



70 YEARS OF CREATING TOMORROW

Environment, Safety & Health

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Date: **JUL 09 2013**

Symbol: ADESH-13-034

Mr. Ted Schooley, Permit Programs Manager
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505-1816

Dear Mr. Schooley:

Subject: Title V Operating Permit P100 Five-Year Renewal Application

Los Alamos National Laboratory (LANL) submits for review the required five-year renewal application for the facility-wide Title V operating permit. The current version of the operating permit is designated P100-R1-M3 and expires on August 6, 2014. This renewal application is being submitted more than one year in advance of the expiration date as required by 20.2.70 NMAC – Operating Permits.

As required, the application utilizes NMED's uniform permit application forms which are intended for either Title V or construction permit applications. Therefore, some of the requested information is not relevant to Title V permits and is noted as such. The application also includes a narrative section apart from the forms to aid in understanding the application, LANL emission units, and proposed permit conditions more fully. The application is organized as follows:

- Section 1.0 Facility description and general information regarding the application
- Section 2.0 Permitted emission unit information including proposed permit conditions
- Appendix A – Application Forms
- Appendix B – Supporting Information on Emission Calculations
- Appendix C – 2012 Annual Compliance Certification

Several Title V permit modifications have been issued since the August 2009 renewal permit was issued. In particular, Permit P100-R1-M1 was issued in June 2012 with a comprehensive reformatting to accommodate a new NMED permit template. This modification resulted in a comprehensive update to the over-all permit which is still current. As such, this renewal application recommends relatively minor revisions to existing permit conditions.

The complete application is being submitted on disc as well as hard copy. When the application is ruled complete, a copy will be sent to EPA Region 6 as required.

Sincerely,



Michael T. Brandt, DrPH, CIH
Associate Director
Environment, Safety & Health

Enclosure: Title V Operating Permit P100 Five-Year Renewal Application

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Title V Operating Permit Renewal Application

For

Los Alamos National Laboratory

Operated by:

Los Alamos National Security, LLC
Los Alamos National Laboratory
Los Alamos, New Mexico 87544

Owned by:

U.S. Department of Energy
National Nuclear Security Administration
Los Alamos Field Office
Los Alamos, New Mexico 87544

JULY 2013

LA-UR-13-23910

**LOS ALAMOS NATIONAL LABORATORY
2013 TITLE V RENEWAL APPLICATION**

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List of Acronyms and Abbreviations

CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CFC	chlorofluorocarbons
CO	carbon monoxide
DOE	Department of Energy
EIB	Environmental Improvement Board
EPA	Environmental Protection Agency
FGR	flue gas recirculation
HAP	hazardous air pollutant
HCl	hydrochloric acid
HE	high explosive
HEPA	high-efficiency particulate air
HVAC	heating, ventilation, and air conditioning
kW	kilowatts
LANL	Los Alamos National Laboratory
lbs/hr	pounds per hour
MACT	Maximum Achievable Control Technology
MMBtu/hr	million British thermal units per hour
MMscf	million standard cubic feet
MW	megawatts
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NMAAQs	New Mexico Ambient Air Quality Standards
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NNSA	National Nuclear Security Administration
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NO _x	nitrogen oxides
NSPS	New Source Performance Standard
NSR	New Source Review
PM	particulate matter
PM _{2.5}	particulate matter less than 2.5 micrometers in diameter
PM ₁₀	particulate matter less than 10 micrometers in diameter
PSD	Prevention of Significant Deterioration
R&D	research and development
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SO _x	sulfur oxides
TA	Technical Area
tpy	tons per year
TSP	total suspended particulates
VOC	volatile organic compound

EXECUTIVE SUMMARY

This permit renewal application is submitted by Los Alamos National Laboratory (LANL or the Laboratory) for renewing LANL's Title V operating permit pursuant to 20.2.70 NMAC – Operating Permits. 20.2.70 NMAC requires facilities defined as major stationary sources to obtain comprehensive air quality operating permits that include all air quality requirements applicable to the source. An operating permit is separate and in addition to air quality construction permits, which are issued for construction of new projects or modifications to existing facilities.

LANL obtained Title V operating permit P100-R1 on August 7, 2009 that will expire on August 8, 2014. In compliance with 20.2.70.300 NMAC, LANL is submitting this permit application 12 months prior to the expiration date.

LANL is owned by the U.S. Department of Energy/National Nuclear Security Administration and operated by Los Alamos National Security, LLC. The Laboratory is a scientific institution dedicated to research and development (R&D) in nuclear weapons science and technology and national problems in energy, environment, infrastructure, and health security. Air emissions predominantly come from operations that support R&D activities, such as power and steam generation, rather than from R&D activities themselves.

This renewal application requests minor changes to the existing Title V operating permit. LANL requests facility-wide emission limits remain unchanged. Regulated source-specific emission limits remain unchanged. Since the 2008 renewal application, emission units with applicable requirements have been reduced as some permitted boilers have been decommissioned. One new emission unit, a standby emergency generator, is being added to the permit. A process restriction is proposed for the data disintegrator to lower potential emission rates of particulate matter.

This Title V renewal application fulfills all the requirements of 20.2.70.300.D NMAC regarding the required contents of renewal permit applications.

1.0 INTRODUCTION

The Laboratory is a scientific institution dedicated to R&D to fulfill the missions of ensuring the safety and reliability of the U.S. nuclear deterrent, reducing the global threat of weapons of mass destruction, and solving national problems in energy, environment, infrastructure and health security. The Laboratory is owned by the DOE/NNSA and is operated by Los Alamos National Security, LLC. The Laboratory's products are specific solutions to R&D problems, and many of these solutions are transferred elsewhere for commercialization or production. The Laboratory's R&D operations are unique in that they have no defined process or schedule. Rather, the intent of research is to constantly develop and improve processes. Therefore, operational flexibility is of utmost importance to this institution.

1.1 Facility Description

The Laboratory is located in Los Alamos County, in north-central New Mexico, approximately 60 miles north of Albuquerque and 25 miles northwest of Santa Fe (Figure 1.1-1). The Laboratory is located on approximately 39 square miles of land and is divided into Technical Areas (TAs) that are used for building sites, experimental areas, radioactive waste disposal locations, roads, and utility rights-of-way (Figure 1.1-2). These uses account for only a small fraction of total land area, because most land provides buffer areas for safety and security reasons. The community of Los Alamos borders the Laboratory to the north and the community of White Rock borders the Laboratory to the southeast. The surrounding land is largely undeveloped, with large tracts of land being held by the Santa Fe National Forest, Bureau of Land Management, Bandelier National Monument, and San Ildefonso Pueblo.

The Laboratory is an R&D institution owned by DOE/NNSA and operated by Los Alamos National Security, LLC. It falls under the Standard Industrial Classification (SIC) 8733 - Noncommercial Research Organization. The primary mission of the Laboratory is to ensure the integrity and safety of the United States' current stockpile of nuclear weapons and nuclear materials. Laboratory scientists and engineers accomplish this mission and other non-weapons related research through acquisition of annual funding from various federal departments to support R&D activities.

In order to support these activities, the Laboratory operates an infrastructure of industrial-type operations that provide electricity, building and process heating and cooling, general construction and maintenance, and road repair. These activities include, but are not limited to, the following:

- External combustion sources including steam generation for general building heat, process heat, or for electricity generation for local consumption;
- Internal combustion engines such as standby generators to provide emergency power to buildings and operations; and
- Asphalt production for road repair.

Industrial-type activities are responsible for the majority of the Laboratory's emissions of regulated air pollutants.

