pollutant	Actual Emissions for Annual Emissions Reporting (tons/yr)	Actual Emissions for Semi-Annual Title V Operating Permit Reporting (tons/yr)	Title V Operating Permit Facility-Wide Emission Limits (tons/yr)
NO_x	24.5	50.4	245
SO_x	0.2	2.0	150
CO	17.5	35.1	225
PM	3.3	5.0	120
PM_{10}	3.3	5.0	120
$PM_{2.5}$	3.0	4.8	--
VOC	13.3	14.7	200

Table 4-2. LANL HAP Emissions from Chemical Use for 2005

Pollutant	Chemical Use HAP Emissions [(a)] (tons/yr)
Total HAPs	5.4
Top 5 HAPs	
Hydrochloric Acid	0.95
Methanol	0.72
Acetonitrile	0.65
Methylene Chloride	0.56
Trichloroethylene	0.72

(a) 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 shows criteria air pollutant emissions by source for 2005, 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 2005. R&D chemical use was the largest source of VOC emissions.

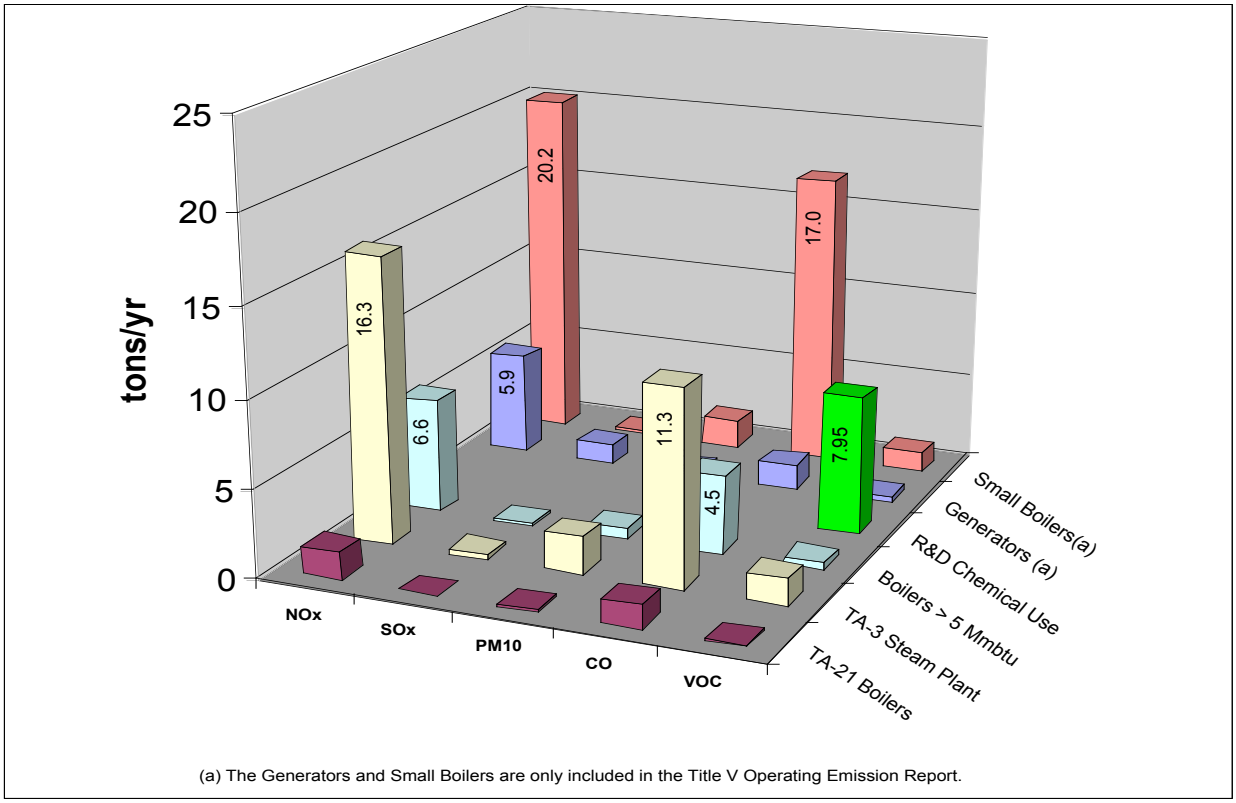

Figure 4-1. Emissions of criteria pollutants by source in 2005.

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 4-2 provides a comparison of the past seven 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.

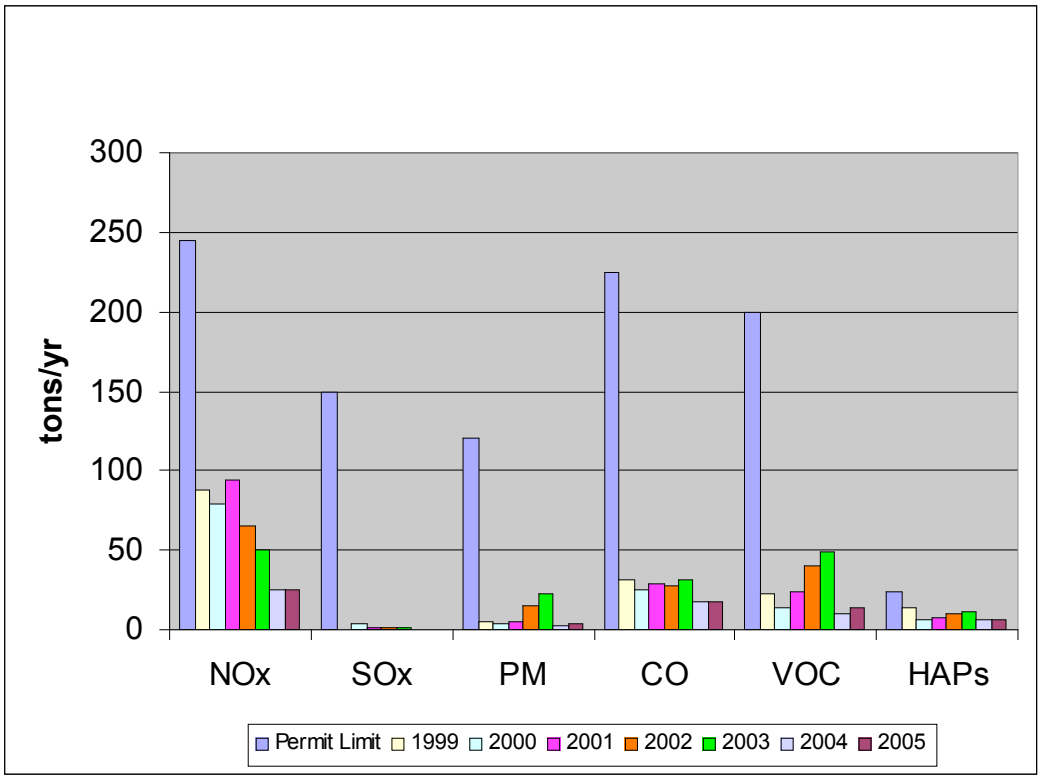

Figure 4-2. Comparison of facility-wide annual reported emissions from 1999–2005.

Figure 4-3 presents VOC and HAP emissions from chemical use activities. 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.

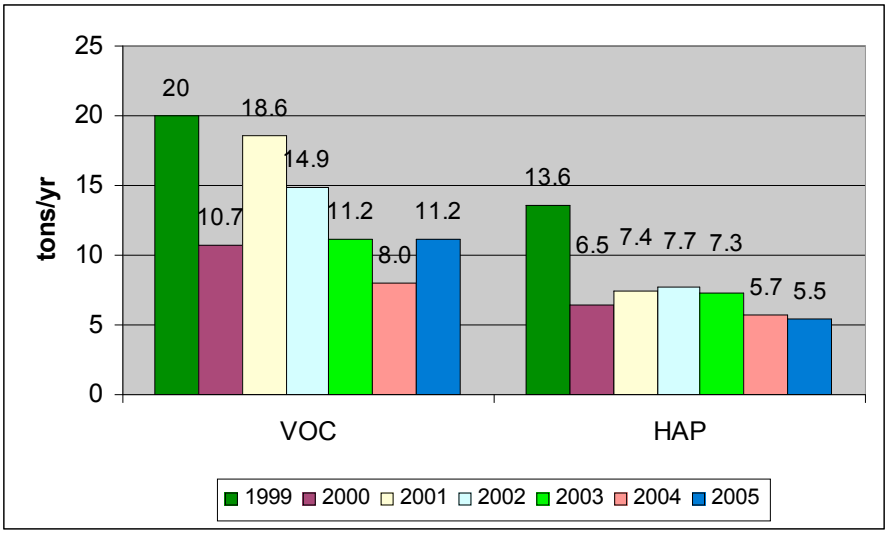

Figure 4-3. VOC and HAP emissions from chemical use, 1999–2005.

REFERENCES

1. U.S. Environmental Protection Agency, Aerometric Information Retrieval System (AIRS), http://www.epa.gov/ttn/chief.

2. Los Alamos National Laboratory, Clean Air Act, Title V Operating Permit No. P-100, issued by the New Mexico Environment Department, Air Quality Bureau to the University of California, operator of Los Alamos National Laboratory, April 30, 2004.

3. Los Alamos National Laboratory, "2005 Annual Emissions Inventory Report Submittal to the New Mexico Environment Department," LA-UR-06-2741, April 2006.

4. Los Alamos National Laboratory, "Semi-Annual Emissions Report, January–June 2005," submitted to the New Mexico Environment Department, September 2005, LA-UR-05-7072, and "Semi-Annual Emissions Report, July–December 2005," submitted to the New Mexico Environment Department, March 2006, LA-UR-06-078.

5. U.S. Environmental Protection Agency, "Compilation of Air Pollutant Emission Factors," AP-42, Fifth Edition, Section 1.4–Natural Gas Combustion, July 1998, and Section 1.3–Fuel Oil Combustion, September 1998.

6. U.S. Environmental Protection Agency, TANKS Emission Estimation Software, http://www.epa.gov/ttn/chief/software/TANKS.

7. U.S. Environmental Protection Agency, "Compilation of Air Pollutant Emission Factors," AP-42, Fifth Edition, Section 3.3–Gasoline and Diesel Industrial Engines, October 1996, and Section 3.4–Large Stationary Diesel and All Stationary Dual Fired Engines, October 1996.

8. New Mexico Environment Department, Air Quality Bureau, "List of Insignificant Activities under Title V Operating Permits," March 24, 2005.

9. New Mexico Environment Department, Air Quality Bureau, "List of Trivial Activities under Title V Operating Permits," January 10, 1996.

ATTACHMENT A.
EMISSION CALCULATION WORKSHEETS
FOR INDIVIDUAL EMISSION UNITS

2005 TA-60 BDM Asphalt Plant

Data Reviewed By / Date: _____

Month	Data Entry Asphalt Produced (Tons)	12-Month Rolling Total	Month	Data Entry Asphalt Produced (Tons)	12-Month Rolling Total
January	0	0	July	219	219
February	0	0	August	359	578
March	0	0	September	572	1150
April	0	0	October	156	1306
May	0	0	November	196	1502
June			December	119	1621
6 mo. Total	0		6 mo. Total:	1,621	

Tons/Asphalt Produced (2005): 1,621

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	0.020	0.000	0.020	(a)
SOx	0.0046	0.004	0.000	0.004	(a)
PM	0.0096	0.008	0.000	0.008	(b)
PM-10	0.006	0.005	0.000	0.005	(c)
PM-2.5	0.006	0.005	0.000	0.005	(c)
CO	0.4	0.324	0.000	0.324	(a)
VOC	0.0082	0.007	0.000	0.007	(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	0.000	0.002	(d)
Formaldehyde	0.00074	0.001	0.000	0.001	(d)
Napthalene	0.000036	0.0000	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	0.000	0.002	(d)
TOTAL HAPS		0.006	0.000	0.006	
EPCRA 313			lbs./year		
Lead	8.90E-07	7.21E-07	0.0014		(e)
Sulfuric Acid	0.0046	3.73E-03	7.46		(f)
Mercury	4.10E-07	3.32E-07	0.0007		(e)
PACs	2.70E-08	2.19E-08	4.38E-05		(d)
Benzo(g,h,i) perylene	5.00E-10	4.05E-10	8.11E-07		(g)

Reference
(a) AP-42, Sec. 11.1, *Hot Mix 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, *Hot Mix Asphalt Plants,* Updated 4/2004
(e) AP-42, Table 11.1-11, *Hot Mix 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

2005 TA-3 & TA-15 Carpenter Shops

TA-3	Data Entry
	Hours of Operation[1]
Month	TA-3
January	7.5
February	20.5
March	20.4
April	14.5
May	12.3
June	8.6
6 mo. Total	83.80

TA-3	Data Entry
	Hours of Operation[1]
Month	TA-3
July	7.5
August	6
September	7.25
October	6.2
November	9.3
December	15
6 mo. Total:	51.25

TA-15	Data Entry
	Hours of Operation[1]
Month	TA-15
January	0.0
February	0.0
March	0.0
April	0.0
May	0.0
June	35.4
6 mo. Total	35.4

TA-15	Data Entry
	Hours of Operation[1]
Month	TA-15
July	17.2
August	21.8
September	41.7
October	26.8
November	16.3
December	5.4
6 mo. Total:	129.2

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.

Reviewed By/Date: _____

Carpenter Shop Emissions Calculations for 2005

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 > 40µm)	(PM 10) (PM 5-20 µm)	(PM 2.5) (PM <2.5 µm)
TA-3-38	2706	135	0.129	0.047	0.003	0.023	0.021
TA-15-563	2100	165	0.122	0.044	0.003	0.021	0.020

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 > 40µm)	(PM 10) (PM 5-20 µm)	(PM 2.5) (PM <2.5 µm)
TA-3-38	2706	84	0.080	0.029	0.002	0.014	0.013
TA-15-563	2100	35	0.026	0.010	0.001	0.005	0.004

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 > 40µm)	(PM 10) (PM 5-20 µm)	(PM 2.5) (PM <2.5 µm)
TA-3-38	2706	51	0.049	0.018	0.001	0.009	0.008
TA-15-563	2100	129	0.096	0.035	0.002	0.017	0.016

Conversions:

lb/ton	lb/grain	min/hr	ton/lb
2000	0.000142857	60	0.0005

Assumptions:

	Cyclone[4] Efficiencies	% PM by size in Wood[5] Dust Prior to Cyclone
PM < 2.5	0.45	0.30
PM 5-20 microns	0.65	0.50
PM > 40 microns	0.95	0.50

Post Cyclone Emission Factor:

grain/ft^3 [2]
0.03

	Shop Location	Flow Rate
Maximum permitted exhaust flow rate is:	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

References:

1.) Exhaust Rate calculated by Victor Martinez.

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 (EIIP) 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 Cyclone.

Reviewed By/Date: _____

2005 TA-52 Data Disintegrator

Reviewed By / Date: _____

	Data Entry			Data Entry	
Month	Boxes[c] Shredded	12-Month Rolling Total	**Month**	Boxes[c] Shredded	12-Month Rolling Total
January	665	3031	**July**	758	7884
February	768	3799	**August**	585	8411
March	1065	4864	**September**	0	7508
April	844	5708	**October**	0	6791
May	768	6476	**November**	320	6660
June	650	7126	**December**	1216	7639
6 mo. Total	4,760		**6 mo. Total:**	2,879	

Annual Boxes (2005):	**7,639**

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[a]
45 Pounds

	Amount Processed (pounds)	**PM-2.5 Emissions (pounds)**	**PM-2.5 Emissions (tons)**	**PM-10 Emissions (pounds)**	**PM-10 Emissions (tons)**	**TSP Emissions (pounds)**	**TSP Emissions (tons)**
Annual	343,766	386.7	0.19	580.1	0.29	644.6	0.32
January - June	214,211	241.0	0.12	361.5	0.18	401.6	0.20
July - December	129,555	145.7	0.07	218.6	0.11	242.9	0.12

Reference				
(a). Estimated maximum box weight is 45 pounds. Information provided by shredding operations. Full box weight of tightly packed paper.	**(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 listed in the construction permit application. (see cyclone efficiency tab for more info.)	**(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 is: **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.

2005 Small Boilers Data Entry / Gas Use

		Metered Boilers						
		TA-55 Boiler Gas Use (MSCF)[c]		TA-50-2[d] (MSCF)	Total Gas Use[a]		Non-Metered Gas Use	12-Month Rolling Total for all Small Boilers (MMSCF)[e]
	Month	BHW-1B (B-602)	BHW-2B (B-603)	BS-1	(MSCF)	(MMSCF)	(MMSCF)	
Data Entry	January	82	2798		75,388	75.39	72.51	539.37
	February	1360	925		68,552	68.55	66.26	534.54
	March	14	2969		65,683	65.68	62.70	545.28
	April	17	2746		48,462	48.46	45.70	544.79
	May	6	2178		30,265	30.27	28.08	547.61
	June	5	1928	17.9	15,693	15.69	13.76	547.14
	July	5	1650		15,299	15.30	13.64	548.68
	August	748	763		14,123	14.12	12.61	549.06
	September	546	756		16,233	16.23	14.93	548.08
	October	1386	448		40,575	40.58	38.74	543.60
	November	1546	1166		54,967	54.97	52.26	527.22
	December	1968	1110	0	73,605	73.61	70.53	518.85
	TOTAL	7683	19437	17.9	518,845	518.85	491.71	Permit Limit = 870

2005 Non Metered Boiler Pool Capacity:	**242.1**	MMBTU/hr[f]
Estimated Gas-Use per MMBtu rating Jan-June:	1.19	MMscf/MMBtu/hr
Estimated Gas-Use per MMBtu rating July-Dec:	0.84	MMscf/MMBtu/hr
Estimated Gas-Use per MMBtu - Annual	2.03	MMscf/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] (MMBTU/hr)	**5.336**	**5.335**	**7.140**	**7.115**	**7.115**	**5.335**	**5.335**	**12.700**	**187**
Calculated Gas Use-Jan-June	6.370	6.369	8.523	8.493	8.493	6.369	6.369	15.160	222.852
Calculated Gas Use-July-Dec	4.468	4.467	5.978	5.957	5.957	4.467	4.467	10.634	156.314
Calculated Gas Use-Annual	10.838	10.836	14.501	14.450	14.450	10.836	10.836	25.794	379.166

Reviewed by:_____

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		
Mangenese	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

Reviewed by:_____

2005 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	25.646	15.011	10.635
SOx	0.156	0.091	0.064
PM	2.061	1.205	0.856
PM-10	2.061	1.205	0.856
PM-2.5	2.061	1.205	0.856
CO	20.565	12.070	8.495
VOC	1.433	0.840	0.594
HAPs			
Arsenic	5.19E-05	3.04E-05	2.15E-05
Benzene	5.45E-04	3.19E-04	2.26E-04
BE	3.11E-06	1.82E-06	1.29E-06
Cadmium	2.85E-04	1.67E-04	1.18E-04
Chromium	3.63E-04	2.13E-04	1.50E-04
Cobalt	2.18E-05	1.28E-05	9.02E-06
Dichlorobenzene	3.11E-04	1.82E-04	1.29E-04
Formaldehyde	1.95E-02	1.14E-02	8.06E-03
Hexane	4.67E-01	2.74E-01	1.93E-01
Lead	1.30E-04	7.60E-05	5.37E-05
Mangenese	9.86E-05	5.78E-05	4.08E-05
Mercury	6.74E-05	3.95E-05	2.79E-05
Napthalene	1.58E-04	9.27E-05	6.55E-05
Nickel	5.45E-04	3.19E-04	2.26E-04
POM	2.28E-05	1.34E-05	9.45E-06
Selenium	6.23E-06	3.65E-06	2.58E-06
Toluene	8.82E-04	5.17E-04	3.65E-04
TOTAL HAPS	0.490	0.287	0.203

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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 individiually metered. Total Gas use does not include TA-3 Power Plant and TA-21 Steam Plant. All other sources are included in this total.
(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 of these boilers will be requested in the next operating permit revision.
(c) 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-RLWTF boiler was added to EI 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 several more years. Therefore, decision was made to include in LANL's annual EI. Fuel use has not been tracked monthly. For 2005, the total gas use for each 6 month reporting period was taken and used to calculate emissions.
(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 MMscf/yr, 12-month rolling average is a permit limit in Section 2.4 of the LANL operating permit.
(f) The non-metered boiler pool capacity is the sum of all active non-metered boilers design ratings in MMBTU. In 2004, the TA-16 boilers were added to the boiler pool. This increased the boiler pool from 249.4 to 262.1 MMBtu/Hr. This number is used to estimate the gas use rate (total non-metered gas use divided by the non-metered boiler pool capacity number).
(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 mutiplied by the gas use rate to provide the estimated gas used per reporting period (in MMSCF).
(h) NMED List of Insignificant Activities (9/95), Item (3.) exempts 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 personal use.
(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 (derated) for each 1,000 feet above sea level (4% x 7.5 = 30%). For forced draft and power burner boilers, the reduction is half that of atmospheric at 15%. The correction is made using the boiler plate input rating minus the appropriate percentage.

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2005 Small Boilers Emissions by Boiler for Annual EI Reporting (Tons/Year)

Pollutant / Criteria	AIRS 015 TA-48-1 BS-1	AIRS 016 TA-48-1 BS-2	AIRS 017 TA-48-1 BS-6	AIRS 018 TA-53-365 BHW-1	AIRS 019 TA-53-365 BHW-2	AIRS 020 TA-59-1 BHW-1	AIRS 021 TA-59-1 BHW-2	AIRS 024 TA-16 Plant 5	AIRS 037 TA-55-6 BHW-1B	AIRS 038 TA-55-6 BHW-2B	AIRS New TA-50-2 BS-1	Total for Small Boilers
NOx	0.542	0.542	0.725	0.722	0.722	0.542	0.542	0.478	0.530	1.341	0.001	6.688
SOx	0.003	0.003	0.004	0.004	0.004	0.003	0.003	0.008	0.002	0.006	0.000	0.042
PM	0.041	0.041	0.055	0.055	0.055	0.041	0.041	0.098	0.055	0.138	0.000	0.620
PM-10	0.041	0.041	0.055	0.055	0.055	0.041	0.041	0.098	0.055	0.138	0.000	0.620
PM-2.5	0.041	0.041	0.055	0.055	0.055	0.041	0.041	0.098	0.055	0.138	0.000	0.620
CO	0.455	0.455	0.609	0.607	0.607	0.455	0.455	0.478	0.147	0.371	0.001	4.640
VOC	0.030	0.030	0.040	0.040	0.040	0.030	0.030	0.071	0.023	0.058	0.000	0.391
HAPs												
Arsenic	1.08E-06	1.08E-06	1.45E-06	1.44E-06	1.44E-06	1.08E-06	1.08E-06	2.58E-06	7.68E-07	1.94E-06	1.79E-09	1.40E-05
Benzene	1.14E-05	1.14E-05	1.52E-05	1.52E-05	1.52E-05	1.14E-05	1.14E-05	2.71E-05	8.07E-06	2.04E-05	1.88E-08	1.47E-04
BE	6.50E-08	6.50E-08	8.70E-08	8.67E-08	8.67E-08	6.50E-08	6.50E-08	1.55E-07	4.61E-08	1.17E-07	1.08E-10	8.38E-07
Cadmium	5.96E-06	5.96E-06	7.98E-06	7.95E-06	7.95E-06	5.96E-06	5.96E-06	1.42E-05	4.23E-06	1.07E-05	9.86E-09	7.68E-05
Chromium	7.59E-06	7.59E-06	1.02E-05	1.01E-05	1.01E-05	7.59E-06	7.59E-06	1.81E-05	5.38E-06	1.36E-05	1.26E-08	9.78E-05
Cobalt	4.55E-07	4.55E-07	6.09E-07	6.07E-07	6.07E-07	4.55E-07	4.55E-07	1.08E-06	3.23E-07	8.16E-07	7.53E-10	5.87E-06
Dichlorobenzene	6.50E-06	6.50E-06	8.70E-06	8.67E-06	8.67E-06	6.50E-06	6.50E-06	1.55E-05	4.61E-06	1.17E-05	1.08E-08	8.38E-05
Formaldehyde	4.06E-04	4.06E-04	5.44E-04	5.42E-04	5.42E-04	4.06E-04	4.06E-04	9.67E-04	2.88E-04	7.29E-04	6.72E-07	5.24E-03
Hexane	9.75E-03	9.75E-03	1.31E-02	1.30E-02	1.30E-02	9.75E-03	9.75E-03	2.32E-02	6.91E-03	1.75E-02	1.61E-05	1.26E-01
Lead	2.71E-06	2.71E-06	3.63E-06	3.61E-06	3.61E-06	2.71E-06	2.71E-06	6.45E-06	1.92E-06	4.86E-06	4.48E-09	3.49E-05
Mangenese	2.06E-06	2.06E-06	2.76E-06	2.75E-06	2.75E-06	2.06E-06	2.06E-06	4.90E-06	1.46E-06	3.69E-06	3.41E-09	2.65E-05
Mercury	1.41E-06	1.41E-06	1.89E-06	1.88E-06	1.88E-06	1.41E-06	1.41E-06	3.35E-06	9.99E-07	2.53E-06	2.33E-09	1.82E-05
Napthalene	3.31E-06	3.31E-06	4.42E-06	4.41E-06	4.41E-06	3.31E-06	3.31E-06	7.87E-06	2.34E-06	5.93E-06	5.47E-09	4.26E-05
Nickel	1.14E-05	1.14E-05	1.52E-05	1.52E-05	1.52E-05	1.14E-05	1.14E-05	2.71E-05	8.07E-06	2.04E-05	1.88E-08	1.47E-04
POM	4.77E-07	4.77E-07	6.38E-07	6.36E-07	6.36E-07	4.77E-07	4.77E-07	1.13E-06	3.38E-07	8.55E-07	7.89E-10	6.15E-06
Selenium	1.30E-07	1.30E-07	1.74E-07	1.73E-07	1.73E-07	1.30E-07	1.30E-07	3.10E-07	9.22E-08	2.33E-07	2.15E-10	1.68E-06
Toluene	1.84E-05	1.84E-05	2.47E-05	2.46E-05	2.46E-05	1.84E-05	1.84E-05	4.38E-05	1.31E-05	3.30E-05	3.05E-08	2.37E-04
TOTAL HAPS/Unit	1.02E-02	1.02E-02	1.37E-02	1.36E-02	1.36E-02	1.02E-02	1.02E-02	2.44E-02	7.25E-03	1.84E-02	1.69E-05	0.13

Reviewed by:_____

EPCRA 313

Chemical	Amount in Fuel[a]		Emissions from all Small Boilers[b]	
	Conc.	Pounds	Emission Factor (lbs/MMscf)	Emissions (lbs)
Lead[c]			5.0E-04	0.27
Sulfuric Acid[d]			0.6	327.59
Mercury[c]			2.6E-04	0.14
PACs[e]			8.69E-07	4.74E-04
Benzo(g,h,i) perylene[c]			1.20E-06	6.55E-04

(a) Amount of EPCRA chemical in fuel is considered "otherwise used" for EPCRA 313 threshold determination

(b) Combustion compounds emitted are considered "manufactured" for EPCRA 313 threshold deteminations. Lead and 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

Reviewed by:_____

TA-3 Power Plant Fuel Use Totals 2005 (Data Entry)

	DATA ENTRY							
	TA-3-22 Steam Plant[b] Boiler # 1 (Edgemoor Iron Works, 210 MMBTU/hr)		TA-3-22 Steam Plant[b] Boiler # 2 (Edgemoor Iron Works, 210 MMBTU/hr)		TA-3-22 Steam Plant[b] Boiler # 3 (Union Iron Works, 210 MMBTU/hr)		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]	Natural Gas (MMCF)[a]	Fuel Oil (gallons)[a]
January	6,231	706	0	0	60,123	119	66.354	825
February	3,136	0	598	0	53,192	122	56.926	122
March	4,944	35	29	0	54,579	0	59.552	35
April	192	446	38,481	598	9,028	0	47.701	1044
May	18,337	512	23,362	384	64	0	41.763	896
June	30,209	0	28	0	450	656	30.687	656
July	10,589	0	14,754	0	4,281	0	29.624	0
August	0	0	18,092	577	9,733	0	27.825	577
September	212	0	4,216	0	23,471	0	27.899	0
October	32,932	219	0	0	9,280	767	42.212	986
November	35,968	0	15,589	0	1,975	0	53.532	0
December	18,847	0	23,023	0	33,701	87	75.571	87
Annual Totals:	161,597	1,918	138,172	1,559	259,877	1,751	559.646	5228
Jan. - June	63,049	1,699	62,498	982	177,436	897	302.983	3578
July - Dec.	98,548	219	75,674	577	82,441	854	256.663	1650

Month	12-Mo. Rolling Total Natural Gas (MMscf)	12-Mo. Rolling Total Fuel Oil (gallons)
January	554.1	27489
February	546.0	26673
March	551.0	23311
April	553.4	20777
May	557.3	21673
June	558.4	22329
July	559.9	11810
August	558.6	7771
September	558.7	7671
October	556.6	7718
November	553.3	5195
December	559.6	5228

	Totals by Fuel Type	
	Natural Gas (MMscf)	Fuel Oil (Gallons)
Annual Totals:	559.65	5228.00
Jan. - June	302.98	3578.00
July - Dec.	256.66	1650.00

For References, See "Emission Summary Sheet"

Data Reviewed By: _____

Permit Limits:	2000 MMscf	500,000 gallons

The limit for Natural Gas is from NSR Permit # 2195BM2. **The limit for Fuel Oil is from the Title-V Operating Permit.**

Emissions by Boiler 2005

Pollutant Criteria	Emission Factor		Unit Emissions				Unit Emissions				Unit Emissions			
			Boiler #1, Stack 032				Boiler #2, Stack 033				Boiler #3, Stack 034			
	Natural Gas (lb/MMscf)[a]	Fuel Oil[f] Pounds/ 1000 gal	Annual Natl Gas (tons)	Annual Fuel Oil (tons)	Jan-June (gas&oil) (tons)	July-Dec (gas&oil) (tons)	Annual Natl Gas (tons)	Annual Fuel Oil (tons)	Jan-June (gas&oil) (tons)	July-Dec (gas&oil) (tons)	Annual Natl Gas (tons)	Annual Fuel Oil (tons)	Jan-June (gas&oil) (tons)	July-Dec (gas&oil) (tons)
Nox[c]	58	8.64	4.686	0.008	1.836	2.859	4.007	0.007	1.817	2.197	7.536	0.008	5.150	2.394
Sox[g]	0.6	7.4	0.048	0.007	0.025	0.030	0.041	0.006	0.022	0.025	0.078	0.006	0.057	0.028
PM[d]	7.6	3.3	0.614	0.003	0.242	0.375	0.525	0.003	0.239	0.289	0.988	0.003	0.676	0.315
PM-10[d]	7.6	2.3	0.614	0.002	0.242	0.375	0.525	0.002	0.239	0.288	0.988	0.002	0.675	0.314
PM-2.5[d]	7.6	1.55	0.614	0.001	0.241	0.375	0.525	0.001	0.238	0.288	0.988	0.001	0.675	0.314
CO[e]	40	5.0	3.232	0.005	1.265	1.972	2.763	0.004	1.252	1.515	5.198	0.004	3.551	1.651
VOC	5.5	0.2	0.444	0.0002	0.174	0.271	0.380	0.0002	0.172	0.208	0.715	0.000	0.488	0.227
HAPs[h]														
Arsenic	0.0002	0.00055	1.62E-05	5.26E-07	6.77E-06	9.91E-06	1.38E-05	4.27E-07	6.52E-06	7.73E-06	2.60E-05	4.80E-07	1.80E-05	8.48E-06
Benzene	0.0021	-	1.70E-04	0.0	6.62E-05	1.03E-04	1.45E-04	0.0	6.56E-05	7.95E-05	2.73E-04	0.0	1.86E-04	8.66E-05
Beryllium	0.000012	0.00041	9.70E-07	3.94E-07	7.27E-07	6.36E-07	8.29E-07	3.20E-07	5.77E-07	5.73E-07	1.56E-06	3.60E-07	1.25E-06	6.70E-07
Cadmium	0.0011	0.00041	8.89E-05	3.94E-07	3.50E-05	5.42E-05	7.60E-05	3.20E-07	3.46E-05	4.17E-05	1.43E-04	3.60E-07	9.78E-05	4.55E-05
Chromium	0.0014	0.00041	1.13E-04	3.94E-07	4.45E-05	6.90E-05	9.67E-05	3.20E-07	4.40E-05	5.31E-05	1.82E-04	3.60E-07	1.24E-04	5.79E-05
Cobalt	0.000084	-	6.79E-06	0.0	2.65E-06	4.14E-06	5.80E-06	0.0	2.62E-06	3.18E-06	1.09E-05	0.0	7.45E-06	3.46E-06
Dichlorobenzene	0.0012	-	9.70E-05	0.0	3.78E-05	5.91E-05	8.29E-05	0.0	3.75E-05	4.54E-05	1.56E-04	0.0	1.06E-04	4.95E-05
Formaldehyde	0.075	0.048	6.06E-03	4.60E-05	2.41E-03	3.70E-03	5.18E-03	3.74E-05	2.37E-03	2.85E-03	9.75E-03	4.20E-05	6.68E-03	3.11E-03
Hexane	1.8	-	1.45E-01	0.0	5.67E-02	8.87E-02	1.24E-01	0.0	5.62E-02	6.81E-02	2.34E-01	0.0	1.60E-01	7.42E-02
Lead	0.0005	0.00123	4.04E-05	1.18E-06	1.68E-05	2.48E-05	3.45E-05	9.61E-07	1.62E-05	1.93E-05	6.50E-05	1.08E-06	4.49E-05	2.11E-05
Mangenese	0.00038	0.00082	3.07E-05	7.88E-07	1.27E-05	1.88E-05	2.63E-05	6.41E-07	1.23E-05	1.46E-05	4.94E-05	7.20E-07	3.41E-05	1.60E-05
Mercury[i]	0.00026	0.00041	2.10E-05	3.94E-07	8.55E-06	1.29E-05	1.80E-05	3.20E-07	8.33E-06	9.96E-06	3.38E-05	3.60E-07	2.33E-05	1.09E-05
Napthalene	0.00061	-	4.93E-05	0.0	1.92E-05	3.01E-05	4.21E-05	0.0	1.91E-05	2.31E-05	7.93E-05	0.0	5.41E-05	2.51E-05
Nickel	0.0021	0.00041	1.70E-04	3.94E-07	6.66E-05	1.04E-04	1.45E-04	3.20E-07	6.58E-05	7.96E-05	2.73E-04	3.60E-07	1.86E-04	8.67E-05
POM	0.000088	0.0033	7.11E-06	3.16E-06	5.58E-06	4.70E-06	6.08E-06	2.57E-06	4.37E-06	4.28E-06	1.14E-05	2.89E-06	9.29E-06	5.04E-06
Selenium	0.000024	0.00206	1.94E-06	1.97E-06	2.50E-06	1.41E-06	1.66E-06	1.60E-06	1.76E-06	1.50E-06	3.12E-06	1.80E-06	3.05E-06	1.87E-06
Toluene	0.0034	-	2.75E-04	0.0	1.07E-04	1.68E-04	2.35E-04	0.0	1.06E-04	1.29E-04	4.42E-04	0.0	3.02E-04	1.40E-04
TOTAL HAPS			1.53E-01	5.56E-05	5.96E-02	9.31E-02	1.30E-01	4.52E-05	5.90E-02	7.15E-02	2.45E-01	5.08E-05	1.68E-01	7.79E-02

For References, see Emission Summary.

Data Reviewed By: _____

12 Month Rolling Emissions 2005 (Tons)

Pollutant	TSP	PM10	NOx	CO	VOC	SO_2
Permit Limit (tons/yr) 12-Month Rolling Average	**15.7**	**15.7**	**99.6**	**81.3**	**11.1**	**36.9**
January	2.151	2.137	16.189	11.152	1.527	0.268
February	2.119	2.106	15.950	10.987	1.504	0.262
March	2.132	2.121	16.080	11.079	1.518	0.251
April	2.137	2.127	16.139	11.120	1.524	0.243
May	2.153	2.143	16.255	11.200	1.535	0.247
June	2.159	2.148	16.291	11.224	1.538	0.250
July	2.147	2.141	16.289	11.228	1.541	0.212
August	2.136	2.132	16.233	11.192	1.537	0.196
September	2.136	2.132	16.235	11.193	1.537	0.196
October	2.128	2.124	16.176	11.152	1.532	0.196
November	2.111	2.109	16.070	11.080	1.522	0.185
December	2.135	2.133	16.252	11.206	1.540	0.187

Monthly Emission Totals (Tons)

Pollutant	TSP	PM10	NOx	CO	VOC	SO_2
January	0.254	0.253	1.928	1.329	0.183	0.023
February	0.217	0.216	1.651	1.139	0.157	0.018
March	0.226	0.226	1.727	1.191	0.164	0.018
April	0.183	0.182	1.388	0.957	0.131	0.018
May	0.160	0.160	1.215	0.838	0.115	0.016
June	0.118	0.117	0.893	0.615	0.084	0.012
July	0.113	0.113	0.859	0.592	0.081	0.009
August	0.107	0.106	0.809	0.558	0.077	0.010
September	0.106	0.106	0.809	0.558	0.077	0.008
October	0.162	0.162	1.228	0.847	0.116	0.016
November	0.203	0.203	1.552	1.071	0.147	0.016
December	0.287	0.287	2.192	1.512	0.208	0.023
Annual Totals	2.135	2.133	16.252	11.206	1.540	0.187

Data Reviewed By: _____

Emission Summary TA-3 Power Plant 2005

Pollutant Criteria	Emission Factor Natural Gas (lb/MMscf)[a]	Emission Factor Fuel Oil[f] (lb/1000 gal.)	Annual Emissions (Natural Gas + Fuel Oil) (tons)	Jan-June Emissions (Natural Gas + Fuel Oil) (tons)	July-Dec Emissions (Natural Gas + Fuel Oil) (tons)	Reference Gas	Reference Oil
NOx	58	8.64	16.230	8.802	7.450	(c)	(c)
SOx	0.6	7.39	0.168	0.104	0.083	(a)(j)	(g)(j)
PM	7.6	3.3	2.127	1.157	0.978	(d)	(d)
PM-10	7.6	2.3	2.127	1.155	0.977	(d)	(d)
PM-2.5	7.6	1.55	2.127	1.154	0.977	(d)	(d)
CO	40	5.0	11.193	6.069	5.137	(b)	(g)
VOC	5.5	0.2	1.539	0.834	0.706	(b)	(i)
HAPs[h]							
Arsenic	0.0002	0.00055	5.60E-05	3.13E-05	2.61E-05	(a)	(k)
Benzene	0.0021	-	5.88E-04	3.18E-04	2.69E-04	(c)	
Beryllium	0.000012	0.00041	3.36E-06	2.55E-06	1.88E-06	(c)	(k)
Cadmium	0.0011	0.00041	3.08E-04	1.67E-04	1.42E-04	(c)	(k)
Chromium	0.0014	0.00041	3.92E-04	2.13E-04	1.80E-04	(c)	(k)
Cobalt	0.000084	-	2.35E-05	1.27E-05	1.08E-05	(c)	
Dichlorobenzene	0.0012	-	3.36E-04	1.82E-04	1.54E-04	(c)	
Formaldehyde	0.075	0.048	2.10E-02	1.14E-02	9.66E-03	(c)	(k)
Hexane	1.8	-	5.04E-01	2.73E-01	2.31E-01	(c)	
Lead	0.0005	0.001233	1.40E-04	7.80E-05	6.52E-05	(c)	(k)
Mangenese	0.00038	0.000822	1.06E-04	5.90E-05	4.94E-05	(c)	(k)
Mercury	0.00026	0.000411	7.28E-05	4.01E-05	3.37E-05	(i)(c)	(i)(k)
Napthalene	0.00061	-	1.71E-04	9.24E-05	7.83E-05	(c)	
Nickel	0.0021	0.000411	5.88E-04	3.19E-04	2.70E-04	(c)	(k)
POM	0.000088	0.0033	2.46E-05	1.92E-05	1.40E-05	(c)	(k)
Selenium	0.000024	0.002055	6.72E-06	7.31E-06	4.78E-06	(c)	(k)
Toluene	0.0034	-	9.51E-04	5.15E-04	4.36E-04	(c)	
TOTAL HAPS			5.28E-01	2.86E-01	2.42E-01		
EPCRA 313				**lbs./year**			
Lead	0.0005	0.00123	1.43E-04	0.286		(c)	(i)(k)
Sulfuric Acid	0.60	0.285	1.69E-01	337.28		(e)(j)	(e)(h)
Mercury	0.00026	0.00041	7.38E-05	0.148		(c)	(i)(k)
PACs	8.69E-07	1.65E-05	2.86E-07	5.73E-04		(f)(l)	(f)(l)
Benzo(g,h,i) perylene	1.20E-06	2.26E-06	3.42E-07	6.83E-04		(i)(k)(c)	(f)
Zinc	-	0.00055	1.43E-06	2.86E-03			(k)

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 (FWO-UI). Values are provided in a monthly data deliverable from KSL.

(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_2 {142S} + SO_3 {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(%)= 0.05

(h) HAP emission factors for natural gas from AP-42, Tables 1.4-3 an 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

(j) Assume all SO_3 is converted to sulfuric acid.

(k) AP-42, tables 1.3-9 and 1.3-10, September 1998.

(l) EPCRA PAC Guidance Document, Table 2-3.

Reviewed By/Date:

2005 TA-21 Steam Plant Data Entry / Fuel Use

DATA ENTRY						
Monthly Fuel Use						
	TA-21-357		Converted			
Month	Natural Gas (MCF)	Fuel Oil (gallons)	Natural Gas (MMscf)	Month	Natural Gas Use 12-Month Rolling Total (MMscf)	Fuel Oil Use 12-Month Rolling Total (Gallons)
January	3849	10	3.849	January	31.45	81
February	3605	10	3.605	February	31.28	87
March	3728	0	3.728	March	32.11	83
April	2627	96	2.627	April	32.10	171
May	2131	88	2.131	May	32.27	255
June	1556	40	1.556	June	32.21	295
July	1153	0	1.153	July	31.73	295
August	1687	0	1.687	August	31.74	295
September	1428	7	1.428	September	31.44	302
October	2584	0	2.584	October	31.54	302
November	3359	1	3.359	November	31.74	303
December	3891	0	3.891	December	31.60	252
Annual Totals:	31598	252	31.598			
Jan. - June	17496	244	17.496			
July - Dec.	14102	8	14.102			

Permit Limit = 60 MMScf/yr natural gas (12 month rolling total)
and 10,000 gal/yr fuel oil (12 month rolling total)

Reviewed By:_____

2005 TA-21 Steam Plant Emission Summary

Pollutant Criteria	Annual Emissions (Natural Gas + Fuel Oil) (tons)	Jan-June Emissions (Natural Gas + Fuel Oil) (tons)	July-Dec Emissions (Natural Gas + Fuel Oil) (tons)
NOx	1.582	0.877	0.705
SOx	0.016	0.011	0.004
PM	0.120	0.067	0.054
PM-10	0.120	0.067	0.054
PM-2.5	0.120	0.067	0.054
CO	1.328	0.735	0.592
VOC	0.087	0.048	0.039
HAPs			
Arsenic	3.23E-06	1.82E-06	1.41E-06
Benzene	3.32E-05	1.84E-05	1.48E-05
Beryllium	2.41E-07	1.55E-07	8.63E-08
Cadmium	1.74E-05	9.67E-06	7.76E-06
Chromium	2.22E-05	1.23E-05	9.87E-06
Cobalt	1.33E-06	7.35E-07	5.92E-07
Dichlorobenzene	1.90E-05	1.05E-05	8.46E-06
Formaldehyde	1.19E-03	6.62E-04	5.29E-04
Hexane	2.84E-02	1.57E-02	1.27E-02
Lead	8.05E-06	4.52E-06	3.53E-06
Mangenese	6.11E-06	3.42E-06	2.68E-06
Mercury	4.16E-06	2.32E-06	1.83E-06
Napthalene	9.64E-06	5.34E-06	4.30E-06
Nickel	3.32E-05	1.84E-05	1.48E-05
POM	1.81E-06	1.17E-06	6.34E-07
Selenium	6.38E-07	4.61E-07	1.77E-07
Toluene	5.37E-05	2.97E-05	2.40E-05
TOTAL HAPS	2.98E-02	1.65E-02	1.33E-02
EPCRA 313		lbs./year	
Lead	8.05E-06	0.016	
Sulfuric Acid	9.48E-03	18.96	
Mercury	4.16E-06	0.008	
PACs	1.58E-08	3.16E-05	
Benzo(g,h,i) perylene	1.92E-08	3.85E-05	

Reviewed By:_____

2005 TA-21 Steam Plant Emissions Calculations

Pollutant Criteria	Natural Gas Emission Factor (lb/MMscf)	Natural Gas Annual Emissions (tons)	Natural Gas Emissions (tons) Jan-June	Natural Gas Emissions (tons) July-Dec	Ref.	Fuel Oil Emission Factor (lb/1000 gal)	Fuel Oil Annual Emissions (tons)	Fuel Oil Emissions (tons) Jan-June	Fuel Oil Emissions (tons) July-Dec	Ref.
Nox	100	1.580	0.875	0.705	(b)	20	2.52E-03	2.44E-03	8.00E-05	(g)
SOx	0.6	0.009	0.005	0.004	(b)	49.0	6.17E-03	5.97E-03	1.96E-04	(h)
PM	7.6	0.120	0.066	0.054	(b)	3.3	4.16E-04	4.03E-04	1.32E-05	(g)
PM-10	7.6	0.120	0.066	0.054	(d)	2.3	2.90E-04	2.81E-04	9.20E-06	(j)
PM-2.5	7.6	0.120	0.066	0.054	(d)	1.55	1.95E-04	1.89E-04	6.20E-06	(j)
CO	84	1.327	0.735	0.592	(b)	5.0	6.30E-04	6.10E-04	2.00E-05	(g)
VOC	5.5	0.087	0.048	0.039	(b)	0.2	2.52E-05	2.44E-05	8.00E-07	(i)
HAPs										
Arsenic	0.0002	3.16E-06	1.75E-06	1.41E-06	(c)	0.00055	6.90E-08	6.69E-08	2.19E-09	(k)
Benzene	0.0021	3.32E-05	1.84E-05	1.48E-05	(c)					
Beryllium	0.000012	1.90E-07	1.05E-07	8.46E-08	(c)	0.00041	5.18E-08	5.01E-08	1.64E-09	(k)
Cadmium	0.0011	1.74E-05	9.62E-06	7.76E-06	(c)	0.00041	5.18E-08	5.01E-08	1.64E-09	(k)
Chromium	0.0014	2.21E-05	1.22E-05	9.87E-06	(c)	0.00041	5.18E-08	5.01E-08	1.64E-09	(k)
Cobalt	0.000084	1.33E-06	7.35E-07	5.92E-07	(c)					
Dichlorobenzene	0.0012	1.90E-05	1.05E-05	8.46E-06	(c)					
Formaldehyde	0.075	1.18E-03	6.56E-04	5.29E-04	(c)	0.048	6.05E-06	5.86E-06	1.92E-07	(k)
Hexane	1.8	2.84E-02	1.57E-02	1.27E-02	(c)					
Lead	0.0005	7.90E-06	4.37E-06	3.53E-06	(c)	0.00123	1.55E-07	1.50E-07	4.93E-09	(k)
Mangenese	0.00038	6.00E-06	3.32E-06	2.68E-06	(c)	0.00082	1.04E-07	1.00E-07	3.29E-09	(k)
Mercury	0.00026	4.11E-06	2.27E-06	1.83E-06	(c)	0.00041	5.18E-08	5.01E-08	1.64E-09	(k)
Napthalene	0.00061	9.64E-06	5.34E-06	4.30E-06	(c)					
Nickel	0.0021	3.32E-05	1.84E-05	1.48E-05	(c)	0.00041	5.18E-08	5.01E-08	1.64E-09	(k)
POM	0.000088	1.39E-06	7.70E-07	6.20E-07	(c)	0.0033	4.16E-07	4.03E-07	1.32E-08	(k)
Selenium	0.000024	3.79E-07	2.10E-07	1.69E-07	(c)	0.00206	2.59E-07	2.51E-07	8.22E-09	(k)
Toluene	0.0034	5.37E-05	2.97E-05	2.40E-05	(c)					
TOTAL HAPS		2.98E-02	1.65E-02	1.33E-02			7.31E-06	7.08E-06	2.32E-07	
EPCRA 313			lbs./year					lbs./year		
Lead	0.0005	7.90E-06	0.016		(c)	0.00123	1.55E-07	3.11E-04		(k)
Sulfuric Acid	0.60	9.48E-03	18.959		(e)	0.0	0.00E+00	0.000		(e)(h)
Mercury	0.00026	4.11E-06	8.22E-03		(c)	0.00041	5.18E-08	1.04E-04		(k)
PACs	8.69E-07	1.37E-08	2.75E-05		(f)	1.65E-05	2.08E-09	4.16E-06		(f)
perylene	1.20E-06	1.90E-08	3.79E-05		(c)	2.26E-06	2.85E-10	5.70E-07		(f)

Reference

(a) Fuel usage obtained from Jerry Gonzales, FWO-UI

(b) AP-42, 7/98, Section. 1.4, Natural Gas Combustion, Tables 1.4-1, 1.4-2.

(c) AP-42 7/98, Section 1.4, Natural Gas Combustion, Tables 1.4-3, 1.4-4.

(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.

(e) Assume all SOx is converted to sulfuric acid.

(f) EPCRA PAC Guidance Document, Table 2-3.

(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.

(h) S = weight % sulfur in oil (Title V Application, December 1995) Boilers <100 MMBtu/hr: SOx Emission Factor = 144 * S

0.34
S(%)=

(i) AP-42, 9/98, Section 1.3, *Fuel Oil Combustion*, Table 1.3-3 NMTOC.

(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.

(k) AP-42, 9/98, Section 1.3, Fuel Oil Combustion, Tables 1.3-8 - 1.3-10.

Reviewed By:_____

								First 6 Month Readings 2005					Second 6 Month Readings 2005				
TA	Bldg	Manufacturer	MODEL	KW	Fuel Type	Reading Date 2nd half 04'	Reading 2nd half 04'	6 Month Reading Date	Reading	Hours Run	Days between readings	6 mth. Prorated Hours	12 Month Reading Date	Reading	Hours Run	Days b/t readings	6 mth. Prorated Hours
3	40	Onan Sons	1500DVE15R3137	150	Diesel	12/01/2004	245.0	06/01/2005	246	1	180	1.0	11/01/2005	246.0	0	150	0.0
3	223	Onan Sons		45	Nat. Gas	12/01/2004	452.1	05/01/2005	457	4.9	150	5.9	11/01/2005	469.1	12.1	180	12.1
3	1404	Cummins		1250	Diesel	11/01/2004	79.0	06/01/2005	123.5	44.5	210	38.1	12/01/2005	176.6	53.1	180	53.1
3	440	Cummins	500FDR5051	150	Diesel	12/01/2004	98.0	06/01/2005	104	6	180	6.0	12/01/2005	110.4	6.4	180	6.4
3	440	Cummins	DFGA-5005210	500	Diesel	12/01/2004	42.9	06/01/2005	49	6.1	180	6.1	12/01/2005	56.6	7.6	180	7.6
3	1076	Cummins	DGBB-5601289	35	Diesel	01/01/2005	44.5	06/01/2005	56	11.5	150	13.8	12/01/2005	69.8	13.8	180	13.8
3	1498	Caterpillar		600	Diesel	12/01/2004	269.0	06/01/2005	276	7	180	7.0	11/01/2005	281.0	5	150	6.0
3	2322	Onan Sons		80	Diesel	12/01/2004	56.8	06/01/2005	192.6	135.8	180	135.8	11/01/2005	202.8	10.2	150	12.2
16	205	Onan Sons	250	250	Diesel	11/01/2004	1008.7	06/01/2005	Shutdown	0	210	0.0	11/01/2005	Shutdown	0	150	0.0
16	980	Cummins	KTA50-G2	1100	Diesel	12/01/2004	10.4	06/01/2005	19	8.6	180	8.6	12/01/2005	43.5	24.5	180	24.5
16	1374	Onan Sons	60ENA	60	Nat. Gas	12/01/2004	865.2	05/01/2005	908	42.8	150	51.4	11/01/2005	978.0	70	180	70.0
18	31	Onan Sons	275DFML29807N	275	Diesel	12/01/2004	147.6	06/01/2005	154	6.4	180	6.4	12/01/2005	160.0	6	180	6.0
21	155	Onan Sons	750.ODFV-4XR	750	Diesel	12/01/2004	825.6	06/01/2005	832	6.4	180	6.4	11/01/2005	837.8	5.8	150	7.0
21	357	Caterpillar		125	Diesel	12/01/2004	445.0	06/01/2005	451	6	180	6.0	11/01/2005	456.5	5.5	150	6.6
21	1002	Onan Sons	H1750DSG15	175	Diesel	11/01/2004	2878.2	05/01/2005	2928.2	50	180	50.0	11/01/2005	2934.0	5.8	180	5.8
21	1002	Onan Sons		350	Diesel	12/01/2004	1770.9	05/01/2005	1778	7.1	150	8.5	11/01/2005	1878.1	100.1	180	100.1
21	1002	Cummins	150DGFA	150	Diesel	12/01/2004	1072.8	05/01/2005	1080	7.2	150	8.6	11/01/2005	1083.5	3.5	180	3.5
33	20	Kohler	30ROZ	30	Diesel	12/01/2004	840.5	05/01/2005	870.0	29.5	150	35.4	11/01/2005	915.2	45.2	180	45.2
33	151	Caterpillar	XQ225	225	Diesel	12/01/2004	2944.0	05/01/2005	2944	0.0	150	0.0	11/01/2005	2944.0	0	180	0.0
33	208	Kohler	1600ROZD	1600	Diesel	12/01/2004	4.9	05/01/2005	4.9	0	150	0.0	11/01/2005	4.9	0	180	0.0
33	Point	Onan Sons	80DG10A	80	Diesel	12/01/2004	7643.1	05/01/2005	7643.1	0	150	0.0	11/01/2005	7643.1	0	180	0.0
35	2	Onan Sons	100DGDB	100	Diesel	01/01/2005	95.3	05/01/2005	105	9.7	120	14.6	12/01/2005	115.3	10.3	210	8.8
43	1	Cummins	4BT3.9-GC	50	Diesel	12/01/2004	344.6	06/01/2005	351	6.4	180	6.4	11/01/2005	356.7	5.7	150	6.8
43	1	Onan Sons		150	Diesel	12/01/2004	455.3	06/01/2005	483	27.7	180	27.7	11/01/2005	506.6	23.6	150	28.3
46	335	Onan Sons	300DEFCB	300	Diesel	12/01/2004	717.3	05/01/2005	748	30.7	150	36.8	11/01/2005	784.6	36.6	180	36.6
48	45	Onan Sons		125	Diesel	12/01/2004	328.5	06/01/2005	334	5.5	180	5.5	11/01/2005	343.7	9.7	150	11.6
50	37	Cummins	680FDR5059FF	500	Diesel	12/01/2004	463.8	06/01/2005	470	6.2	180	6.2	11/01/2005	475.4	5.4	150	6.5
50	184	Onan Sons	75ENAD	60	Nat. Gas	01/01/2005	49.5	05/01/2005	65	15.5	120	23.3	11/01/2005	92.1	27.1	180	27.1
50	188	Onan Sons	L940563879	1250	Diesel	12/01/2004	131.2	06/01/2005	138	6.8	180	6.8	11/01/2005	142.7	4.7	150	5.6
53	1	Onan Sons		60	Nat. Gas	12/01/2004	971.1	06/01/2005	1017.5	46.4	180	46.4	11/01/2005	1067.1	49.6	150	59.5
53	2	Kato Eng.	Kaman	50	Diesel	12/01/2004	189.0	06/01/2005	193	4	180	4.0	11/01/2005	194.3	1.3	150	1.6
53	M	Cummins		60	Diesel	12/01/2004	4440.0	06/01/2005	4440	0	180	0.0	11/01/2005	4440.0	0	150	0.0
53	M	Onan Sons		12.5	Nat. Gas	12/01/2004	581.5	06/01/2005	581.5	0	180	0.0	11/01/2005	581.5	0	150	0.0
54	412	Olympian	95M-07874-F	500	Diesel	12/01/2004	242.6	06/01/2005	248	5.4	180	5.4	11/01/2005	269.2	21.2	150	25.4
55	5			100	Nat. Gas	12/01/2004	44.7	06/01/2005	53.3	8.6	180	8.6	12/01/2005	62.4	9.1	180	9.1
55	8	Detroit		600	Diesel	12/01/2004	760.6	06/01/2005	773	12.4	180	12.4	12/01/2005	782.9	9.9	180	9.9
55	8	Onan Sons	1250DFLC-4987	1250	Diesel								12/01/2005	11.9	11.9	38131	0.1
55	28	Onan Sons		40	Diesel	12/01/2004	31.4	06/01/2005	38.6	7.2	180	7.2	12/01/2005	45.1	6.5	180	6.5
55	47	Onan Sons	1465	200	Diesel	12/01/2004	480.6	06/01/2005	487	6.4	180	6.4	11/01/2005	492.3	5.3	150	6.4
55	142	Cummins	DFEB-4963414	400	Diesel	12/01/2004	24.8	06/01/2005	31	6.2	180	6.2	12/01/2005	75.0	44	180	44.0
59	1	Allis Chalmers	2884-0703	90	Diesel	12/01/2004	725.5	06/01/2005	731	5.5	180	5.5	11/01/2005	736.8	5.8	150	7.0
61	23	Murphy		20	Diesel	12/01/2004	569.9	05/01/2005	569.9	0	150	0.0	11/01/2005	569.9	0	180	0.0
64	1	Onan Sons		250	Diesel	12/01/2004	114.6	06/01/2005	129	14.4	180	14.4	11/01/2005	134.5	5.5	150	6.6
64	39	Onan Sons		20	Diesel	12/01/2004	189.0	06/01/2005	190	1	180	1.0	12/01/2005	189.9	-0.1	180	-0.1
69	33	Cummins	DFLC-5568730	1250	Diesel	12/01/2004	16.5	06/01/2005	30	13.5	180	13.5	11/01/2005	35.0	5	150	6.0
	45 Generators in use										**TOTAL**	653.3				**TOTAL**	693.2

N/R = Not Read

First half average hours per unit	14.8	Second half average hours per unit	15.4

Annual Average of hours per unit	15.13

Reviewed By / Date: _____

EMISSION FACTORS	NOx lb/kw-hr	CO lb/kw-hr	SOx lb/kw-hr	PM lb/kw-hr	PM_{10} lb/kw-hr	VOC lb/kw-hr
Large Diesel fired [a][b]	0.032	0.007	0.011	0.001	0.001	0.001
Small Diesel fired [a][c]	0.042	0.009	0.003	0.003	0.003	0.003
Natural Gas Fired[d]	0.008	0.013	2.0E-06	3.4E-05	3.2E-05	1.0E-04

(a) Emission factors from

References:

447	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.	
(c) Emission factors for small diesel fired boilers were taken from AP-42 (fifth edition) Tables 3.3-1 and 3.3-2.	
(d) The AP-42 (fifth edition) emission factors for natural gas burning 4-stroke rich-burn engines (Table 3.2-3) provides units of lb/MMBtu. There are 3413 Btus in a kilowatt-hr (kwh) or 2.928×10^{-4} kwh per btu. Therefore, take lb/MMBtu x 3413 / 1×10^{6} or lb/MMbtu /10^{6}/2.928×10^{-4} to obtain the emissions factor in lb/kwh.	

	First 6 Month Emissions of 2005						Second 6 Month Emissions of 2005					
Location	*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)*
3-40	6.2	1.3	0.4	0.4	0.5	2.0E-03	0.0	0.0	0.0	0.0	0.0	0.0E+00
3-223	2.0	3.4	0.0	0.0	0.0	3.0E-02	4.1	6.9	0.0	0.0	0.1	6.1E-02
3-1404	1534.5	351.7	517.3	44.8	45.1	2.8E-01	2136.2	489.5	720.1	62.3	62.8	3.9E-01
3-440	37.4	8.1	2.5	2.7	3.0	1.2E-02	39.9	8.6	2.6	2.8	3.2	1.3E-02
3-440	98.2	22.5	33.1	2.9	2.9	1.8E-02	122.3	28.0	41.2	3.6	3.6	2.2E-02
3-1076	20.1	4.3	1.3	1.4	1.6	6.5E-03	20.1	4.3	1.3	1.4	1.6	6.5E-03
3-1498	135.2	31.0	45.6	3.9	4.0	2.4E-02	115.9	26.6	39.1	3.4	3.4	2.1E-02
3-2322	451.6	97.3	29.9	32.1	36.0	1.5E-01	40.7	8.8	2.7	2.9	3.2	1.3E-02
16-205	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
16-980	304.5	69.8	102.6	8.9	8.9	5.5E-02	867.4	198.8	292.4	25.3	25.5	1.6E-01
16-1374	23.2	39.1	0.0	0.1	0.3	3.5E-01	31.7	53.3	0.0	0.1	0.4	4.7E-01
18-31	73.2	15.8	4.8	5.2	5.8	2.4E-02	68.6	14.8	4.5	4.9	5.5	2.2E-02
21-155	154.5	35.4	52.1	4.5	4.5	2.8E-02	168.0	38.5	56.6	4.9	4.9	3.0E-02
64-39	0.8	0.2	0.1	0.1	0.1	2.7E-04	-0.1	0.0	0.0	0.0	0.0	-2.7E-05
21-357	31.2	6.7	2.1	2.2	2.5	1.0E-02	34.3	7.4	2.3	2.4	2.7	1.1E-02
21-1002	363.7	78.4	24.1	25.8	29.0	1.2E-01	42.2	9.1	2.8	3.0	3.4	1.4E-02
21-1002	124.0	26.7	8.2	8.8	9.9	4.0E-02	1456.4	313.8	96.3	103.4	116.0	4.7E-01
21-1002	53.9	11.6	3.6	3.8	4.3	1.8E-02	21.8	4.7	1.4	1.5	1.7	7.1E-03
33-20	44.1	9.5	2.9	3.1	3.5	1.4E-02	56.4	12.1	3.7	4.0	4.5	1.8E-02
33-151	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
33-208	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
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
35-2	60.5	13.0	4.0	4.3	4.8	2.0E-02	36.7	7.9	2.4	2.6	2.9	1.2E-02
43-1	13.3	2.9	0.9	0.9	1.1	4.3E-03	14.2	3.1	0.9	1.0	1.1	4.6E-03
43-1	172.7	37.2	11.4	12.3	13.8	5.6E-02	176.6	38.1	11.7	12.5	14.1	5.7E-02
46-335	459.4	99.0	30.4	32.6	36.6	1.5E-01	456.4	98.4	30.2	32.4	36.4	1.5E-01
48-45	28.6	6.2	1.9	2.0	2.3	9.3E-03	60.5	13.0	4.0	4.3	4.8	2.0E-02
50-37	99.8	22.9	33.6	2.9	2.9	1.8E-02	104.3	23.9	35.1	3.0	3.1	1.9E-02
50-184	10.5	17.7	0.0	0.0	0.1	1.6E-01	12.3	20.6	0.0	0.1	0.2	1.8E-01
50-188	273.6	62.7	92.2	8.0	8.0	4.9E-02	226.9	52.0	76.5	6.6	6.7	4.1E-02
53-1	21.0	35.3	0.0	0.1	0.3	3.1E-01	26.9	45.3	0.0	0.1	0.4	4.0E-01
53-2	8.3	1.8	0.5	0.6	0.7	2.7E-03	3.2	0.7	0.2	0.2	0.3	1.1E-03
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
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
54-412	86.9	19.9	29.3	2.5	2.6	1.6E-02	409.4	93.8	138.0	11.9	12.0	7.4E-02
55-5	6.5	10.9	0.0	0.0	0.1	9.7E-02	6.9	11.6	0.0	0.0	0.1	1.0E-01
55-8	239.4	54.9	80.7	7.0	7.0	4.3E-02	191.2	43.8	64.4	5.6	5.6	3.5E-02
55-28	12.0	2.6	0.8	0.8	1.0	3.9E-03	10.8	2.3	0.7	0.8	0.9	3.5E-03
55-47	53.2	11.5	3.5	3.8	4.2	1.7E-02	52.9	11.4	3.5	3.8	4.2	1.7E-02
55-142	103.1	22.2	6.8	7.3	8.2	3.4E-02	731.6	157.7	48.4	51.9	58.3	2.4E-01
59-1	20.6	4.4	1.4	1.5	1.6	6.7E-03	26.0	5.6	1.7	1.8	2.1	8.5E-03
61-23	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
64-1	149.7	32.2	9.9	10.6	11.9	4.9E-02	68.6	14.8	4.5	4.9	5.5	2.2E-02
69-33	543.1	124.5	183.1	15.8	16.0	9.8E-02	241.4	55.3	81.4	7.0	7.1	4.4E-02
lbs/6 months	5820.4	1394.5	1320.8	263.8	285.0	2.3	8082.7	1924.5	1770.8	376.6	408.1	3.2
Tons/6 months	**2.9**	**0.7**	**0.7**	**0.1**	**0.1**	**1.2E-03**	**4.0**	**1.0**	**0.9**	**0.2**	**0.2**	**1.6E-03**

YEARLY TOTAL	NOx	CO	SOx	PM	VOC	HAPs
Tons/Year	6.95	1.66	1.55	0.32	0.35	0.003

		HAPS (lbs)											
		Benzene		Toluene		Xylenes		1,3-Butadiene		Formaldehyde		Acetaldehyde	
Emission Factors (lb/kwh)	Natural Gas	5.40E-06		1.91E-06		6.66E-07		2.26E-06		7.00E-05		9.53E-06	
	Diesel (small)	3.19E-06		1.40E-06		9.73E-07		1.34E-07		4.03E-06		2.62E-06	
	Diesel (large)	2.65E-06		9.60E-07		6.59E-07				2.69E-07		8.61E-08	
	Location	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half	1st Half	2nd Half
	3-40	4.78E-04	0.00E+00	2.10E-04	0.00E+00	1.46E-04	0.00E+00	2.00E-05	0.00E+00	6.05E-04	0.00E+00	3.93E-04	0.00E+00
	3-223	1.43E-03	2.94E-03	5.04E-04	1.04E-03	1.76E-04	3.63E-04	5.99E-04	1.23E-03	1.85E-02	3.81E-02	2.52E-03	5.19E-03
	3-1404	1.26E-01	1.76E-01	4.58E-02	6.37E-02	3.14E-02	4.38E-02	0.00E+00	0.00E+00	1.28E-02	1.79E-02	4.10E-03	5.71E-03
	3-440	2.87E-03	3.06E-03	1.26E-03	1.34E-03	8.76E-04	9.34E-04	1.20E-04	1.28E-04	3.63E-03	3.87E-03	2.36E-03	2.51E-03
	3-440	8.08E-03	1.01E-02	2.93E-03	3.65E-03	2.01E-03	2.50E-03	0.00E+00	0.00E+00	8.22E-04	1.02E-03	2.63E-04	3.27E-04
	3-1076	1.54E-03	1.54E-03	6.75E-04	6.75E-04	4.70E-04	4.70E-04	6.45E-05	6.45E-05	1.95E-03	1.95E-03	1.27E-03	1.27E-03
	3-1498	1.11E-02	9.54E-03	4.03E-03	3.45E-03	2.77E-03	2.37E-03	0.00E+00	0.00E+00	1.13E-03	9.70E-04	3.61E-04	3.10E-04
	3-2322	3.46E-02	3.12E-03	1.52E-02	1.37E-03	1.06E-02	9.53E-04	1.45E-03	1.31E-04	4.38E-02	3.95E-03	2.85E-02	2.57E-03
	16-205	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
	16-980	2.51E-02	7.14E-02	9.08E-03	2.59E-02	6.24E-03	1.78E-02	0.00E+00	0.00E+00	2.55E-03	7.26E-03	8.14E-04	2.32E-03
	16-1374	1.66E-02	2.27E-02	5.87E-03	8.00E-03	2.05E-03	2.80E-03	6.98E-03	9.51E-03	2.16E-01	2.94E-01	2.94E-02	4.00E-02
	18-31	5.61E-03	5.26E-03	2.46E-03	2.30E-03	1.71E-03	1.61E-03	2.35E-04	2.20E-04	7.09E-03	6.65E-03	4.61E-03	4.32E-03
	21-155	1.27E-02	1.38E-02	4.61E-03	5.01E-03	3.16E-03	3.44E-03	0.00E+00	0.00E+00	1.29E-03	1.41E-03	4.13E-04	4.49E-04
	64-39	6.37E-05	-6.37E-06	2.79E-05	-2.79E-06	1.95E-05	-1.95E-06	2.67E-06	-2.67E-07	8.06E-05	-8.06E-06	5.24E-05	-5.24E-06
	21-357	2.39E-03	2.63E-03	1.05E-03	1.15E-03	7.30E-04	8.03E-04	1.00E-04	1.10E-04	3.02E-03	3.32E-03	1.96E-03	2.16E-03
	21-1002	2.79E-02	3.23E-03	1.22E-02	1.42E-03	8.52E-03	9.88E-04	1.17E-03	1.36E-04	3.53E-02	4.09E-03	2.29E-02	2.66E-03
	21-1002	9.50E-03	1.12E-01	4.17E-03	4.89E-02	2.90E-03	3.41E-02	3.98E-04	4.68E-03	1.20E-02	1.41E-01	7.81E-03	9.18E-02
	21-1002	4.13E-03	1.67E-03	1.81E-03	7.33E-04	1.26E-03	5.11E-04	1.73E-04	7.01E-05	5.22E-03	2.12E-03	3.39E-03	1.38E-03
	33-20	3.38E-03	4.32E-03	1.48E-03	1.89E-03	1.03E-03	1.32E-03	1.42E-04	1.81E-04	4.28E-03	5.46E-03	2.78E-03	3.55E-03
	33-151	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
	33-208	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
	33-Point	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
	35-2	4.64E-03	2.81E-03	2.03E-03	1.23E-03	1.42E-03	8.59E-04	1.94E-04	1.18E-04	5.86E-03	3.56E-03	3.81E-03	2.31E-03
	43-1	1.02E-03	1.09E-03	4.47E-04	4.78E-04	3.11E-04	3.33E-04	4.27E-05	4.57E-05	1.29E-03	1.38E-03	8.38E-04	8.96E-04
	43-1	1.32E-02	1.35E-02	5.80E-03	5.93E-03	4.04E-03	4.13E-03	5.55E-04	5.67E-04	1.67E-02	1.71E-02	1.09E-02	1.11E-02
	46-335	3.52E-02	3.50E-02	1.54E-02	1.53E-02	1.08E-02	1.07E-02	1.48E-03	1.47E-03	4.45E-02	4.43E-02	2.90E-02	2.88E-02
	48-45	2.19E-03	4.64E-03	9.60E-04	2.03E-03	6.69E-04	1.42E-03	9.18E-05	1.94E-04	2.77E-03	5.86E-03	1.80E-03	3.81E-03
	50-37	8.22E-03	8.59E-03	2.98E-03	3.11E-03	2.04E-03	2.14E-03	0.00E+00	0.00E+00	8.35E-04	8.73E-04	2.67E-04	2.79E-04
	50-184	7.53E-03	8.77E-03	2.66E-03	3.10E-03	9.29E-04	1.08E-03	3.16E-03	3.68E-03	9.77E-02	1.14E-01	1.33E-02	1.55E-02
	50-188	2.25E-02	1.87E-02	8.16E-03	6.77E-03	5.60E-03	4.65E-03	0.00E+00	0.00E+00	2.29E-03	1.90E-03	7.32E-04	6.07E-04
	53-1	1.50E-02	1.93E-02	5.31E-03	6.81E-03	1.85E-03	2.38E-03	6.30E-03	8.09E-03	1.95E-01	2.50E-01	2.65E-02	3.40E-02
	53-2	6.37E-04	2.49E-04	2.79E-04	1.09E-04	1.95E-04	7.59E-05	2.67E-05	1.04E-05	8.06E-04	3.14E-04	5.24E-04	2.04E-04
	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	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	0.00E+00
	54-412	7.16E-03	3.37E-02	2.59E-03	1.22E-02	1.78E-03	8.38E-03	0.00E+00	0.00E+00	7.28E-04	3.43E-03	2.32E-04	1.09E-03
	55-5	4.64E-03	4.91E-03	1.64E-03	1.73E-03	5.73E-04	6.06E-04	1.95E-03	2.06E-03	6.02E-02	6.37E-02	8.19E-03	8.67E-03
	55-8	1.97E-02	1.57E-02	7.14E-03	5.70E-03	4.90E-03	3.92E-03	0.00E+00	0.00E+00	2.00E-03	1.60E-03	6.40E-04	5.11E-04
	55-28	9.18E-04	8.28E-04	4.02E-04	3.63E-04	2.80E-04	2.53E-04	3.85E-05	3.47E-05	1.16E-03	1.05E-03	7.54E-04	6.81E-04
	55-47	4.08E-03	4.05E-03	1.79E-03	1.78E-03	1.25E-03	1.24E-03	1.71E-04	1.70E-04	5.16E-03	5.13E-03	3.35E-03	3.33E-03
	55-142	7.90E-03	5.61E-02	3.46E-03	2.46E-02	2.41E-03	1.71E-02	3.31E-04	2.35E-03	9.99E-03	7.09E-02	6.50E-03	4.61E-02
	59-1	1.58E-03	2.00E-03	6.91E-04	8.75E-04	4.82E-04	6.10E-04	6.61E-05	8.36E-05	1.99E-03	2.52E-03	1.30E-03	1.64E-03
	61-23	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
	64-1	1.15E-02	5.26E-03	5.03E-03	2.30E-03	3.50E-03	1.61E-03	4.81E-04	2.20E-04	1.45E-02	6.65E-03	9.43E-03	4.32E-03
	69-33	4.47E-02	1.99E-02	1.62E-02	7.20E-03	1.11E-02	4.94E-03	0.00E+00	0.00E+00	4.55E-03	2.02E-03	1.45E-03	6.45E-04
	Total Emissions lbs	**5.06E-01**	**6.98E-01**	**1.96E-01**	**2.72E-01**	**1.30E-01**	**1.81E-01**	**2.63E-02**	**3.56E-02**	**8.38E-01**	**1.13E+00**	**2.33E-01**	**3.31E-01**
	Tons/Half/HAP	**2.53E-04**	**3.49E-04**	**9.82E-05**	**1.36E-04**	**6.51E-05**	**9.06E-05**	**1.32E-05**	**1.78E-05**	**4.19E-04**	**5.65E-04**	**1.17E-04**	**1.66E-04**
	Tons/year/HAP	**6.02E-04**		**2.34E-04**		**1.56E-04**		**3.09E-05**		**9.84E-04**		**2.82E-04**	
	Tons/Year Total	**2.74E-03**											

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)

HAPS (lbs)																	HAPS (lbs)
Acrolein		Naphthalene		1,1,2,2-Tetrachloroethane		1,1,2-Trichloroethane		1,3-Dichloropropene		Carbon Tetrachloride		Chlorobenzene		Chloroform		Ethylbenzene	
8.98E-06		3.32E-07		8.64E-08		5.23E-08		4.34E-08		6.05E-08		4.41E-08		4.68E-08		8.47E-08	
3.16E-07		2.90E-07															
2.69E-08		4.44E-07															
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	1st Half	2nd Half
4.74E-05	0.00E+00	4.34E-05	0.00E+00														
2.38E-03	4.89E-03	8.77E-05	1.81E-04	2.29E-05	4.70E-05	1.38E-05	2.85E-05	1.15E-05	2.36E-05	1.60E-05	3.29E-05	1.17E-05	2.40E-05	1.24E-05	2.55E-05	2.24E-05	4.61E-05
1.28E-03	1.79E-03	2.12E-02	2.95E-02														
2.84E-04	3.03E-04	2.61E-04	2.78E-04														
8.21E-05	1.02E-04	1.35E-03	1.69E-03														
1.53E-04	1.53E-04	1.40E-04	1.40E-04														
1.13E-04	9.69E-05	1.86E-03	1.60E-03														
3.43E-03	3.09E-04	3.15E-03	2.84E-04														
0.00E+00	0.00E+00	0.00E+00	0.00E+00														
2.55E-04	7.25E-04	4.20E-03	1.20E-02														
2.77E-02	3.77E-02	1.02E-03	1.39E-03	2.66E-04	0.00E+00	1.61E-04	0.00E+00	1.34E-04	1.82E-04	1.86E-04	2.54E-04	1.36E-04	1.85E-04	1.44E-04	1.97E-04	2.61E-04	3.56E-04
5.56E-04	5.21E-04	5.10E-04	4.78E-04														
1.29E-04	1.40E-04	2.13E-03	2.32E-03														
6.32E-06	-6.32E-07	5.79E-06	-5.79E-07														
2.37E-04	2.61E-04	2.17E-04	2.39E-04														
2.76E-03	3.21E-04	2.53E-03	2.94E-04														
9.42E-04	1.11E-02	8.64E-04	1.01E-02														
4.09E-04	1.66E-04	3.75E-04	1.52E-04														
3.36E-04	4.28E-04	3.08E-04	3.93E-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														
4.60E-04	2.79E-04	4.21E-04	2.56E-04														
1.01E-04	1.08E-04	9.27E-05	9.90E-05														
1.31E-03	1.34E-03	1.20E-03	1.23E-03														
3.49E-03	3.47E-03	3.20E-03	3.18E-03														
2.17E-04	4.60E-04	1.99E-04	4.21E-04														
8.34E-05	8.72E-05	1.38E-03	1.44E-03														
1.25E-02	1.46E-02	4.63E-04	5.39E-04	1.21E-04	0.00E+00	7.29E-05	0.00E+00	6.05E-05	7.05E-05	8.43E-05	9.83E-05	6.15E-05	7.16E-05	6.53E-05	7.61E-05	1.18E-04	1.38E-04
2.29E-04	1.90E-04	3.77E-03	3.13E-03														
2.50E-02	3.21E-02	9.23E-04	1.18E-03	2.41E-04	0.00E+00	1.45E-04	0.00E+00	1.21E-04	1.55E-04	1.68E-04	2.16E-04	1.23E-04	1.57E-04	1.30E-04	1.67E-04	2.36E-04	3.02E-04
6.32E-05	2.46E-05	5.79E-05	2.26E-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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7.27E-05	3.42E-04	1.20E-03	5.65E-03														
7.72E-03	8.17E-03	2.85E-04	3.02E-04	7.43E-05	0.00E+00	4.49E-05	0.00E+00	3.73E-05	3.95E-05	5.20E-05	5.50E-05	3.79E-05	4.01E-05	4.02E-05	4.26E-05	7.28E-05	7.71E-05
2.00E-04	1.60E-04	3.30E-03	2.64E-03														
9.10E-05	8.21E-05	8.34E-05	7.53E-05														
4.04E-04	4.02E-04	3.71E-04	3.68E-04														
7.83E-04	5.56E-03	7.18E-04	5.10E-03														
1.56E-04	1.98E-04	1.43E-04	1.81E-04														
0.00E+00	0.00E+00	0.00E+00	0.00E+00														
1.14E-03	5.21E-04	1.04E-03	4.78E-04														
4.54E-04	2.02E-04	7.49E-03	3.33E-03														
9.56E-02	**1.27E-01**	**6.66E-02**	**9.06E-02**	**7.25E-04**	**4.70E-05**	**4.38E-04**	**2.85E-05**	**3.64E-04**	**4.71E-04**	**5.07E-04**	**6.56E-04**	**3.69E-04**	**4.78E-04**	**3.92E-04**	**5.08E-04**	**7.10E-04**	**9.19E-04**
4.78E-05	**6.36E-05**	**3.33E-05**	**4.53E-05**	**3.62E-07**	**2.35E-08**	**2.19E-07**	**1.42E-08**	**1.82E-07**	**2.35E-07**	**2.53E-07**	**3.28E-07**	**1.85E-07**	**2.39E-07**	**1.96E-07**	**2.54E-07**	**3.55E-07**	**4.60E-07**
1.11E-04		**7.86E-05**		**3.86E-07**		**2.33E-07**		**4.17E-07**		**5.81E-07**		**4.24E-07**		**4.50E-07**		**8.15E-07**	

HAPS (lbs)															
Ethylene Dibromide		Methanol		Methylene Chloride		PAH		Styrene		Toluene		Vinyl Chloride		Individual Generator HAP Emissions (lbs)	
7.27E-08		1.05E-05		1.41E-07		4.82E-07		4.06E-08		1.91E-06		2.45E-08			
						5.74E-07									
						7.24E-07									
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
						8.61E-05	0.00E+00							2.03E-03	0.00E+00
1.92E-05	3.96E-05	2.77E-03	5.69E-03	3.72E-05	7.66E-05	1.27E-04	2.62E-04	1.08E-05	2.21E-05	5.04E-04	1.04E-03	6.49E-06	1.34E-05	2.98E-02	6.13E-02
						3.45E-02	4.81E-02							2.77E-01	3.86E-01
						5.16E-04	5.51E-04							1.22E-02	1.30E-02
						2.21E-03	2.75E-03							1.77E-02	2.21E-02
						2.77E-04	2.77E-04							6.53E-03	6.53E-03
						3.04E-03	2.61E-03							2.44E-02	2.10E-02
						6.23E-03	5.62E-04							1.47E-01	1.32E-02
						0.00E+00	0.00E+00							0.00E+00	0.00E+00
						6.85E-03	1.95E-02							5.51E-02	1.57E-01
2.24E-04	3.06E-04	3.22E-02	4.39E-02	4.34E-04	5.91E-04	1.48E-03	2.02E-03	1.25E-04	1.71E-04	5.87E-03	8.00E-03	7.56E-05	1.03E-04	3.47E-01	4.72E-01
						1.01E-03	9.47E-04							2.38E-02	2.23E-02
						3.48E-03	3.78E-03							2.79E-02	3.04E-02
						1.15E-05	-1.15E-06							2.70E-04	-2.70E-05
						4.30E-04	4.73E-04							1.01E-02	1.12E-02
						5.02E-03	5.82E-04							1.18E-01	1.37E-02
						1.71E-03	2.01E-02							4.03E-02	4.74E-01
						7.44E-04	3.01E-04							1.75E-02	7.10E-03
						6.09E-04	7.78E-04							1.44E-02	1.83E-02
						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
						8.35E-04	5.07E-04							1.97E-02	1.19E-02
						1.84E-04	1.96E-04							4.33E-03	4.62E-03
						2.38E-03	2.44E-03							5.62E-02	5.74E-02
						6.34E-03	6.30E-03							1.49E-01	1.48E-01
						3.94E-04	8.35E-04							9.29E-03	1.97E-02
						2.24E-03	2.35E-03							1.80E-02	1.89E-02
1.01E-04	1.18E-04	1.46E-02	1.70E-02	1.96E-04	2.29E-04	6.72E-04	7.83E-04	5.67E-05	6.61E-05	2.66E-03	3.10E-03	3.42E-05	3.99E-05	1.57E-01	1.83E-01
						6.15E-03	5.10E-03							4.95E-02	4.10E-02
2.03E-04	2.60E-04	2.91E-02	3.73E-02	3.92E-04	5.03E-04	1.34E-03	1.72E-03	1.13E-04	1.45E-04	5.31E-03	6.81E-03	6.83E-05	8.76E-05	3.14E-01	4.02E-01
						1.15E-04	4.48E-05							2.70E-03	1.05E-03
						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
						1.95E-03	9.21E-03							1.57E-02	7.40E-02
6.26E-05	6.62E-05	8.99E-03	9.51E-03	1.21E-04	1.28E-04	4.14E-04	4.38E-04	3.50E-05	3.70E-05	1.64E-03	1.73E-03	2.11E-05	2.23E-05	9.69E-02	1.02E-01
						5.39E-03	4.30E-03							4.33E-02	3.46E-02
						1.65E-04	1.49E-04							3.89E-03	3.51E-03
						7.34E-04	7.30E-04							1.73E-02	1.72E-02
						1.42E-03	1.01E-02							3.35E-02	2.38E-01
						2.84E-04	3.59E-04							6.69E-03	8.47E-03
						0.00E+00	0.00E+00							0.00E+00	0.00E+00
						2.07E-03	9.47E-04							4.87E-02	2.23E-02
						1.22E-02	5.43E-03							9.82E-02	4.36E-02
6.10E-04	**7.89E-04**	**8.76E-02**	**1.13E-01**	**1.18E-03**	**1.53E-03**	**1.14E-01**	**1.56E-01**	**3.41E-04**	**4.41E-04**	**1.60E-02**	**2.07E-02**	**2.06E-04**	**2.66E-04**	2.32E+00	3.16E+00
3.05E-07	**3.95E-07**	**4.38E-05**	**5.67E-05**	**5.90E-07**	**7.63E-07**	**5.68E-05**	**7.78E-05**	**1.70E-07**	**2.21E-07**	**7.99E-06**	**1.03E-05**	**1.03E-07**	**1.33E-07**		
7.00E-07		**1.01E-04**		**1.35E-06**		**1.35E-04**		**3.91E-07**		**1.83E-05**		**2.36E-07**			

Degreaser TA-55
Semi Annual Emissions January - June 2005

Table 1. Usage Data

Date Measured	Initial Solvent Level "(inches)	Volume Added (liters)	Level Added (inches)	Volume Removed (liters)	Level Removed (inches)
Jan-03-2005	7.4	0	0	0	0
Feb-01-2005	7	0	0	0	0
Mar-01-2005	6.8	0	0	0	0
Mar-07-2005	6.8	0	0	13.37	6.8
Mar-08-2005	0	14.74	7.5	0	0
Apr-04-2005	7.3	0	0	0	0
May-02-2005	7.1	0	0	0	0
Jun-05-2005	6.8	0	0	0	0
Jun-23-2005	6.6	0	0	12.97	6.6
Jun-27-2005	0	15.33	7.8	0	0
TOTAL Solvent Use		30.07	Liters	26.34	Liters

The Usage information for UT Bath" degreaser from "Jan-01-2005" through "Jul-01-2005". "
Type: Cold Batch
TA: 55
Solvent: Trichloroethylene

EMISSION CALCULATION

Conversions

Kg/L	1.463
Lb/Kg	2.21
lb/ton	2000

Emissions = (Vol Added - L) - (Vol Removed - L) x (1.463 Kg/L) x (2.21 Lb/Kg) = 12.06 lbs
0.01 tons

Degreaser TA-55
Semi Annual Emissions July - December 2005

Table 1. Usage Data

Date Measured	Initial Solvent Level (inches)	Volume Added (liters)	Level Added (inches)	Volume Removed (liters)	Level Removed (inches)
Jul-05-2005	7.7	0	0	0	0
Aug-01-2005	7.3	0	0	0	0
Sep-01-2005	7	0	0	0	0
Oct-03-2005	6.8	0	0	0	0
Nov-01-2005	6.6	0	0	12.97	6.6
Nov-07-2005	0	14.35	7.3	0	0
Dec-01-2005	6.8	0	0	0	0
TOTAL Solvent Use		14.35	Liters	12.97	Liters

The Usage information for UT Bath degreaser from "Jul-01-2005" through "Jan-01-2006".
Type: Cold Batch
TA: 55
Solvent: Trichloroethylene

EMISSION CALCULATION
Conversions

Kg/L	1.463
Lb/Kg	2.21
lb/ton	2000

1 L added/removed =	0.5 inches

Emissions = (Vol Added - L) - (Vol Removed - L) x (1.463 Kg/L) x (2.21 Lb/Kg) = 4.46 lbs

\+

(Starting Level in) - (Ending Level in) / (0.5 in/L) x (1.463 kg/L) x (2.21 lb/kg) = 5.82 lbs

10.28 lbs

0.005 tons

ATTACHMENT B.
2005 ANNUAL EMISSIONS INVENTORY SUBMITTAL TO NMED

Los Alamos
NATIONAL LABORATORY

Environmental Stewardship Division
Meteorology and Air Quality Group
P.O. Box 1663, MS J978
Los Alamos, New Mexico 87545
(505) 665-8855/Fax: (505) 665-8858

Date: April 19, 2006
Refer to: ENV-MAQ:06-109

Ms. Heather Lancour
New Mexico Environment Department
Air Quality Bureau
2048 Galisteo Street
Santa Fe, NM 87505

IDEA ID NO.856 – LOS ALAMOS NATIONAL LABORATORY
ANNUAL EMISSION INVENTORY REPORT REQUIRED UNDER 20.2.73 NMAC

Dear Ms. Lancour:

Enclosed is the 2005 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 *2005 New Mexico Emissions Inventory Update.* All changes made to the worksheets are highlighted in yellow (additions) and green (deletions).

In general, criteria pollutant emissions from LANL sources in 2005 are similar to emissions reported last year. Additionally, please note the following changes to our inventory for 2005:

- Four emission units were added this year: the TA-60 asphalt plant; the TA-60 asphalt emulsion tank; the TA-33 generator; and the TA-3-22 turbine. The generator and the turbine did not start operating in 2005. Therefore, all emissions from the two sources have been reported as zero.

- Per NMED request, emissions from natural gas and from No. 2 fuel oil have been reported separately for the boilers located at the TA-3 power plant and at the TA-21 steam plant.

- From the January 26, 2006 NMED letter, we were 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.

NMED has again required the reporting of HAP emissions, particulate matter in the size of 2.5 microns in diameter or less ($PM_{2.5}$) emissions, and ammonia (NH_3) emissions in the 2005 Emissions Inventory. Therefore, this information, with the exception of the radionuclide emissions, is once again included in the 2005 Emissions Inventory.

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 1.68 mrem during 2004. For 2005, this offsite dose is estimated to be between 6 and 7 mrem. A final dose for 2005 will be reported to EPA in June 2006.

This submittal includes a diskette containing electronic copies of the updated spreadsheets and a certification statement. We have also included a summary report that was prepared at the completion of the Emissions Inventory submittal for 2004. We followed the same methodology in preparing the 2005 emissions inventory updates as described in this report.

If you have any questions regarding this report, please contact Margie Stockton (667-9359) or Walt Whetham (665-8885), in the Laboratory's Meteorology and Air Quality Group.

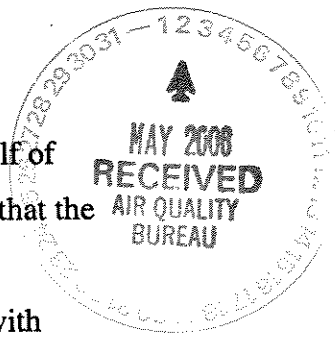
Sincerely,

Douglas M. Stavert
Deputy Division Leader (Acting)
Environmental Stewardship Division

DMS:alb

Cy:
S. Fong, DOE/OLASO, A316
K. Hargis, ENV-DO, J591
P. Wardwell, LC-ESH, A187
J. Hurtle, ENV-MAQ, J978
D. Wilburn, ENV -MAQ, J978
S. Story, ENV -MAQ, J978
W. Whetham, ENV -MAQ, J978
20.2.73 NMAC Project File, J978
ENV-MAQ File

2005 Emissions Inventory Certification



I, Douglas M. Stavert, hereby certify on behalf of Los Alamos National Laboratory, that the information and data submitted in the 2005 Emissions Inventory for Los Alamos National Laboratory with Permit Number P100 (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 second day of May, 2006, upon my oath of affirmation, before a notary of the State of New Mexico.

SIGNATURE (Responsible Company Official)	DATE	PHONE
	5/2/06	665-0255

PRINTED NAME	TITLE	COMPANY
Doug Stavert	Dep Div Leader	Los Alamos Nat'l Lab

Subscribed and sworn to before me on this 2 day of May, 2006.

My authorization as a Notary of the State of New Mexico expires on the 24th day of , 2006.

NOTARY'S SIGNATURE	DATE
Delilah Baldonado	May 2, 2006

NOTARY'S PRINTED NAME: Delilah Baldonado

OFFICIAL SEAL
Delilah Baldonado
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 6/24/06

2005 Emissions Inventory Certification

I, Douglas M. Stavert, hereby certify on behalf of Los Alamos National Laboratory, that the information and data submitted in the 2005 Emissions Inventory for Los Alamos National Laboratory with Permit Number P100 (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 second day of May, 2006, upon my oath of affirmation, before a notary of the State of New Mexico.

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NOTARY'S SIGNATURE	DATE
Delilah Baldonado	May 2, 2006

Delilah Baldonado
NOTARY'S PRINTED NAME

OFFICIAL SEAL
Delilah Baldonado
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 6/24/06

MASTER_AI_ID	Agency Interest Name	AIRS ID	Subject Item Designation	Field Description	Value	Description
856	Los Alamos National Laboratory	350280001	Agency Interest	Standard Industrial Classification (SIC) Code	9711	National security
856	Los Alamos National Laboratory	350280001	Agency Interest	North American Industry Classification (NAIC) Code	92811	National Security

Subject Item Designation	Subject Item Description	Field Description	Value	Description
006	Be Machining Ta35 Bldg213	Actual Percent of Operation During Winter	25	percent of time
006	Be Machining Ta35 Bldg213	Actual Percent of Operation During Spring	25	percent of time
006	Be Machining Ta35 Bldg213	Actual Percent of Operation During Summer	25	percent of time
006	Be Machining Ta35 Bldg213	Actual Percent of Operation During Fall	25	percent of time
006	Be Machining Ta35 Bldg213	Actual Operating Time in Hours Per Day	5	h/d
006	Be Machining Ta35 Bldg213	Actual Operating Time in Days Per Week	7	d/week
006	Be Machining Ta35 Bldg213	Actual Operating Time in Weeks Per Year	52	weeks/y
006	Be Machining Ta35 Bldg213	Actual Operating Time in Hours Per Year	1920	h/y
006	Be Machining Ta35 Bldg213	Actual Input Materials Processed	516	Metal Industrial Processes, Fabricated Metal
006	Be Machining Ta35 Bldg213	Standard Classification (SCC) Code	30903004	Products, Machining Operations, Specify
006	Be Machining Ta35 Bldg213	Actual Beryllium in tons per year	1.98E-08	tons/y
006	Be Machining Ta35 Bldg213	Actual Beryllium calculation method	es	Estimate
006	Be Machining Ta35 Bldg213	BerylliumActual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent
006	Be Machining Ta35 Bldg213	Actual Particulate Matter (total suspended) in tons per year	1.98E-08	tons/y
006	Be Machining Ta35 Bldg213	Actual Particulate Matter (total suspended) calculation method	es	Estimate
006	Be Machining Ta35 Bldg213	Particulate Matter (total suspended)Actual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent

Subject Item Designation	Subject Item Description	Field Description	Value	Description
007	Be Machining Ta3 Bldg 141	Actual Percent of Operation During Winter	25	percent of time
007	Be Machining Ta3 Bldg 141	Actual Percent of Operation During Spring	25	percent of time
007	Be Machining Ta3 Bldg 141	Actual Percent of Operation During Summer	25	percent of time
007	Be Machining Ta3 Bldg 141	Actual Percent of Operation During Fall	25	percent of time
007	Be Machining Ta3 Bldg 141	Actual Operating Time in Hours Per Day	24	h/d
007	Be Machining Ta3 Bldg 141	Actual Operating Time in Days Per Week	7	d/week
007	Be Machining Ta3 Bldg 141	Actual Operating Time in Weeks Per Year	52	weeks/y
007	Be Machining Ta3 Bldg 141	Actual Operating Time in Hours Per Year	8760	h/y
007	Be Machining Ta3 Bldg 141	Actual Input Materials Processed	516	Metal
007	Be Machining Ta3 Bldg 141	Standard Classification (SCC) Code	30903004	Industrial Processes, Fabricated Metal Products, Machining Operations, Specify Material**
007	Be Machining Ta3 Bldg 141	Actual Beryllium in tons per year	7.70E-09	tons/y
007	Be Machining Ta3 Bldg 141	Actual Beryllium calculation method	es	Estimate
007	Be Machining Ta3 Bldg 141	BerylliumActual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent
007	Be Machining Ta3 Bldg 141	Actual Particulate Matter (total suspended) in tons per year	7.70E-09	tons/y
007	Be Machining Ta3 Bldg 141	Actual Particulate Matter (total suspended) calculation method	es	Estimate
007	Be Machining Ta3 Bldg 141	Particulate Matter (total suspended)Actual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent

Subject Item Designation	Subject Item Description	Field Description	Value	Description
010	Be Cutting & Bead Dressing Ta-55-4	Actual Percent of Operation During Winter	25	percent of time
010	Be Cutting & Bead Dressing Ta-55-4	Actual Percent of Operation During Spring	25	percent of time
010	Be Cutting & Bead Dressing Ta-55-4	Actual Percent of Operation During Summer	25	percent of time
010	Be Cutting & Bead Dressing Ta-55-4	Actual Percent of Operation During Fall	25	percent of time
010	Be Cutting & Bead Dressing Ta-55-4	Actual Operating Time in Hours Per Day	5	h/d
010	Be Cutting & Bead Dressing Ta-55-4	Actual Operating Time in Days Per Week	7	d/week
010	Be Cutting & Bead Dressing Ta-55-4	Actual Operating Time in Weeks Per Year	52	weeks/y
010	Be Cutting & Bead Dressing Ta-55-4	Actual Operating Time in Hours Per Year	1920	h/y
010	Be Cutting & Bead Dressing Ta-55-4	Actual Input Materials Processed	516	Metal
010	Be Cutting & Bead Dressing Ta-55-4	Standard Classification (SCC) Code	30903004	Industrial Processes, Fabricated Metal Products, Machining Operations, Specify Material**
010	Be Cutting & Bead Dressing Ta-55-4	Actual Aluminum in tons per year	1.56E-06	tons/y
010	Be Cutting & Bead Dressing Ta-55-4	Actual Aluminum calculation method	ES	Estimate
010	Be Cutting & Bead Dressing Ta-55-4	AluminumActual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent
010	Be Cutting & Bead Dressing Ta-55-4	Actual Beryllium in tons per year	1.56E-06	tons/y
010	Be Cutting & Bead Dressing Ta-55-4	Actual Beryllium calculation method	ES	Estimate
010	Be Cutting & Bead Dressing Ta-55-4	BerylliumActual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent

Subject Item Designation	Subject Item Description	Field Description	Value	Description
031	R & D Activities - Labwide	Actual Percent of Operation During Winter	25	percent of time
031	R & D Activities - Labwide	Actual Percent of Operation During Spring	25	percent of time
031	R & D Activities - Labwide	Actual Percent of Operation During Summer	25	percent of time
031	R & D Activities - Labwide	Actual Percent of Operation During Fall	25	percent of time
031	R & D Activities - Labwide	Actual Operating Time in Hours Per Day	24	h/d
031	R & D Activities - Labwide	Actual Operating Time in Days Per Week	7	d/week
031	R & D Activities - Labwide	Actual Operating Time in Weeks Per Year	52	weeks/y
031	R & D Activities - Labwide	Actual Operating Time in Hours Per Year	8760	h/y
031	R & D Activities - Labwide	Actual Fuel Consumption		MM SCF/y
031	R & D Activities - Labwide	Actual Fuel Heating Value		MM BTU/MM SCF
031	R & D Activities - Labwide	Actual Fuel Type	209	Natural Gas
031	R & D Activities - Labwide	Actual Percent Sulfur of Fuel		percent
031	R & D Activities - Labwide	Actual Percent Ash of Fuel		percent
031	R & D Activities - Labwide	Actual Input Materials Processed		
031	R & D Activities - Labwide	Standard Classification (SCC) Code	31503001	Industrial Processes, Photographic Equipment/Health Care/Laboratories, Laboratories, Bench Scale Reagents: Research
031	R & D Activities - Labwide	Actual Acetaldehyde; (Ethyl aldehyde) in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Acetaldehyde; (Ethyl aldehyde) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Acetonitrile; (Methyl cyanide) in tons per year	0.65	tons/y
031	R & D Activities - Labwide	Actual Acetonitrile; (Methyl cyanide) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Acetophenone in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Acetophenone calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Acrylamide in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Acrylamide calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Acrylic acid in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Acrylic acid calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Acrylonitrile in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Acrylonitrile calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Ammonia in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Ammonia calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Aniline in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Aniline calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Antimony in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Antimony calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Antimony compounds in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Antimony compounds calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Arsenic Compounds in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Arsenic Compounds calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Benzene in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Benzene calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Benzyl Chloride in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Benzyl Chloride calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Biphenyl in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Biphenyl calculation method	mb	Material balance

031	R & D Activities - Labwide	Actual Bromoform; (Tribromomethane) in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Bromoform; (Tribromomethane) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Butadiene(1,3-) in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Butadiene(1,3-) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Cadmium in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Cadmium calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Cadmium compounds in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Cadmium compounds calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Carbon Disulfide in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Carbon Disulfide calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Carbon tetrachloride; (Tetrachoromethane) in tons per yea	0	tons/y
031	R & D Activities - Labwide	Actual Carbon tetrachloride; (Tetrachoromethane) calculation met	mb	Material balance
031	R & D Activities - Labwide	Actual Carbonyl sulfide in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Carbonyl sulfide calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Catechol (Pyrocatechol) in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Catechol (Pyrocatechol) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Chlorine in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Chlorine calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Chloroacetic Acid in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Chloroacetic Acid calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Chlorobenzene(Phenyl Chloride) in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Chlorobenzene(Phenyl Chloride) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Chloroform; (Trichloromethane) in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Chloroform; (Trichloromethane) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Chromium in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Chromium calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Chromium compounds, other in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Chromium compounds, other calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Cobalt in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Cobalt calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Cobalt Compounds in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Cobalt Compounds calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Cresol(m-); (Methylphenol, 3-) in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Cresol(m-); (Methylphenol, 3-) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Cumene in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Cumene calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Cyanide in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Cyanide calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Cyanide compounds in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Cyanide compounds calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Dibutylphthalate; (Di-n-butyl phthalate) in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Dibutylphthalate; (Di-n-butyl phthalate) calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Dichloroethane (1,2-); (EDC); (Ethylene dichloride) in tons	0	tons/y
031	R & D Activities - Labwide	Actual Dichloroethane (1,2-); (EDC); (Ethylene dichloride) calcula	mb	Material balance
031	R & D Activities - Labwide	Actual Diethanolamine in tons per year	0	tons/y
031	R & D Activities - Labwide	Actual Diethanolamine calculation method	mb	Material balance
031	R & D Activities - Labwide	Actual Dimethyl Sulfate in tons per year	0	tons/y

031	R & D Activities - Labwide	Actual Dimethyl Sulfate calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Dimethyl formamide in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Dimethyl formamide calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Dimethylhydrazine(1,1-) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Dimethylhydrazine(1,1-) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Dioxane(1,4-) (1,4-Diethyleneoxide) in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Dioxane(1,4-) (1,4-Diethyleneoxide) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Epichlorohydrin; (1-Chloro-2,3-epoxypropane) in tons per y	0		tons/y
031	R & D Activities - Labwide	Actual Epichlorohydrin; (1-Chloro-2,3-epoxypropane) calculation r	mb		Material balance
031	R & D Activities - Labwide	Actual Epoxybutane(1,2-) (1,2-Butylene oxide) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Epoxybutane(1,2-) (1,2-Butylene oxide) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Ethyl Acrylate in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Ethyl Acrylate calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Ethyl chloride; (Chloroethane) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Ethyl chloride; (Chloroethane) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Ethylene Glycol in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Ethylene Glycol calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Ethylene dibromide; (EDB); (1,2-Dibromoethane) in tons pe	0		tons/y
031	R & D Activities - Labwide	Actual Ethylene dibromide; (EDB); (1,2-Dibromoethane) calculatic	mb		Material balance
031	R & D Activities - Labwide	Actual Fine mineral fibers in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Fine mineral fibers calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Formaldehyde in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Formaldehyde calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Glycol Ethers in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Glycol Ethers calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Hexachlorocyclopentadiene in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Hexachlorocyclopentadiene calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Hexamethylphosphoramide in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Hexamethylphosphoramide calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Hexane in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Hexane calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Hydrazine in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Hydrazine calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Hydrochloric acid (HCl) in tons per year		0.95	tons/y
031	R & D Activities - Labwide	Actual Hydrochloric acid (HCl) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Hydrofluoric Acid; (Hydrogen fluoride) in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Hydrofluoric Acid; (Hydrogen fluoride) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Hydroquinone in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Hydroquinone calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Iodomethane (Methyl iodide) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Iodomethane (Methyl iodide) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Lead Compounds in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Lead Compounds calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Manganese in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Manganese calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Manganese compounds in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Manganese compounds calculation method	mb		Material balance

031	R & D Activities - Labwide	Actual Mercury compounds in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Mercury compounds calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Methanol; (Methyl alcohol) in tons per year		0.72	tons/y
031	R & D Activities - Labwide	Actual Methanol; (Methyl alcohol) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Methyl Ethyl Ketone; (MEK); (2-Butanone) in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Methyl Ethyl Ketone; (MEK); (2-Butanone) calculation meth	mb		Material balance
031	R & D Activities - Labwide	Actual Methyl Methacrylate in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Methyl Methacrylate calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Methyl bromide; (Bromomethane) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Methyl bromide; (Bromomethane) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Methyl chloride; (Chloromethane) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Methyl chloride; (Chloromethane) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Methyl isobutyl ketone; (Hexone); (4-Methyl-2-pentanone)	0		tons/y
031	R & D Activities - Labwide	Actual Methyl isobutyl ketone; (Hexone); (4-Methyl-2-pentanone)	mb		Material balance
031	R & D Activities - Labwide	Actual Methyl tert butyl ether in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Methyl tert butyl ether calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Methylene chloride; (Dichloromethane) in tons per year		0.56	tons/y
031	R & D Activities - Labwide	Actual Methylene chloride; (Dichloromethane) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Methylenebiphenyl isocyanate; (MDI); (Diphenylmethane d	0		tons/y
031	R & D Activities - Labwide	Actual Methylenebiphenyl isocyanate; (MDI); (Diphenylmethane d	mb		Material balance
031	R & D Activities - Labwide	Actual Naphthalene in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Naphthalene calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Nickel in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Nickel calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Nickel compounds in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Nickel compounds calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Nitrobenzene; (nitro-Benzene) in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Nitrobenzene; (nitro-Benzene) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Nitrophenol(4-); (p-Nitrophenol) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Nitrophenol(4-); (p-Nitrophenol) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual PAHs: Total Naphthalene plus monomethylnaphthalenes ii	0		tons/y
031	R & D Activities - Labwide	Actual PAHs: Total Naphthalene plus monomethylnaphthalenes c	mb		Material balance
031	R & D Activities - Labwide	Actual PCE; (Perchloroethylene); (Tetrachloroethylene); (Tetrachl	0		tons/y
031	R & D Activities - Labwide	Actual PCE; (Perchloroethylene); (Tetrachloroethylene); (Tetrachl	mb		Material balance
031	R & D Activities - Labwide	Actual Phenol in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Phenol calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Phenylenediamine(p-); (Phenylenediamine) in tons per yea		0	tons/y
031	R & D Activities - Labwide	Actual Phenylenediamine(p-); (Phenylenediamine) calculation me	mb		Material balance
031	R & D Activities - Labwide	Actual Phosphine in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Phosphine calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Phosphorus in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Phosphorus calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Phthalic anhydride in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Phthalic anhydride calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Polycylic Organic Matter in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Polycylic Organic Matter calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Propylene oxide in tons per year	0		tons/y

031	R & D Activities - Labwide	Actual Propylene oxide calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Selenium in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Selenium calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Selenium compounds in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Selenium compounds calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Styrene in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Styrene calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual TCE; (Trichloroethylene); (Trichloroethene) in tons per yea		0.72	tons/y
031	R & D Activities - Labwide	Actual TCE; (Trichloroethylene); (Trichloroethene) calculation met	mb		Material balance
031	R & D Activities - Labwide	Actual Tetrachloroethane(1,1,2,2-) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Tetrachloroethane(1,1,2,2-) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Titanium tetrachloride in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Titanium tetrachloride calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Toluene diisocyanate(2,4-) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Toluene diisocyanate(2,4-) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Toluene; (Methyl benzene) in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Toluene; (Methyl benzene) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Total HAP in tons per year		5.44	tons/y
031	R & D Activities - Labwide	Actual Total HAP calculation method	es		Estimate
031	R & D Activities - Labwide	Total HAPActual total efficiency controlled by Uncontrolled			percent
031	R & D Activities - Labwide	Actual Trichloroethane(1,1,1-) (Methyl Chloroform) in tons per yea	0		tons/y
031	R & D Activities - Labwide	Actual Trichloroethane(1,1,1-) (Methyl Chloroform) calculation me	mb		Material balance
031	R & D Activities - Labwide	Actual Trichloroethane(1,1,2-) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Trichloroethane(1,1,2-) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Triethylamine in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Triethylamine calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Trimethylpentane(2,2,4-) in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Trimethylpentane(2,2,4-) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Urethane; (Ethyl carbamate) in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Urethane; (Ethyl carbamate) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Vinyl acetate; (Vinyl acetate monomer) in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Vinyl acetate; (Vinyl acetate monomer) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Volatile Organic Compounds (VOC) in tons per year		11.2	tons/y
031	R & D Activities - Labwide	Actual Volatile Organic Compounds (VOC) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Xylene(m-); (1,3-Dimethylbenzene); (meta-Xylene) in tons		0	tons/y
031	R & D Activities - Labwide	Actual Xylene(m-); (1,3-Dimethylbenzene); (meta-Xylene) calcula	mb		Material balance
031	R & D Activities - Labwide	Actual Xylene(o-); (1,2-Dimethylbenzene); (ortho-Xylene) in tons		0	tons/y
031	R & D Activities - Labwide	Actual Xylene(o-); (1,2-Dimethylbenzene); (ortho-Xylene) calculati	mb		Material balance
031	R & D Activities - Labwide	Actual Xylene(p-); (1,4-Dimethylbenzene); (para-Xylene) in tons p		0	tons/y
031	R & D Activities - Labwide	Actual Xylene(p-); (1,4-Dimethylbenzene); (para-Xylene) calculati	mb		Material balance
031	R & D Activities - Labwide	Actual Xylenes (total); (Xylol) in tons per year		0	tons/y
031	R & D Activities - Labwide	Actual Xylenes (total); (Xylol) calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual Zirconium in tons per year	0		tons/y
031	R & D Activities - Labwide	Actual Zirconium calculation method	mb		Material balance
031	R & D Activities - Labwide	Actual bis(2-ethylhexyl) phthalate; (Di-2-ethylhexyl phthalate); (DE	0		tons/y
031	R & D Activities - Labwide	Actual bis(2-ethylhexyl) phthalate; (Di-2-ethylhexyl phthalate); (DE	mb		Material balance

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-3-38	Carpenter Shop - General Construction	Actual Percent of Operation During Winter	20	percent of time
TA-3-38	Carpenter Shop - General Construction	Actual Percent of Operation During Spring	30	percent of time
TA-3-38	Carpenter Shop - General Construction	Actual Percent of Operation During Summer	30	percent of time
TA-3-38	Carpenter Shop - General Construction	Actual Percent of Operation During Fall	20	percent of time
TA-3-38	Carpenter Shop - General Construction	Actual Operating Time in Hours Per Day	12	h/d
TA-3-38	Carpenter Shop - General Construction	Actual Operating Time in Days Per Week	7	d/week
TA-3-38	Carpenter Shop - General Construction	Actual Operating Time in Weeks Per Year	52	weeks/y
TA-3-38	Carpenter Shop - General Construction	Actual Operating Time in Hours Per Year	4368	h/y
TA-3-38	Carpenter Shop - General Construction	Actual Input Materials Processed	15	Wood Products, Miscellaneous Wood Working
TA-3-38	Carpenter Shop - General Construction	Standard Classification (SCC) Code	30703096	Operations, Sanding/Planning Operations: Specify
TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (10 microns or less) in tons per year	0.044	tons/y
TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-38	Carpenter Shop - General Construction	Particulate Matter (10 microns or less)Actual total efficiency controlled by Single Cyclone	65	percent
TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (2.5 microns or less) in tons per year	0.02	tons/y
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)
TA-3-38	Carpenter Shop - General Construction	Particulate Matter (2.5 microns or less)Actual total efficiency controlled by Single Cyclone	45	percent
TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (total suspended) in tons per year	0.047	tons/y
TA-3-38	Carpenter Shop - General Construction	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-38	Carpenter Shop - General Construction	Particulate Matter (total suspended)Actual total efficiency controlled by Single Cyclone	95	percent
TA-3-38	Carpenter Shop - General Construction	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
TA-3-38	Carpenter Shop - General Construction	Actual Volatile Organic Compounds (VOC) calculation method	04	Engineer Calculation

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-15-563	Carpenter Shop - Test Stands	Actual Percent of Operation During Winter	20	percent of time
TA-15-563	Carpenter Shop - Test Stands	Actual Percent of Operation During Spring	30	percent of time
TA-15-563	Carpenter Shop - Test Stands	Actual Percent of Operation During Summer	30	percent of time
TA-15-563	Carpenter Shop - Test Stands	Actual Percent of Operation During Fall	20	percent of time
TA-15-563	Carpenter Shop - Test Stands	Actual Operating Time in Hours Per Day	12	h/d
TA-15-563	Carpenter Shop - Test Stands	Actual Operating Time in Days Per Week	7	d/week
TA-15-563	Carpenter Shop - Test Stands	Actual Operating Time in Weeks Per Year	52	weeks/y
TA-15-563	Carpenter Shop - Test Stands	Actual Operating Time in Hours Per Year	4368	h/y
TA-15-563	Carpenter Shop - Test Stands	Actual Input Materials Processed	15	Wood
TA-15-563	Carpenter Shop - Test Stands	Standard Classification (SCC) Code	30703096	Wood Products, Miscellaneous Wood Working Operations, Sanding/Planning
TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (10 microns or less) in tons per year	0.041	tons/y
TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (2.5 microns or less) in tons per year	0.02	tons/y
TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (total suspended) in tons per year	0.044	tons/y
TA-15-563	Carpenter Shop - Test Stands	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Percent of Operation During Winter	25	percent of time
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Percent of Operation During Spring	25	percent of time
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Percent of Operation During Summer	25	percent of time
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Percent of Operation During Fall	25	percent of time
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Operating Time in Hours Per Day	24	h/d
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Operating Time in Days Per Week	7	d/week
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Operating Time in Weeks Per Year	52	weeks/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Operating Time in Hours Per Year	8760	h/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Fuel Consumption	31.6	MM SCF/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Fuel Heating Value	1030	MM BTU/MM SCF
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Fuel Type	209	Natural Gas
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Percent Sulfur of Fuel	0	percent
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Percent Ash of Fuel	0	percent
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Input Materials Processed	209	Natural Gas
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Carbon Monoxide in tons per year	1.33	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Formaldehyde in tons per year	0.001	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Hexane in tons per year	0.028	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Nitrogen Dioxide in tons per year	1.58	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (10 microns or less) in tons per year	0.12	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (2.5 microns or less) in tons per year	0.12	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (total suspended) in tons per year	0.12	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Sulfur Dioxide in tons per year	0.009	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Sulfur Dioxide calculation method	es	Estimate
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Sulfur DioxideActual total efficiency controlled by Uncontrolled		percent
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Volatile Organic Compounds (VOC) in tons per year	0.087	tons/y
TA-21-357-1	Steam Plant Boiler (x3) Ta21 Bldg357 Nat Gas	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
005	Td Site Boiler Not Built	Actual Percent of Operation During Winter	0	percent of time
005	Td Site Boiler Not Built	Actual Percent of Operation During Spring	0	percent of time
005	Td Site Boiler Not Built	Actual Percent of Operation During Summer	0	percent of time
005	Td Site Boiler Not Built	Actual Percent of Operation During Fall	0	percent of time
005	Td Site Boiler Not Built	Actual Operating Time in Hours Per Day	0	h/d
005	Td Site Boiler Not Built	Actual Operating Time in Days Per Week	0	d/week
005	Td Site Boiler Not Built	Actual Operating Time in Weeks Per Year	0	weeks/y
005	Td Site Boiler Not Built	Actual Operating Time in Hours Per Year	0	h/y
005	Td Site Boiler Not Built	Actual Fuel Consumption		MM SCF/y
005	Td Site Boiler Not Built	Actual Fuel Heating Value		MM BTU/MM SCF
005	Td Site Boiler Not Built	Actual Fuel Type	209	Natural Gas
005	Td Site Boiler Not Built	Actual Percent Sulfur of Fuel		percent
005	Td Site Boiler Not Built	Actual Percent Ash of Fuel		percent
005	Td Site Boiler Not Built	Actual Input Materials Processed		
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
005	Td Site Boiler Not Built	Actual Carbon Monoxide in tons per year	0	tons/y
005	Td Site Boiler Not Built	Actual Carbon Monoxide calculation method	es	Estimate
005	Td Site Boiler Not Built	Carbon MonoxideActual total efficiency controlled by Uncontrolled		percent
005	Td Site Boiler Not Built	Actual Nitrogen Dioxide in tons per year	0	tons/y
005	Td Site Boiler Not Built	Actual Nitrogen Dioxide calculation method	es	Estimate
005	Td Site Boiler Not Built	Nitrogen DioxideActual total efficiency controlled by Uncontrolled		percent
005	Td Site Boiler Not Built	Actual Particulate Matter (total suspended) in tons per year	0	tons/y
005	Td Site Boiler Not Built	Actual Particulate Matter (total suspended) calculation method	es	Estimate
005	Td Site Boiler Not Built	Particulate Matter (total suspended)Actual total efficiency controlled by Uncontrolled		percent
005	Td Site Boiler Not Built	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
005	Td Site Boiler Not Built	Actual Volatile Organic Compounds (VOC) calculation method	es	Estimate
005	Td Site Boiler Not Built	Volatile Organic Compounds (VOC)Actual total efficiency controlled by Uncontrolled		percent

Subject Item Designation	Subject Item Description	Field Description	Value	Description
011	Metallography Ta55-4 North Stack	Actual Percent of Operation During Winter	25	percent of time
011	Metallography Ta55-4 North Stack	Actual Percent of Operation During Spring	25	percent of time
011	Metallography Ta55-4 North Stack	Actual Percent of Operation During Summer	25	percent of time
011	Metallography Ta55-4 North Stack	Actual Percent of Operation During Fall	25	percent of time
011	Metallography Ta55-4 North Stack	Actual Operating Time in Hours Per Day	24	h/d
011	Metallography Ta55-4 North Stack	Actual Operating Time in Days Per Week	7	d/week
011	Metallography Ta55-4 North Stack	Actual Operating Time in Weeks Per Year	52	weeks/y
011	Metallography Ta55-4 North Stack	Actual Operating Time in Hours Per Year	8760	h/y
~~011~~	~~Metallography Ta55-4 North Stack~~	~~Actual Fuel Consumption~~	~~1100~~	~~MM SCF/y~~
011	Metallography Ta55-4 North Stack	Actual Input Materials Processed	516	Metal
011	Metallography Ta55-4 North Stack	Standard Classification (SCC) Code	30900303	Industrial Processes, Fabricated Metal Products, Abrasive Cleaning of Metal Parts, Polishing
011	Metallography Ta55-4 North Stack	Actual Aluminum in tons per year	1.56E-06	tons/y
011	Metallography Ta55-4 North Stack	Actual Aluminum calculation method	es	Estimate
011	Metallography Ta55-4 North Stack	AluminumActual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent
011	Metallography Ta55-4 North Stack	Actual Beryllium in tons per year	1.56E-06	tons/y
011	Metallography Ta55-4 North Stack	Actual Beryllium calculation method	es	Estimate
011	Metallography Ta55-4 North Stack	BerylliumActual total efficiency controlled by Fabric Filter-Medium Temp ie 180F<T<250F	99.95	percent

Subject Item Designation	Subject Item Description	Field Description	Value	Description
015	Boiler (Ta-48-1) Bs-1	Actual Percent of Operation During Winter	40	percent of time
015	Boiler (Ta-48-1) Bs-1	Actual Percent of Operation During Spring	20	percent of time
015	Boiler (Ta-48-1) Bs-1	Actual Percent of Operation During Summer	0	percent of time
015	Boiler (Ta-48-1) Bs-1	Actual Percent of Operation During Fall	40	percent of time
015	Boiler (Ta-48-1) Bs-1	Actual Operating Time in Hours Per Day	15	h/d
015	Boiler (Ta-48-1) Bs-1	Actual Operating Time in Days Per Week	7	d/week
015	Boiler (Ta-48-1) Bs-1	Actual Operating Time in Weeks Per Year	33	weeks/y
015	Boiler (Ta-48-1) Bs-1	Actual Operating Time in Hours Per Year	5500	h/y
015	Boiler (Ta-48-1) Bs-1	Actual Fuel Consumption	10.01	MM SCF/y
015	Boiler (Ta-48-1) Bs-1	Actual Fuel Heating Value	1030	MM BTU/MM SCF
015	Boiler (Ta-48-1) Bs-1	Actual Fuel Type	209	Natural Gas
015	Boiler (Ta-48-1) Bs-1	Actual Percent Sulfur of Fuel	0	percent
015	Boiler (Ta-48-1) Bs-1	Actual Percent Ash of Fuel	0	percent
015	Boiler (Ta-48-1) Bs-1	Actual Input Materials Processed	209	Natural Gas
015	Boiler (Ta-48-1) Bs-1	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
015	Boiler (Ta-48-1) Bs-1	Actual Carbon Monoxide in tons per year	0.455	tons/y
015	Boiler (Ta-48-1) Bs-1	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
015	Boiler (Ta-48-1) Bs-1	Actual Hexane in tons per year	0.01	tons/y
015	Boiler (Ta-48-1) Bs-1	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
015	Boiler (Ta-48-1) Bs-1	Actual Nitrogen Dioxide in tons per year	0.542	tons/y
015	Boiler (Ta-48-1) Bs-1	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
015	Boiler (Ta-48-1) Bs-1	Actual Particulate Matter (10 microns or less) in tons per year	0.041	tons/y
015	Boiler (Ta-48-1) Bs-1	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
015	Boiler (Ta-48-1) Bs-1	Actual Particulate Matter (2.5 microns or less) in tons per year	0.041	tons/y
015	Boiler (Ta-48-1) Bs-1	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
015	Boiler (Ta-48-1) Bs-1	Actual Particulate Matter (total suspended) in tons per year	0.041	tons/y
015	Boiler (Ta-48-1) Bs-1	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
015	Boiler (Ta-48-1) Bs-1	Actual Sulfur Dioxide in tons per year	0.003	tons/y
015	Boiler (Ta-48-1) Bs-1	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
015	Boiler (Ta-48-1) Bs-1	Actual Volatile Organic Compounds (VOC) in tons per year	0.03	tons/y
015	Boiler (Ta-48-1) Bs-1	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
016	Boiler (Ta-48-1) Bs-2	Actual Percent of Operation During Winter	40	percent of time
016	Boiler (Ta-48-1) Bs-2	Actual Percent of Operation During Spring	20	percent of time
016	Boiler (Ta-48-1) Bs-2	Actual Percent of Operation During Summer	0	percent of time
016	Boiler (Ta-48-1) Bs-2	Actual Percent of Operation During Fall	40	percent of time
016	Boiler (Ta-48-1) Bs-2	Actual Operating Time in Hours Per Day	15	h/d
016	Boiler (Ta-48-1) Bs-2	Actual Operating Time in Days Per Week	7	d/week
016	Boiler (Ta-48-1) Bs-2	Actual Operating Time in Weeks Per Year	33	weeks/y
016	Boiler (Ta-48-1) Bs-2	Actual Operating Time in Hours Per Year	5500	h/y
016	Boiler (Ta-48-1) Bs-2	Actual Fuel Consumption	10.01	MM SCF/y
016	Boiler (Ta-48-1) Bs-2	Actual Fuel Heating Value	1030	MM BTU/MM SCF
016	Boiler (Ta-48-1) Bs-2	Actual Fuel Type	209	Natural Gas
016	Boiler (Ta-48-1) Bs-2	Actual Percent Sulfur of Fuel	0	percent
016	Boiler (Ta-48-1) Bs-2	Actual Percent Ash of Fuel	0	percent
016	Boiler (Ta-48-1) Bs-2	Actual Input Materials Processed	209	Natural Gas
016	Boiler (Ta-48-1) Bs-2	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
016	Boiler (Ta-48-1) Bs-2	Actual Carbon Monoxide in tons per year	0.455	tons/y
016	Boiler (Ta-48-1) Bs-2	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
016	Boiler (Ta-48-1) Bs-2	Actual Hexane in tons per year	0.01	tons/y
016	Boiler (Ta-48-1) Bs-2	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
016	Boiler (Ta-48-1) Bs-2	Actual Nitrogen Dioxide in tons per year	0.542	tons/y
016	Boiler (Ta-48-1) Bs-2	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
016	Boiler (Ta-48-1) Bs-2	Actual Particulate Matter (10 microns or less) in tons per year	0.041	tons/y
016	Boiler (Ta-48-1) Bs-2	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
016	Boiler (Ta-48-1) Bs-2	Actual Particulate Matter (2.5 microns or less) in tons per year	0.041	tons/y
016	Boiler (Ta-48-1) Bs-2	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
016	Boiler (Ta-48-1) Bs-2	Actual Particulate Matter (total suspended) in tons per year	0.041	tons/y
016	Boiler (Ta-48-1) Bs-2	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
016	Boiler (Ta-48-1) Bs-2	Actual Sulfur Dioxide in tons per year	0.003	tons/y
016	Boiler (Ta-48-1) Bs-2	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
016	Boiler (Ta-48-1) Bs-2	Actual Volatile Organic Compounds (VOC) in tons per year	0.03	tons/y
016	Boiler (Ta-48-1) Bs-2	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
017	Boiler (Ta-48-1) Bs-6	Actual Percent of Operation During Winter	40	percent of time
017	Boiler (Ta-48-1) Bs-6	Actual Percent of Operation During Spring	20	percent of time
017	Boiler (Ta-48-1) Bs-6	Actual Percent of Operation During Fall	40	percent of time
017	Boiler (Ta-48-1) Bs-6	Actual Operating Time in Hours Per Day	15	h/d
017	Boiler (Ta-48-1) Bs-6	Actual Operating Time in Days Per Week	7	d/week
017	Boiler (Ta-48-1) Bs-6	Actual Operating Time in Weeks Per Year	33	weeks/y
017	Boiler (Ta-48-1) Bs-6	Actual Operating Time in Hours Per Year	5500	h/y
017	Boiler (Ta-48-1) Bs-6	Actual Fuel Consumption	13.4	MM SCF/y
017	Boiler (Ta-48-1) Bs-6	Actual Fuel Heating Value	1030	MM BTU/MM SCF
017	Boiler (Ta-48-1) Bs-6	Actual Fuel Type	209	Natural Gas
017	Boiler (Ta-48-1) Bs-6	Actual Percent Sulfur of Fuel	0	percent
017	Boiler (Ta-48-1) Bs-6	Actual Percent Ash of Fuel	0	percent
017	Boiler (Ta-48-1) Bs-6	Actual Input Materials Processed	209	Natural Gas
017	Boiler (Ta-48-1) Bs-6	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
017	Boiler (Ta-48-1) Bs-6	Actual Carbon Monoxide in tons per year	0.609	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
017	Boiler (Ta-48-1) Bs-6	Actual Formaldehyde in tons per year	0.001	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
017	Boiler (Ta-48-1) Bs-6	Actual Hexane in tons per year	0.013	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
017	Boiler (Ta-48-1) Bs-6	Actual Nitrogen Dioxide in tons per year	0.725	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (10 microns or less) in tons per year	0.055	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (2.5 microns or less) in tons per year	0.055	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (total suspended) in tons per year	0.055	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
017	Boiler (Ta-48-1) Bs-6	Actual Sulfur Dioxide in tons per year	0.004	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
017	Boiler (Ta-48-1) Bs-6	Actual Volatile Organic Compounds (VOC) in tons per year	0.4	tons/y
017	Boiler (Ta-48-1) Bs-6	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
018	Boiler (Ta-53-365) Bhw-1	Actual Percent of Operation During Winter	40	percent of time
018	Boiler (Ta-53-365) Bhw-1	Actual Percent of Operation During Spring	20	percent of time
018	Boiler (Ta-53-365) Bhw-1	Actual Percent of Operation During Summer	0	percent of time
018	Boiler (Ta-53-365) Bhw-1	Actual Percent of Operation During Fall	40	percent of time
018	Boiler (Ta-53-365) Bhw-1	Actual Operating Time in Hours Per Day	15	h/d
018	Boiler (Ta-53-365) Bhw-1	Actual Operating Time in Days Per Week	7	d/week
018	Boiler (Ta-53-365) Bhw-1	Actual Operating Time in Weeks Per Year	33	weeks/y
018	Boiler (Ta-53-365) Bhw-1	Actual Operating Time in Hours Per Year	5500	h/y
018	Boiler (Ta-53-365) Bhw-1	Actual Fuel Consumption	13.35	MM SCF/y
018	Boiler (Ta-53-365) Bhw-1	Actual Fuel Heating Value	1030	MM BTU/MM SCF
018	Boiler (Ta-53-365) Bhw-1	Actual Fuel Type	209	Natural Gas
018	Boiler (Ta-53-365) Bhw-1	Actual Percent Sulfur of Fuel	0	percent
018	Boiler (Ta-53-365) Bhw-1	Actual Percent Ash of Fuel	0	percent
018	Boiler (Ta-53-365) Bhw-1	Actual Input Materials Processed	209	Natural Gas
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
018	Boiler (Ta-53-365) Bhw-1	Actual Carbon Monoxide in tons per year	0.607	tons/y
018	Boiler (Ta-53-365) Bhw-1	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
018	Boiler (Ta-53-365) Bhw-1	Actual Formaldehyde in tons per year	0.001	tons/y
018	Boiler (Ta-53-365) Bhw-1	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
018	Boiler (Ta-53-365) Bhw-1	Actual Hexane in tons per year	0.013	tons/y
018	Boiler (Ta-53-365) Bhw-1	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
018	Boiler (Ta-53-365) Bhw-1	Actual Nitrogen Dioxide in tons per year	0.722	tons/y
018	Boiler (Ta-53-365) Bhw-1	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (10 microns or less) in tons per year	0.055	tons/y
018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (2.5 microns or less) in tons per year	0.055	tons/y
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)
018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (total suspended) in tons per year	0.055	tons/y
018	Boiler (Ta-53-365) Bhw-1	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
018	Boiler (Ta-53-365) Bhw-1	Actual Sulfur Dioxide in tons per year	0.004	tons/y
018	Boiler (Ta-53-365) Bhw-1	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
018	Boiler (Ta-53-365) Bhw-1	Actual Volatile Organic Compounds (VOC) in tons per year	0.04	tons/y
018	Boiler (Ta-53-365) Bhw-1	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
019	Boiler (Ta-53-365) Bhw-2	Actual Percent of Operation During Winter	40	percent of time
019	Boiler (Ta-53-365) Bhw-2	Actual Percent of Operation During Spring	20	percent of time
019	Boiler (Ta-53-365) Bhw-2	Actual Percent of Operation During Summer	0	percent of time
019	Boiler (Ta-53-365) Bhw-2	Actual Percent of Operation During Fall	40	percent of time
019	Boiler (Ta-53-365) Bhw-2	Actual Operating Time in Hours Per Day	15	h/d
019	Boiler (Ta-53-365) Bhw-2	Actual Operating Time in Days Per Week	7	d/week
019	Boiler (Ta-53-365) Bhw-2	Actual Operating Time in Weeks Per Year	33	weeks/y
019	Boiler (Ta-53-365) Bhw-2	Actual Operating Time in Hours Per Year	5500	h/y
019	Boiler (Ta-53-365) Bhw-2	Actual Fuel Consumption	13.35	MM SCF/y
019	Boiler (Ta-53-365) Bhw-2	Actual Fuel Heating Value	1030	MM BTU/MM SCF
019	Boiler (Ta-53-365) Bhw-2	Actual Fuel Type	209	Natural Gas
019	Boiler (Ta-53-365) Bhw-2	Actual Percent Sulfur of Fuel	0	percent
019	Boiler (Ta-53-365) Bhw-2	Actual Percent Ash of Fuel	0	percent
019	Boiler (Ta-53-365) Bhw-2	Actual Input Materials Processed	209	Natural Gas
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
019	Boiler (Ta-53-365) Bhw-2	Actual Carbon Monoxide in tons per year	0.607	tons/y
019	Boiler (Ta-53-365) Bhw-2	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
019	Boiler (Ta-53-365) Bhw-2	Actual Formaldehyde in tons per year	0.001	tons/y
019	Boiler (Ta-53-365) Bhw-2	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
019	Boiler (Ta-53-365) Bhw-2	Actual Hexane in tons per year	0.013	tons/y
019	Boiler (Ta-53-365) Bhw-2	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
019	Boiler (Ta-53-365) Bhw-2	Actual Nitrogen Dioxide in tons per year	0.722	tons/y
019	Boiler (Ta-53-365) Bhw-2	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (10 microns or less) in tons per year	0.055	tons/y
019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (2.5 microns or less) in tons per year	0.055	tons/y
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)
019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (total suspended) in tons per year	0.055	tons/y
019	Boiler (Ta-53-365) Bhw-2	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
019	Boiler (Ta-53-365) Bhw-2	Actual Sulfur Dioxide in tons per year	0.004	tons/y
019	Boiler (Ta-53-365) Bhw-2	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
019	Boiler (Ta-53-365) Bhw-2	Actual Volatile Organic Compounds (VOC) in tons per year	0.4	tons/y
019	Boiler (Ta-53-365) Bhw-2	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
020	Boiler (Ta-59-1) Bhw-1	Actual Percent of Operation During Winter	40	percent of time
020	Boiler (Ta-59-1) Bhw-1	Actual Percent of Operation During Spring	20	percent of time
020	Boiler (Ta-59-1) Bhw-1	Actual Percent of Operation During Summer	0	percent of time
020	Boiler (Ta-59-1) Bhw-1	Actual Percent of Operation During Fall	40	percent of time
020	Boiler (Ta-59-1) Bhw-1	Actual Operating Time in Hours Per Day	15	h/d
020	Boiler (Ta-59-1) Bhw-1	Actual Operating Time in Days Per Week	7	d/week
020	Boiler (Ta-59-1) Bhw-1	Actual Operating Time in Weeks Per Year	33	weeks/y
020	Boiler (Ta-59-1) Bhw-1	Actual Operating Time in Hours Per Year	5500	h/y
020	Boiler (Ta-59-1) Bhw-1	Actual Fuel Consumption	10.01	MM SCF/y
020	Boiler (Ta-59-1) Bhw-1	Actual Fuel Heating Value	1030	MM BTU/MM SCF
020	Boiler (Ta-59-1) Bhw-1	Actual Fuel Type	209	Natural Gas
020	Boiler (Ta-59-1) Bhw-1	Actual Percent Sulfur of Fuel	0	percent
020	Boiler (Ta-59-1) Bhw-1	Actual Percent Ash of Fuel	0	percent
020	Boiler (Ta-59-1) Bhw-1	Actual Input Materials Processed	209	Natural Gas
020	Boiler (Ta-59-1) Bhw-1	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
020	Boiler (Ta-59-1) Bhw-1	Actual Carbon Monoxide in tons per year	0.455	tons/y
020	Boiler (Ta-59-1) Bhw-1	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
020	Boiler (Ta-59-1) Bhw-1	Actual Hexane in tons per year	0.01	tons/y
020	Boiler (Ta-59-1) Bhw-1	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
020	Boiler (Ta-59-1) Bhw-1	Actual Nitrogen Dioxide in tons per year	0.542	tons/y
020	Boiler (Ta-59-1) Bhw-1	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (10 microns or less) in tons per year	0.041	tons/y
020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (2.5 microns or less) in tons per year	0.041	tons/y
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)
020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (total suspended) in tons per year	0.041	tons/y
020	Boiler (Ta-59-1) Bhw-1	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
020	Boiler (Ta-59-1) Bhw-1	Actual Sulfur Dioxide in tons per year	0.003	tons/y
020	Boiler (Ta-59-1) Bhw-1	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
020	Boiler (Ta-59-1) Bhw-1	Actual Volatile Organic Compounds (VOC) in tons per year	0.03	tons/y
020	Boiler (Ta-59-1) Bhw-1	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
021	Boiler (Ta-59-1) Bhw-2	Actual Percent of Operation During Winter	40	percent of time
021	Boiler (Ta-59-1) Bhw-2	Actual Percent of Operation During Spring	20	percent of time
021	Boiler (Ta-59-1) Bhw-2	Actual Percent of Operation During Summer	0	percent of time
021	Boiler (Ta-59-1) Bhw-2	Actual Percent of Operation During Fall	40	percent of time
021	Boiler (Ta-59-1) Bhw-2	Actual Operating Time in Hours Per Day	15	h/d
021	Boiler (Ta-59-1) Bhw-2	Actual Operating Time in Days Per Week	7	d/week
021	Boiler (Ta-59-1) Bhw-2	Actual Operating Time in Weeks Per Year	33	weeks/y
021	Boiler (Ta-59-1) Bhw-2	Actual Operating Time in Hours Per Year	5500	h/y
021	Boiler (Ta-59-1) Bhw-2	Actual Fuel Consumption	10.01	MM SCF/y
021	Boiler (Ta-59-1) Bhw-2	Actual Fuel Heating Value	1030	MM BTU/MM SCF
021	Boiler (Ta-59-1) Bhw-2	Actual Fuel Type	209	Natural Gas
021	Boiler (Ta-59-1) Bhw-2	Actual Percent Sulfur of Fuel	0	percent
021	Boiler (Ta-59-1) Bhw-2	Actual Percent Ash of Fuel	0	percent
021	Boiler (Ta-59-1) Bhw-2	Actual Input Materials Processed	209	Natural Gas
021	Boiler (Ta-59-1) Bhw-2	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
021	Boiler (Ta-59-1) Bhw-2	Actual Carbon Monoxide in tons per year	0.455	tons/y
021	Boiler (Ta-59-1) Bhw-2	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
021	Boiler (Ta-59-1) Bhw-2	Actual Hexane in tons per year	0.01	tons/y
021	Boiler (Ta-59-1) Bhw-2	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
021	Boiler (Ta-59-1) Bhw-2	Actual Nitrogen Dioxide in tons per year	0.542	tons/y
021	Boiler (Ta-59-1) Bhw-2	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
021	Boiler (Ta-59-1) Bhw-2	Actual Particulate Matter (10 microns or less) in tons per year	0.041	tons/y
021	Boiler (Ta-59-1) Bhw-2	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
021	Boiler (Ta-59-1) Bhw-2	Actual Particulate Matter (2.5 microns or less) in tons per year	0.041	tons/y
021	Boiler (Ta-59-1) Bhw-2	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
021	Boiler (Ta-59-1) Bhw-2	Actual Particulate Matter (total suspended) in tons per year	0.041	tons/y
021	Boiler (Ta-59-1) Bhw-2	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
021	Boiler (Ta-59-1) Bhw-2	Actual Sulfur Dioxide in tons per year	0.003	tons/y
021	Boiler (Ta-59-1) Bhw-2	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
021	Boiler (Ta-59-1) Bhw-2	Actual Volatile Organic Compounds (VOC) in tons per year	0.03	tons/y
021	Boiler (Ta-59-1) Bhw-2	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent of Operation During Winter	25	percent of time
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent of Operation During Spring	25	percent of time
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent of Operation During Summer	25	percent of time
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent of Operation During Fall	25	percent of time
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Operating Time in Hours Per Day	24	h/d
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Operating Time in Days Per Week	7	d/week
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Operating Time in Weeks Per Year	52	weeks/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Operating Time in Hours Per Year	8760	h/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Fuel Consumption	23.83	MM SCF/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Fuel Heating Value	1030	MM BTU/MM SCF
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Fuel Type	209	Natural Gas
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent Sulfur of Fuel	0	percent
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Percent Ash of Fuel	0	percent
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Input Materials Processed	209	Natural Gas
				External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Standard Classification (SCC) Code	10100602	Million Btu/hr except Tangential
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Carbon Monoxide in tons per year	0.478	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Carbon Monoxide calculation method	11	Manufacturer Specification
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Formaldehyde in tons per year	0.001	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Hexane in tons per year	0.023	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Nitrogen Dioxide in tons per year	0.478	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Nitrogen Dioxide calculation method	11	Manufacturer Specification
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Nitrogen DioxideActual total efficiency controlled by Low NOX Burners	63	percent
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (10 microns or less) in tons per year	0.098	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (2.5 microns or less) in tons per year	0.098	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (total suspended) in tons per year	0.098	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Sulfur Dioxide in tons per year	0.008	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Volatile Organic Compounds (VOC) in tons per year	0.071	tons/y
TA-16-1484	TA-16 Boiler with Backup, Plant-5	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Percent of Operation During Winter	25	percent of time
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Percent of Operation During Spring	25	percent of time
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Percent of Operation During Summer	25	percent of time
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Percent of Operation During Fall	25	percent of time
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Operating Time in Hours Per Day	4	h/d
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Operating Time in Days Per Week	1	d/week
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Operating Time in Weeks Per Year	52	weeks/y
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Operating Time in Hours Per Year	208	h/y
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual Input Materials Processed	952	Solvents: All
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Standard Classification (SCC) Code	40100255	Petroleum and Solvent Evaporation, Organic Solvent Evaporation, Degreasing, Trichloroethylene:
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual TCE; (Trichloroethylene); (Trichloroethene) in tons per year	0.011	tons/y
028	Degreaser - Cold Ultrasonic Bath Ta-55-4	Actual TCE; (Trichloroethylene); (Trichloroethene) calculation method	mb	Material balance

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Winter	30	percent of time
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Spring	20	percent of time
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Summer	20	percent of time
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Fall	30	percent of time
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Day	24	h/d
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Days Per Week	7	d/week
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Weeks Per Year	52	weeks/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Year	8760	h/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Consumption	161.6	MM SCF/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Heating Value	1030	MM BTU/MM SCF
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Type	209	Natural Gas
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent Sulfur of Fuel	0	percent
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Percent Ash of Fuel	0	percent
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Input Materials Processed	209	Natural Gas
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Standard Classification (SCC) Code	10100601	External Combustion Boilers, Electric Generation, Natural Gas, Boilers > 100 Million Btu/hr except Tangential
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide in tons per year	3.232	tons/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde in tons per year	0.006	tons/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Hexane in tons per year	0.145	tons/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide in tons per year	4.686	tons/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Nitrogen DioxideActual total efficiency controlled by Flue Gas Recirculation	64	percent
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) in tons per year	0.614	tons/y
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)
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.614	tons/y
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)
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) in tons per year	0.614	tons/y
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)
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide in tons per year	0.048	tons/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Toluene; (Methyl benzene) in tons per year	0	tons/y
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Toluene; (Methyl benzene) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-1	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) in tons per year	0.444	tons/y
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)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Winter	30	percent of time
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Spring	20	percent of time
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Summer	20	percent of time
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Fall	30	percent of time
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Day	24	h/d
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Days Per Week	7	d/week
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Weeks Per Year	52	weeks/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Year	8760	h/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Consumption	138.2	MM SCF/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Heating Value	1030	MM BTU/MM SCF
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Type	209	Natural Gas
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Percent Sulfur of Fuel	0	percent
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Percent Ash of Fuel	0	percent
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Input Materials Processed	209	Natural Gas
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Standard Classification (SCC) Code	10100601	External Combustion Boilers, Electric Generation, Natural Gas, Boilers > 100 Million Btu/hr except Tangential
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide in tons per year	2.763	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde in tons per year	0.005	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Hexane in tons per year	0.124	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide in tons per year	4.007	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Nitrogen DioxideActual total efficiency controlled by Flue Gas Recirculation	64	percent
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) in tons per year	0.525	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.525	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) in tons per year	0.525	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide in tons per year	0.04	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) in tons per year	0.38	tons/y
TA-3-22-2	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Winter	30	percent of time
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Spring	20	percent of time
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Summer	20	percent of time
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Percent of Operation During Fall	30	percent of time
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Day	24	h/d
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Days Per Week	7	d/week
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Weeks Per Year	52	weeks/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Operating Time in Hours Per Year	8760	h/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Consumption	259.9	MM SCF/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Heating Value	1030	MM BTU/MM SCF
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Fuel Type	209	Natural Gas
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Percent Sulfur of Fuel	0	percent
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Percent Ash of Fuel	0	percent
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Input Materials Processed	209	Natural Gas
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Standard Classification (SCC) Code	10100601	External Combustion Boilers, Electric Generation, Natural Gas, Boilers > 100 Million Btu/hr except Tangential
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide in tons per year	5.198	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde in tons per year	0.01	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Hexane in tons per year	0.234	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide in tons per year	7.536	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Nitrogen DioxideActual total efficiency controlled by Flue Gas Recirculation	64	percent
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) in tons per year	0.988	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.988	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) in tons per year	0.988	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide in tons per year	0.078	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) in tons per year	0.715	tons/y
TA-3-22-3	Power Plant Boiler (pph, Natural Gas)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Percent of Operation During Winter	25	percent of time
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Percent of Operation During Spring	25	percent of time
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Percent of Operation During Summer	25	percent of time
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Percent of Operation During Fall	25	percent of time
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Operating Time in Hours Per Day	24	h/d
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Operating Time in Days Per Week	7	d/week
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Operating Time in Weeks Per Year	52	weeks/y
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Operating Time in Hours Per Year	8760	h/y
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Fuel Consumption	5228	gallon
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Input Materials Processed	58	Distillate Oil (No. 2)
035	Tank 03-026 (No. 2 Fuel Oil)	Standard Classification (SCC) Code	39090004	Industrial Processes, In-process Fuel Use, Fuel Storage - Fixed Roof Tanks, Distillate Oil (No. 2): Working Loss
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Volatile Organic Compounds (VOC) in tons per year	0.007	tons/y
035	Tank 03-026 (No. 2 Fuel Oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Percent of Operation During Winter	25	percent of time
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Percent of Operation During Spring	25	percent of time
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Percent of Operation During Summer	25	percent of time
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Percent of Operation During Fall	25	percent of time
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Operating Time in Hours Per Day	24	h/d
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Operating Time in Days Per Week	7	d/week
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Operating Time in Weeks Per Year	52	weeks/y
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Operating Time in Hours Per Year	8760	h/y
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Fuel Consumption	5228	gallon
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Input Materials Processed	58	Distillate Oil (No. 2)
036	Tank 03-779 (No. 2 Fuel Oil)	Standard Classification (SCC) Code	39090004	Industrial Processes, In-process Fuel Use, Fuel Storage - Fixed Roof Tanks, Distillate Oil (No. 2): Working Loss
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Volatile Organic Compounds (VOC) in tons per year	0.033	tons/y
036	Tank 03-779 (No. 2 Fuel Oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Percent of Operation During Winter	40	percent of time
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Percent of Operation During Spring	20	percent of time
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Percent of Operation During Summer	0	percent of time
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Percent of Operation During Fall	40	percent of time
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Operating Time in Hours Per Day	15	h/d
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Operating Time in Days Per Week	7	d/week
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Operating Time in Weeks Per Year	33	weeks/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Operating Time in Hours Per Year	5500	h/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Fuel Consumption	7.683	MM SCF/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Fuel Heating Value	1030	MM BTU/MM SCF
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Fuel Type	209	Natural Gas
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Percent Sulfur of Fuel	0	percent
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Percent Ash of Fuel	0	percent
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Input Materials Processed	209	Natural Gas
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Carbon Monoxide in tons per year	0.147	tons/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Carbon Monoxide calculation method	11	Manufacturer Specification
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Hexane in tons per year	0.007	tons/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Nitrogen Dioxide in tons per year	0.53	tons/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (10 microns or less) in tons per year	0.055	tons/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (10 microns or less) calculation method	11	Manufacturer Specification
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.055	tons/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (2.5 microns or less) calculation method	11	Manufacturer Specification
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (total suspended) in tons per year	0.055	tons/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (total suspended) calculation method	11	Manufacturer Specification
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Sulfur Dioxide in tons per year	0.002	tons/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Volatile Organic Compounds (VOC) in tons per year	0.023	tons/y
037	Sellers Boiler Bhw-1b(Ta 55, Bldg. Pf6)	Actual Volatile Organic Compounds (VOC) calculation method	11	Manufacturer Specification

Subject Item Designation	Subject Item Description	Field Description	Value	Description
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Percent of Operation During Winter	40	percent of time
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Percent of Operation During Spring	20	percent of time
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Percent of Operation During Summer	0	percent of time
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Percent of Operation During Fall	40	percent of time
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Operating Time in Hours Per Day	15	h/d
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Operating Time in Days Per Week	7	d/week
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Operating Time in Weeks Per Year	33	weeks/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Operating Time in Hours Per Year	5500	h/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Fuel Consumption	19.437	MM SCF/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Fuel Heating Value	1030	MM BTU/MM SCF
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Fuel Type	209	Natural Gas
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Percent Sulfur of Fuel	0	percent
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Percent Ash of Fuel	0	percent
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Input Materials Processed	209	Natural Gas
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Standard Classification (SCC) Code	10100602	External Combustion Boilers, Electric Generation, Natural Gas, Boilers < 100 Million Btu/hr except Tangential
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Carbon Monoxide in tons per year	0.371	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Carbon Monoxide calculation method	11	Manufacturer Specification
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Formaldehyde in tons per year	0.001	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Hexane in tons per year	0.018	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Lead in tons per year	0	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Lead calculation method	11	Manufacturer Specification
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Nitrogen Dioxide in tons per year	1.341	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Nitrogen Dioxide calculation method	st	Actual stack test
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (10 microns or less) in tons per year	0.138	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (10 microns or less) calculation method	11	Manufacturer Specification
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.138	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (2.5 microns or less) calculation method	11	Manufacturer Specification
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (total suspended) in tons per year	0.138	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Particulate Matter (total suspended) calculation method	11	Manufacturer Specification
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Sulfur Dioxide in tons per year	0.006	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Volatile Organic Compounds (VOC) in tons per year	0.058	tons/y
038	Sellers Boiler Bhw-2b(Ta 55, Bldg. Pf6)	Actual Volatile Organic Compounds (VOC) calculation method	11	Manufacturer Specification

Subject Item Designation	Subject Item Description	Field Description	Value	Description
044	BoilerTA-50 RLWTF	Actual Percent of Operation During Winter	25	percent of time
044	BoilerTA-50 RLWTF	Actual Percent of Operation During Spring	25	percent of time
044	BoilerTA-50 RLWTF	Actual Percent of Operation During Summer	25	percent of time
044	BoilerTA-50 RLWTF	Actual Percent of Operation During Fall	25	percent of time
044	BoilerTA-50 RLWTF	Actual Operating Time in Hours Per Day	12	h/d
044	BoilerTA-50 RLWTF	Actual Operating Time in Days Per Week	2	d/week
044	BoilerTA-50 RLWTF	Actual Operating Time in Weeks Per Year	12	weeks/y
044	BoilerTA-50 RLWTF	Actual Operating Time in Hours Per Year	192	h/y
044	BoilerTA-50 RLWTF	Actual Fuel Consumption	0.018	MM SCF/y
044	BoilerTA-50 RLWTF	Actual Fuel Heating Value	1030	MM BTU/MM SCF
044	BoilerTA-50 RLWTF	Actual Fuel Type	209	Natural Gas
044	BoilerTA-50 RLWTF	Actual Percent Sulfur of Fuel	0	percent
044	BoilerTA-50 RLWTF	Actual Percent Ash of Fuel	0	percent
044	BoilerTA-50 RLWTF	Actual Input Materials Processed	209	Natural Gas
044	BoilerTA-50 RLWTF	Standard Classification (SCC) Code	10100604	External Combustion Boilers, Electric Generation, Natural Gas, Tangentially Fired Units
044	BoilerTA-50 RLWTF	Actual Carbon Monoxide in tons per year	0.001	tons/y
044	BoilerTA-50 RLWTF	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
044	BoilerTA-50 RLWTF	Actual Hexane in tons per year	0	tons/y
044	BoilerTA-50 RLWTF	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
044	BoilerTA-50 RLWTF	Actual Lead in tons per year	0	tons/y
044	BoilerTA-50 RLWTF	Actual Lead calculation method	ap	EPA emission factors (e.g., AP-42)
044	BoilerTA-50 RLWTF	Actual Nitrogen Dioxide in tons per year	0.001	tons/y
044	BoilerTA-50 RLWTF	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
044	BoilerTA-50 RLWTF	Actual Particulate Matter (10 microns or less) in tons per year	0	tons/y
044	BoilerTA-50 RLWTF	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
044	BoilerTA-50 RLWTF	Actual Particulate Matter (2.5 microns or less) in tons per year	0	tons/y
044	BoilerTA-50 RLWTF	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
044	BoilerTA-50 RLWTF	Actual Particulate Matter (total suspended) in tons per year	0	tons/y
044	BoilerTA-50 RLWTF	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
044	BoilerTA-50 RLWTF	Actual Sulfur Dioxide in tons per year	0	tons/y
044	BoilerTA-50 RLWTF	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
044	BoilerTA-50 RLWTF	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
044	BoilerTA-50 RLWTF	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-33-G-1	Diesel Fired Generator	Actual Percent of Operation During Winter	0	percent of time
TA-33-G-1	Diesel Fired Generator	Actual Percent of Operation During Spring	0	percent of time
TA-33-G-1	Diesel Fired Generator	Actual Percent of Operation During Summer	0	percent of time
TA-33-G-1	Diesel Fired Generator	Actual Percent of Operation During Fall	0	percent of time
TA-33-G-1	Diesel Fired Generator	Actual Operating Time in Hours Per Day	0	h/d
TA-33-G-1	Diesel Fired Generator	Actual Operating Time in Days Per Week	0	d/week
TA-33-G-1	Diesel Fired Generator	Actual Operating Time in Weeks Per Year	0	weeks/y
TA-33-G-1	Diesel Fired Generator	Actual Operating Time in Hours Per Year	0	h/y
TA-33-G-1	Diesel Fired Generator	Actual Fuel Consumption	0	M gal/y
TA-33-G-1	Diesel Fired Generator	Actual Fuel Heating Value	0	MM BTU/M gal
TA-33-G-1	Diesel Fired Generator	Actual Fuel Type	44	Diesel
TA-33-G-1	Diesel Fired Generator	Actual Percent Sulfur of Fuel	0.34	percent
TA-33-G-1	Diesel Fired Generator	Actual Percent Ash of Fuel	0.01	percent
TA-33-G-1	Diesel Fired Generator	Actual Input Materials Processed	44	Diesel
TA-33-G-1	Diesel Fired Generator	Standard Classification (SCC) Code	20100102	Internal Combustion Engines, Electric Generation, Distillate Oil (Diesel), Reciprocating
TA-33-G-1	Diesel Fired Generator	Actual Carbon Monoxide in tons per year	0	tons/y
TA-33-G-1	Diesel Fired Generator	Actual Carbon Monoxide calculation method	dc	Design calculation
TA-33-G-1	Diesel Fired Generator	Actual Lead in tons per year	0	tons/y
TA-33-G-1	Diesel Fired Generator	Actual Lead calculation method	dc	Design calculation
TA-33-G-1	Diesel Fired Generator	Actual Nitrogen Dioxide in tons per year	0	tons/y
TA-33-G-1	Diesel Fired Generator	Actual Nitrogen Dioxide calculation method	dc	Design calculation
TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (10 microns or less) in tons per year	0	tons/y
TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (10 microns or less) calculation method	dc	Design calculation
TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (2.5 microns or less) in tons per year	0	tons/y
TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (2.5 microns or less) calculation method	dc	Design calculation
TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (total suspended) in tons per year	0	tons/y
TA-33-G-1	Diesel Fired Generator	Actual Particulate Matter (total suspended) calculation method	dc	Design calculation
TA-33-G-1	Diesel Fired Generator	Actual Sulfur Dioxide in tons per year	0	tons/y
TA-33-G-1	Diesel Fired Generator	Actual Sulfur Dioxide calculation method	dc	Design calculation
TA-33-G-1	Diesel Fired Generator	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
TA-33-G-1	Diesel Fired Generator	Actual Volatile Organic Compounds (VOC) calculation method	dc	Design calculation

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-60	Tank (Asphalt Emulsion)	AQB-State/Local ID	035	Not Applicable
TA-60	Tank (Asphalt Emulsion)	Actual Percent of Operation During Winter	25	percent of time
TA-60	Tank (Asphalt Emulsion)	Actual Percent of Operation During Spring	25	percent of time
TA-60	Tank (Asphalt Emulsion)	Actual Percent of Operation During Summer	25	percent of time
TA-60	Tank (Asphalt Emulsion)	Actual Percent of Operation During Fall	25	percent of time
TA-60	Tank (Asphalt Emulsion)	Actual Operating Time in Hours Per Day	24	h/d
TA-60	Tank (Asphalt Emulsion)	Actual Operating Time in Days Per Week	7	d/week
TA-60	Tank (Asphalt Emulsion)	Actual Operating Time in Weeks Per Year	52	weeks/y
TA-60	Tank (Asphalt Emulsion)	Actual Operating Time in Hours Per Year	8760	h/y
TA-60	Tank (Asphalt Emulsion)	Actual Fuel Consumption	28,432	gallon
TA-60	Tank (Asphalt Emulsion)	Actual Input Materials Processed	647	Asphalt
TA-60	Tank (Asphalt Emulsion)	Standard Classification (SCC) Code	A2501995000	Storage and Transport, Petroleum and Petroleum Product Storage, All Storage Types: Working Loss, Total: All Products
TA-60	Tank (Asphalt Emulsion)	Actual Volatile Organic Compounds (VOC) in tons per year	0.003	tons/y
TA-60	Tank (Asphalt Emulsion)	Actual Volatile Organic Compounds (VOC) calculation method	ap	AP-42

Subject Item Designation	Subject Item Description	Field Description	Value	Description
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Percent of Operation During Winter	25	percent of time
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Percent of Operation During Spring	25	percent of time
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Percent of Operation During Summer	25	percent of time
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Percent of Operation During Fall	25	percent of time
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Operating Time in Hours Per Day	7	h/d
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Operating Time in Days Per Week	5	d/week
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Operating Time in Weeks Per Year	52	weeks/y
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Operating Time in Hours Per Year	2000	h/y
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Input Materials Processed	226	Paper
Ta-52-11	Data Disintegrator/industrial Shredder	Standard Classification (SCC) Code	30701399	Industrial Processes, Pulp and Paper and Wood Products, Miscellaneous Paper Products, Other Not Classified
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Particulate Matter (10 microns or less) in tons per year	0.29	tons/y
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Particulate Matter (10 microns or less) calculation method	11	Manufacturer Specification
Ta-52-11	Data Disintegrator/industrial Shredder	Particulate Matter (10 microns or less)Actual total efficiency controlled by Single Cyclone, Fabric Filter	75	percent
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Particulate Matter (2.5 microns or less) in tons per year	0.19	tons/y
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Particulate Matter (2.5 microns or less) calculation method	11	Manufacturer Specification
Ta-52-11	Data Disintegrator/industrial Shredder	Particulate Matter (2.5 microns or less)Actual total efficiency controlled by Single Cyclone, Fabric Filter	0	percent
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Particulate Matter (total suspended) in tons per year	0.32	tons/y
Ta-52-11	Data Disintegrator/industrial Shredder	Actual Particulate Matter (total suspended) calculation method	11	Manufacturer Specification
Ta-52-11	Data Disintegrator/industrial Shredder	Particulate Matter (total suspended)Actual total efficiency controlled by Single Cyclone, Fabric Filter	75	percent

Subject Item Designation	Subject Item Description	Field Description	Value	Description
043	Composite Mineral Oil Tank	Actual Percent of Operation During Winter	25	percent of time
043	Composite Mineral Oil Tank	Actual Percent of Operation During Spring	25	percent of time
043	Composite Mineral Oil Tank	Actual Percent of Operation During Summer	25	percent of time
043	Composite Mineral Oil Tank	Actual Percent of Operation During Fall	25	percent of time
043	Composite Mineral Oil Tank	Actual Operating Time in Hours Per Day	24	h/d
043	Composite Mineral Oil Tank	Actual Operating Time in Days Per Week	7	d/week
043	Composite Mineral Oil Tank	Actual Operating Time in Weeks Per Year	52	weeks/y
043	Composite Mineral Oil Tank	Actual Operating Time in Hours Per Year	8760	h/y
043	Composite Mineral Oil Tank	Actual Fuel Consumption		MM SCF/y
043	Composite Mineral Oil Tank	Actual Input Materials Processed		
043	Composite Mineral Oil Tank	Standard Classification (SCC) Code	39090004	Industrial Processes, In-process Fuel Use, Fuel Storage - Fixed Roof Tanks, Distillate Oil (No. 2): Working Loss
043	Composite Mineral Oil Tank	Actual Volatile Organic Compounds (VOC) in tons per year	0.007	tons/y
043	Composite Mineral Oil Tank	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	AQB-State/Local ID	002	Not Applicable
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Winter	30	percent of time
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Spring	20	percent of time
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Summer	20	percent of time
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Fall	30	percent of time
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Day	24	h/d
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Days Per Week	2	d/week
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Weeks Per Year	12	weeks/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Year	576	h/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Consumption	1.918	M gal/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Heating Value	137,000	BTU/gal
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Type	44	Diesel
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Sulfur of Fuel	0.05	percent
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Ash of Fuel	<0.01	percent
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Input Materials Processed	44	Diesel
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Standard Classification (SCC) Code	10100601	External Combustion Boilers, Electric Generation, Natural Gas, Boilers > 100 Million Btu/hr except Tangential
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide in tons per year	0.005	tons/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide calculation method	ap	AP-42
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead in tons per year	0	tons/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead calculation method	ap	AP-42
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide in tons per year	0.008	tons/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide calculation method	st	Stack Test
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) in tons per year	0.002	tons/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) calculation method	ap	AP-42
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.001	tons/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	AP-42
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) in tons per year	0.003	tons/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) calculation method	ap	AP-42
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide in tons per year	0.007	tons/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide calculation method	ap	AP-42
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
TA-3-22-1	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	AP-42

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	AQB-State/Local ID	002	Not Applicable
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Winter	30	percent of time
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Spring	20	percent of time
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Summer	20	percent of time
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Fall	30	percent of time
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Day	24	h/d
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Days Per Week	2	d/week
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Weeks Per Year	12	weeks/y
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Year	576	h/y
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Consumption	1.559	M gal/y
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Heating Value	137,000	BTU/gal
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Type	44	Diesel
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Sulfur of Fuel	0.05	percent
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Ash of Fuel	<0.01	percent
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Input Materials Processed	44	Diesel
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
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide in tons per year	0.004	tons/y
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide calculation method	ap	AP-42
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead in tons per year	0	tons/y
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead calculation method	ap	AP-42
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide in tons per year	0.007	tons/y
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide calculation method	st	Stack Test
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
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) calculation method	ap	AP-42
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
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	AP-42
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
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) calculation method	ap	AP-42
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide in tons per year	0.006	tons/y
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide calculation method	ap	AP-42
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
TA-3-22-2	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	AP-42

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	AQB-State/Local ID	002	Not Applicable
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Winter	30	percent of time
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Spring	20	percent of time
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Summer	20	percent of time
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent of Operation During Fall	30	percent of time
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Day	24	h/d
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Days Per Week	2	d/week
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Weeks Per Year	12	weeks/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Operating Time in Hours Per Year	576	h/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Consumption	1.751	M gal/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Heating Value	137,000	BTU/gal
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Fuel Type	44	Diesel
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Sulfur of Fuel	0.05	percent
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Percent Ash of Fuel	<0.01	percent
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Input Materials Processed	44	Diesel
TA-3-22-3	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
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide in tons per year	0.004	tons/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Carbon Monoxide calculation method	ap	AP-42
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead in tons per year	0	tons/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Lead calculation method	ap	AP-42
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide in tons per year	0.008	tons/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Nitrogen Dioxide calculation method	st	Stack Test
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) in tons per year	0.002	tons/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (10 microns or less) calculation method	ap	AP-42
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) in tons per year	0.001	tons/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (2.5 microns or less) calculation method	ap	AP-42
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) in tons per year	0.003	tons/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Particulate Matter (total suspended) calculation method	ap	AP-42
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide in tons per year	0.006	tons/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Sulfur Dioxide calculation method	ap	AP-42
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
TA-3-22-3	Power Plant Boiler (pph, No.2 fuel oil)	Actual Volatile Organic Compounds (VOC) calculation method	ap	AP-42

Subject Item Designation	Subject Item Description	Field Description	Value	Description
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent of Operation During Winter	0	percent of time
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent of Operation During Spring	0	percent of time
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent of Operation During Summer	0	percent of time
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent of Operation During Fall	0	percent of time
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Operating Time in Hours Per Day	0	h/d
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Operating Time in Days Per Week	0	d/week
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Operating Time in Weeks Per Year	0	weeks/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Operating Time in Hours Per Year	0	h/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Fuel Consumption	0	MM SCF/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Fuel Heating Value	0	MM BTU/MM SCF
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Fuel Type	209	Natural Gas
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent Sulfur of Fuel	0	percent
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Percent Ash of Fuel	0	percent
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Input Materials Processed	209	Natural Gas
CT-1	Turbine Generation Set (TA-3, Power plant)	Standard Classification (SCC) Code	20100201	Internal Combustion Engines, Electric Generation, Natural Gas, Turbine
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Carbon Monoxide in tons per year	0	tons/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Carbon Monoxide calculation method	dc	Design calculation
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Lead in tons per year	0	tons/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Lead calculation method	dc	Design calculation
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Nitrogen Dioxide in tons per year	0	tons/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Nitrogen Dioxide calculation method	dc	Design calculation
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (10 microns or less) in tons per year	0	tons/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (10 microns or less) calculation method	dc	Design calculation
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (2.5 microns or less) in tons per year	0	tons/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (2.5 microns or less) calculation method	dc	Design calculation
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (total suspended) in tons per year	0	tons/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Particulate Matter (total suspended) calculation method	dc	Design calculation
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Sulfur Dioxide in tons per year	0	tons/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Sulfur Dioxide calculation method	dc	Design calculation
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
CT-1	Turbine Generation Set (TA-3, Power plant)	Actual Volatile Organic Compounds (VOC) calculation method	dc	Design calculation

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Percent of Operation During Winter	25	percent of time
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Percent of Operation During Spring	25	percent of time
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Percent of Operation During Summer	25	percent of time
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Percent of Operation During Fall	25	percent of time
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Operating Time in Hours Per Day	24	h/d
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Operating Time in Days Per Week	2	d/week
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Operating Time in Weeks Per Year	12	weeks/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Operating Time in Hours Per Year	576	h/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Fuel Consumption	0.252	M gal/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Fuel Heating Value	137,000	BTU/gal
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Fuel Type	41	Diesel
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Percent Sulfur of Fuel	<0.34	percent
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Percent Ash of Fuel	<0.01	percent
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Input Materials Processed	41	Diesel
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Standard Classification (SCC) Code	10100501	External Combustion Boilers, Electric Generation, Distillate Oil, Grades 1 and 2 Oil
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Carbon Monoxide in tons per year	0.001	tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Formaldehyde in tons per year	0	tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Formaldehyde calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Hexane in tons per year		tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Hexane calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Nitrogen Dioxide in tons per year	0.003	tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Particulate Matter (10 microns or less) in tons per year	0.0003	tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Particulate Matter (10 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Particulate Matter (2.5 microns or less) in tons per year	0.0002	tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Particulate Matter (2.5 microns or less) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Particulate Matter (total suspended) in tons per year	0.0004	tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Particulate Matter (total suspended) calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Sulfur Dioxide in tons per year	0.006	tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Sulfur DioxideActual total efficiency controlled by Uncontrolled		percent
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Volatile Organic Compounds (VOC) in tons per year	0	tons/y
TA-21-357-1b	Steam Plant Boiler (x3) Ta21 Bldg357 No. 2 Fuel	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

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

Subject Item Designation	Subject Item Description	Field Description	Value	Description
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent of Operation During Winter	35	percent of time
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent of Operation During Spring	0	percent of time
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent of Operation During Summer	25	percent of time
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent of Operation During Fall	40	percent of time
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Operating Time in Hours Per Day	8	h/d
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Operating Time in Days Per Week	5	d/week
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Operating Time in Weeks Per Year	26	weeks/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Operating Time in Hours Per Year	1040	h/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Fuel Consumption	1,621	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Fuel Heating Value	91,200	BTU/gal
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Fuel Type	255	Propane
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent Sulfur of Fuel	0	percent
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Percent Ash of Fuel	0	percent
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Input Materials Processed	647	Asphalt Products, Asphalt Concrete, Drum Mix Plant: Rotary Drum Dryer / Mixer,
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Standard Classification (SCC) Code	30500255	Natural Gas - Fired
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Carbon Monoxide in tons per year	0.324	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Carbon Monoxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Lead in tons per year	0	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Lead calculation method	ap	EPA emission factors (e.g., AP-42)
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Nitrogen Dioxide in tons per year	0.02	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Nitrogen Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (10 microns or less) in tons per year	0.005	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (10 microns or less) calculation method	11	Manufacturer Specification
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (2.5 microns or less) in tons per year	0.005	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (2.5 microns or less) calculation method	11	Manufacturer Specification
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (total suspended) in tons per year	0.008	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Particulate Matter (total suspended) calculation method	11	Manufacturer Specification
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Sulfur Dioxide in tons per year	0.004	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Sulfur Dioxide calculation method	ap	EPA emission factors (e.g., AP-42)
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Volatile Organic Compounds (VOC) in tons per year	0.007	tons/y
TA-60-BDMb	Asphalt Plant Dryer (Alt Op Scen) Propane	Actual Volatile Organic Compounds (VOC) calculation method	ap	EPA emission factors (e.g., AP-42)

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

ATTACHMENT C.
2005 SEMI-ANNUAL EMISSIONS REPORTS SUBMITTED
UNDER TITLE V OPERATING PERMIT REQUIREMENTS

Los Alamos
NATIONAL LABORATORY
EST. 1943

Environmental Stewardship Division
Meteorology and Air Quality Group
P.O. Box 1663, MS J978
Los Alamos, New Mexico 87545
(505) 665-8855/FAX: (505) 665-8858

Date: September 15, 2005
Refer to: ENV-MAQ:05-267

Mr. Edward L. Horst
Environmental Compliance Specialist
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)
SEMI-ANNUAL EMISSIONS REPORT – OPERATING PERMIT NUMBER: P100

Dear Mr. Horst:

Attached is the semi-annual emissions report for January through June of 2005. This report includes actual emissions from permitted sources included in section 2.0 of the Los Alamos National Laboratory (LANL) Operating Permit. This submission satisfies permit condition 4.1., which requires submission of a semi-annual emissions report on a 6-month basis. Furthermore, this report is submitted within 90 days from the end of the reporting period as stipulated in permit condition 4.3.

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. 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.

A Construction Permit modification (NSR Permit 2195B-M1) was issued on July 30, 2004 to install a combustion turbine at the TA-3 power plant, but installation is not yet complete. This permit reduced the allowable emissions for the TA-3 power plant boilers. In addition, emissions from the data disintegrator, which replaced the paper shredder in 2004, are included in this report. The emission limits for this unit were taken from NSR Air Quality Permit 2195-H. Both of these changes were incorporated into the LANL Operating Permit modification application submitted in July of 2005.

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

Douglas M. Stavert
Deputy Division Leader (Acting)
Environmental Stewardship Division

DMS:alb

Cy:

S. Fong, DOE-LA-AO, A316
K. Hargis, ENV-DO, J591
D. Stavert, ENV-DO, J978
P. Wardwell, LC-ESH, A187
M. Clay, DX-TSO, C925
F. Sisneros, DX-TSO, C925
D. Macdonell, ESA-WOI, C928
D. Shoemaker, FM-MSE, K787
T. Siverling, FM-MSE, K787
D. Padilla, FM-UI, K718
J. Gonzales, FM-UI, K718
R. Patterson, MST-6, G770
P. Reardon, MST-7, E549
T. Blum, NMT-DO, E509
P. Sasa, NMT-DO, G746
H. Decker, NMT-7, E501
S. Evans-Carmichael, NMT-7, E501
S. Barnes, S-5, G733
D. Fuehne, ENV-MAQ, J978
J. Hurtle, ENV-MAQ, J978
D. Wilburn, ENV-MAQ, J978
S. Story, ENV-MAQ, J978
M. Stockton, ENV-MAQ, J978
W. Whetham, ENV-MAQ, J978
D. Plante, KSL, A199
ENV-MAQ Title V Emissions Report File
ENV-MAQ Reading File

Title V Operating Permit
Semi-Annual Emission Report

January 1 – June 30, 2005

Source Name: Los Alamos National Laboratory County: Los Alamos

Source Address:
City: Los Alamos State: NM Zip Code: 87545

Responsible Official: Douglas M. Stavert Ph No. (505) 665-0235 Fax No. (505) 665-8190
Technical Contact: Steven L. Story Ph No. (505) 665-2169 Fax No. (505) 665-8858
Principal Company Product or Business: National Security and Nuclear Weapons Research Primary SIC Code: 9711

Permit No. P100 {IDEA/Tempo ID No. 856} Permit Issued Date: April 30, 2004

I, Douglas M. Stavert 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:

Title: Deputy Division Leader (Acting), Environmental Stewardship Division

Los Alamos National Laboratory
2005 Semi-Annual Emissions Report
(January through June)

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 P100. The emissions included in this report were calculated using operating data recorded during the first six months of 2005.

Facility Emissions

The following table displays the actual facility-wide emissions compared with the Facility Wide Emission Limits specified in permit condition 2.11 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. Also, due to the method used for calculating Hazardous Air Pollutant (HAP) and Volitile Organic Compound (VOC) emissions from chemical use, fugitive emissions are included (see permit condition 4.1).

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2005 Annual Emissions (tons)
Nitrogen Oxides (NOx)	27.8		
Carbon Monoxide (CO)	19.6		
Volatile Organic Compounds (VOCs)	8.0		
Sulfur Dioxide (SO_2)	0.9		
Particulate Matter (PM)	2.8		
Hazardous Air Pollutants (HAPs)	4.3		
Jan-June Highest Individual HAP (Hydrochloric Acid)	0.7		

LA-UR-05-7072

Los Alamos National Laboratory
2005 Semi-Annual Emissions Report
(January through June)

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	Jan-June Emissions (tons)	July-Dec Emissions (tons)	Annual Emissions (tons)	
NOx	0.0			
SO_2	0.0			
PM	0.0			
CO	0.0			
VOC	0.0			
HAPs	0.0			

Note: The Asphalt Plant did not operate during the first 6 months of 2005.

* The Asphal Plant does not have a tons per year limit for PM. The lb/hr emissions will be demonstrated during the initial source compliance test.

LA-UR-05-7072

2.2 Beryllium Activities

Source	Pollutant	Jan-June Emissions (grams)	July-Dec Emissions (grams)	Annual Emissions (grams)
Beryllium Test Facility TA-3-141	Beryllium	3.30E-03		
Target Fabrication Facility TA-35-213	Beryllium	9.44E-03		
Plutonium Facility TA-55-PF4				
Machining Operation	Beryllium	1.495		
	Aluminum	1.495		
Foundry Operation	Beryllium	0		
	Aluminum	0		
Jan-June Beryllium Total (tons) =		**1.66E-06**	**Jan-June Aluminum Total (tons**	

Note: Emission values shown for the Beryllium Test Facility are from actual stack emission measurements. Emiss are from initial compliance testing of that source and based on 8 hour work days. Emissions for the Plutonium Fac permitted limits. The Plutonium Facility foundry operations did not operate during the first six months of 2005. Oth 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)
NOx	15.9		
SO_2	0.1		
PM	1.3		
PM-10	1.3		
CO	12.8		
VOC	0.9		
HAPs	0.30		

Note: The emissions shown in this table include significant and insignificant sources. This section does include the TA-3-22 Power Plant boilers. These can be found under 2.9. The TA-21 steam plant boilers included in this table.

LA-UR-05-7072

Los Alamos National Laboratory
2005 Semi-Annual Emissions Report
(January through June)

2.4 Carpenter Shops

Shop	Pollutant	January - June Emissions (tons)	July - December Emission (tons)	Annual Emissions (tons)
TA-3-38	PM_{10}	0.027		
TA-15-563	PM_{10}	0.009		

2.5 Chemical Usage

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)
VOCs	6.1		
HAPs	3.7		
Highest Individual HAP (Hydrochloric Acid)	0.7		

2.6 Degreasers

Degreaser TA-55-DG-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)
VOCs	0.006		
HAPs	0.006		

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used in the first six months of 2005. These degreasers are not expected to be used in the near future and are in storage.

LA-UR-05-7072

2.7 Internal Combustion Sources

Generator TA-33-G-1	Jan-June Emissions (tons)	July-Dec Emissions (tons)	Annual (tons)
TSP	0.0		
PM_{10}	0.0		
NOx	0.0		
CO	0.0		
VOC	0.0		
SO_X	0.0		
HAPs	0.0		

Note: The TA-33-G-1 generator did not operate during the first six months of 2005.

Standby Generators	Jan-June Emissions (tons)	July-Dec Emissions (tons)	Annual (tons)
TSP	0.1		
PM_{10}	0.1		
NOx	3.1		
CO	0.7		
VOC	0.2		
SOx	0.7		
HAPs	1.2E-03		

Note: Standby Generators are insignificant sources.

2.8 Paper Shredder

Emission Unit TA-52-11	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)
TSP	0.0		

Note: The paper shredder was shutdown in July 2004 and was replaced with a new data disintegrator (see data disintegrator - section 2.8.b).

2.8.b Data Disintegrator (Unit replaced paper shredder)

Emission Unit TA-52-11	January - June Emissions	July - December Emissions	Annual Emissions (ton)
TSP	0.20		
PM10	0.18		

Note: The data disintegrator was started on August 18, 2004, and replaced the existing paper shredder. This unit and its allowable emissions were included in LANL's Title V operating permit application modification submitted to NMED on July 29, 2005. The data disintegrator was installed under Air Quality Permit No. 2195-H. The emissions from this unit are included in the facility wide total.

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

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)
NOx	8.8		
SO_2	0.1		
TSP	1.2		
PM_{10}	1.2		
CO	6.1		
VOC	0.8		
HAPs	0.3		

Note: On July 29, 2005, LANL submitted a Title V modification application and requested that the power plant boilers emission limits be lowered to be consistant with Construction Permit 2195B-M1 (issued July 30, 2004). The revised Title V permit has not been issued and therefore, the limits shown here reflect the permit limits in the original Title V permit. However, all emissions from the power plant boilers are in compliance with the emission limits in Permit 2195B-M1.

2.10 Rock Crusher

The Rock Crusher was not used during this 6 month reporting period. The source was retired on June 10, 2004.

LA-UR-05-7072

Los Alamos
NATIONAL LABORATORY
EST.1943

Environmental Stewardship Division
Meteorology and Air Quality Group
P.O. Box 1663, MS J978
Los Alamos, New Mexico 87545
(505) 665-8855/FAX: (505) 665-8858

Date: March 24, 2006
Refer to: ENV-MAQ:06-078

Mr. Edward L. Horst
Environmental Compliance Specialist
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)
SEMI-ANNUAL EMISSIONS REPORT – OPERATING PERMIT NUMBER: P100

Dear Mr. Horst:

Attached is the semi-annual emissions report for July - December of 2005. This report includes actual emissions from permitted sources included in section 2.0 of the Los Alamos National Laboratory (LANL) Operating Permit. This submission satisfies permit condition 4.1, which requires submission of an emissions report on a 6-month basis. Furthermore, this report is submitted within 90 days from the end of the reporting period as stipulated in permit condition 4.3.

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. Emissions are also reported for insignificant boiler and generator sources. These sources are included to demonstrate that LANL has not exceeded Prevention of Significant Deterioration (PSD) applicability thresholds.

A Construction Permit modification (NSR Permit 2195B M1) was issued on July 30, 2004 to install a combustion turbine at the TA-3 power plant, but installation is not yet complete. This permit reduced the allowable emissions for the TA-3 power plant boilers. In addition, emissions from the data disintegrator, which replaced the paper shredder in 2005, are included in this report. The emission limits for this unit were taken from NSR Air Quality Permit 2195-H. Both of these changes were incorporated into the LANL Operating Permit modification application submitted in July of 2005.

Should you have any questions or comments regarding the information provided in this report, please contact Steve Story at (505) 665-2169 or Margie Stockton at (505) 667-9359.

Sincerely,

Douglas M. Stavert
Deputy Division Leader (Acting)
Environmental Stewardship Division

DMS:alb

Cy:

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K. Hargis, ENV-DO, J591
P. Wardwell, LC-ESH, A187
M. Clay, DX-TSO, C925
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D. Macdonell, ESA-WOI, C928
D. Shoemaker, FM-MSE, K787
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D. Padilla, FM-UI, K718
J. Gonzales, FM-UI, K718
P. Dunn, MST-6, G770
P. Reardon, MST-7, E549
T. Blum, NMT-DO, E509
P. Sasa, NMT-DO, G746
H. Decker, NMT-7, E501
S. Evans-Carmichael, NMT-7, E501
S. Barnes, S-5, G733
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J. Hurtle, ENV-MAQ, J978
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S. Story, ENV-MAQ, J978
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R. Costa, KSL, A199
ENV-MAQ Title V Emissions Report File
ENV-MAQ Reading File

Title V Operating Permit
Semi-Annual Emissions Report

July 1 – December 31, 2005

Identifying Information

Source Name: Los Alamos National Laboratory County: Los Alamos .

Source Address:
City: Los Alamos State: NM Zip Code: 87545

Responsible Official: Douglas M. Stavert Ph No. (505) 665-0235 Fax No. (505) 665-8190
Technical Contact: Steven L. Story Ph No. (505) 665-2169 Fax No. (505) 665-8858
Principal Company Product or Business: National Security and Nuclear Weapons Research Primary SIC Code: 9711

Permit No. P100 {IDEA/Tempo ID No. 856} Permit Issued Date: April 30, 2004

Certification of Truth, Accuracy, and Completeness

I, Douglas M. Stavert certify that, based on information and belief formed after reasonable inquiry, the statements and information in the attached semi-annual emissions report are true, accurate, and complete.

Signature _____ Date: 1/24/06

Title: Deputy Division Leader (Acting), Environmental Stewardship Division

Los Alamos National Laboratory
2005 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 P100. The emissions were calculated using operating data recorded during the second six months of 2005. The emissions from the first six months of 2005 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 2.11 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. Also, due to the method used for calculating Hazardous Air Pollutant (HAP) and Volatile Organic Compound (VOC) emissions from chemical use, fugitive emissions are included (see permit condition 4.1).

Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	2005 Annual Emissions (ton)	Facility-Wide Emission Limits (Permit Condition 2.11) (ton per year)
Nitrogen Oxides (NO_X)	27.6	22.9	50.5	245
Carbon Monoxide (CO)	19.6	15.5	35.1	225
Volatile Organic Compounds (VOCs)	8.0	6.6	14.6	200
Sulfur Dioxide (SO_2)	0.9	1.0	1.9	150
Particulate Matter (PM)	2.8	2.3	5.1	120
Hazardous Air Pollutants (HAPs)	4.3	2.2	6.5	24 combined
Highest Individual HAP (Hydrochloric Acid)	0.7	0.3	1.0	8 individual

Note: NOx emissions shown for Jan-June are slightly lower than originally reported due to a correction to one of the generator meter readings after the report was submitted.

Los Alamos National Laboratory
2005 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 when applicable.

Permit Condition/Source

2.1 Asphalt Production - BDM Asphalt Plant located at TA-60

Source	Pollutant	Jan-June Emissions (ton)	July-Dec Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.1.2) (ton per year)
BDM Asphalt Plant TA-60	NO_X	0.0	0.020	0.020	1.0
	SO_2	0.0	0.004	0.004	1.0
	PM	0.0	0.008	0.008	No Ton Per Year Limit
	CO	0.0	0.324	0.324	2.6
	VOC	0.0	0.007	0.007	1.0
	HAPs	0.0	0.006	0.006	No Source Permit Limit

Note: The new Asphalt Plant started operation in July 2005. The Asphalt Plant does not have a ton per year limit for PM. Compliance with the lb/hr emission limit was demonstrated during the initial source compliance test.

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2.2 Beryllium Activities

Source	Pollutant	Jan-June Emissions	July-Dec Emissions	Annual Emissions	Emission Limits (Permit Condition 2.2.2)
Beryllium Test Facility TA-3-141	Beryllium (gram)	3.30E-03	3.30E-03	0.007	3.5 gm/yr
Target Fabrication Facility TA-35-213	Beryllium (gram)	9.44E-03	9.00E-03	0.018	0.36 gm/yr
Plutonium Facility TA-55-PF4					
Machining Operation	Beryllium (gram)	1.495	1.41	2.91	2.99 gm/yr
	Aluminum (gram)	1.495	1.41	2.91	2.99 gm/yr
Foundry Operation	Beryllium (gram)	0	0	0	8.73×10^{-4} gm/yr
	Aluminum (gram)	0	0	0	8.73×10^{-4} gm/yr
Beryllium Total (tons) =		**1.66E-06**	**1.57E-06**	**3.23E-06**	
Aluminum Total (tons) =		**1.65E-06**	**1.55E-06**	**3.20E-06**	

Note: Emission values shown for the Beryllium Test Facility are from actual stack emission measurements. Emissions for the Target Fabrication Facility are based on initial compliance testing of that source and a conservative use of maximum hours of operation. Emissions for the Plutonium Facility Machining Operation are based on initial compliance testing of the source and a conservative use of maximum throughput. The Plutonium Facility Foundry Operations did not operate during 2005. Other beryllium sources listed in section 2.2 of the permit do not require reporting in the Semi-Annual Emissions Report.

2.3 Boilers and Heaters

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.3.2) (ton per year)
Boilers and Heaters	**NO_X**	15.9	11.4	27.3	80
	SO_2	0.1	0.1	0.2	50
	PM	1.3	0.9	2.2	50
	PM_{10}	1.3	0.9	2.2	50
	CO	12.8	9.1	21.9	80
	VOC	0.9	0.6	1.5	50
	HAPs	0.3	0.2	0.5	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 (see section 2.9). The TA-21 steam plant boilers are included in this table.

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2.4 Carpenter Shops

Source	Pollutant	January - June Emissions (ton)	July - December Emission (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.4.2) (ton per year)
TA-3-38	PM_{10}	0.027	0.017	0.044	3.07
TA-15-563	PM_{10}	0.009	0.032	0.041	2.81

2.5 Chemical Usage

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.5.3.1)
Chemical Usage	VOCs	6.1	5.1	11.2	Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
	HAPs	3.7	1.8	5.5	
	HAP (Hydrochloric	0.7	0.3	1.0	

2.6 Degreasers

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.6.2.1) (ton per year)
Degreaser TA-55-DG-1	VOCs	0.006	0.005	0.011	Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
	HAPs	0.006	0.005	0.011	

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used in 2005. These degreasers are not expected to be used in the near future and are in storage.

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2.7 Internal Combustion Sources

Source	Pollutant	Jan-June Emissions (ton)	July-Dec Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.7.2) (ton per year)
Generator TA-33-G-1	TSP	0.0	0.0	0.0	0.6
	PM_{10}	0.0	0.0	0.0	0.6
	NO_X	0.0	0.0	0.0	18.1
	CO	0.0	0.0	0.0	15.2
	VOC	0.0	0.0	0.0	0.3
	SO_X	0.0	0.0	0.0	2.5
	HAPs	0.0	0.0	0.0	No Source Limit

Note: The TA-33-G-1 generator did not operate during 2005.

Source	Pollutant	Jan-June Emissions (ton)	July-Dec Emissions (ton)	Annual Emissions (ton)	Emission Limits
Standby Generators	TSP	0.1	0.2	0.3	No Source Specific Emission Limits for Standby Generators
	PM_{10}	0.1	0.2	0.3	
	NO_X	2.9	4.0	7.0	
	CO	0.7	1.0	1.7	
	VOC	0.1	0.2	0.3	
	SO_X	0.7	0.9	1.5	
	HAPs	0.0	0.0	0.0	

Note 1: Standby Generators are insignificant sources. Insignificant source information is provided to demonstrate compliance with PSD applicability thresholds.

Note 2: Emissions shown for Jan-June are slightly lower than originally reported due to a correction to one of the generator meter readings after the report was submitted.

2.8.a Paper Shredder

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limit (Permit Condition 2.8.2.1) (ton per year)
Paper Shredder TA-52-11	TSP	0.00	0.00	0.00	13

Note: The paper shredder was shutdown in July 2004 and was replaced with a new data disintegrator (see data disintegrator - section 2.8.b).

2.8.b Data Disintegrator (Unit replaced paper shredder)

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (NSR Permit No. 2195-H) (ton)
Data Disinterator TA-52-11	TSP	0.20	0.12	0.32	9.9
	PM_{10}	0.18	0.11	0.29	9.9

Note: The data disintegrator was started on August 18, 2004, and replaced the old paper shredder. This unit and its allowable emissions were included in LANL's Title V operating permit application modification submitted to NMED on July, 2005. The data disintegrator was installed under Air Quality Permit No. 2195-H. The emissions from this unit are included in the facility-wide total.

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

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.9.2) 12 mo. rolling total (ton)	Emission Limits (NSR Permit No. 2195BM1) 12 mo. rolling total (ton)
Power Plant Boilers TA-3-22	NO_X	8.8	7.5	16.3	99.6	60.2
	SO_2	0.1	0.1	0.2	36.9	7.9
	TSP	1.2	1.0	2.1	15.7	8.4
	PM_{10}	1.2	1.0	2.1	15.7	8.2
	CO	6.1	5.1	11.2	81.3	41.3
	VOC	0.8	0.7	1.5	11.1	5.6
	HAPs	0.3	0.2	0.5	No Source Limit	No Source Limit

Note: The allowable emission limits from Air Quality Permit No. 2195BM1 are included above. This permit was issued on July 30, 2004, for the installation of a combustion turbine. Installation of the turbine is not yet complete. These limits are the most current applicable limits for the power plant boilers. These new limits will be included in the next LANL Title V operating permit modification.

2.10 Rock Crusher

The Rock Crusher was not used in 2005. The unit was retired June 10, 2004.


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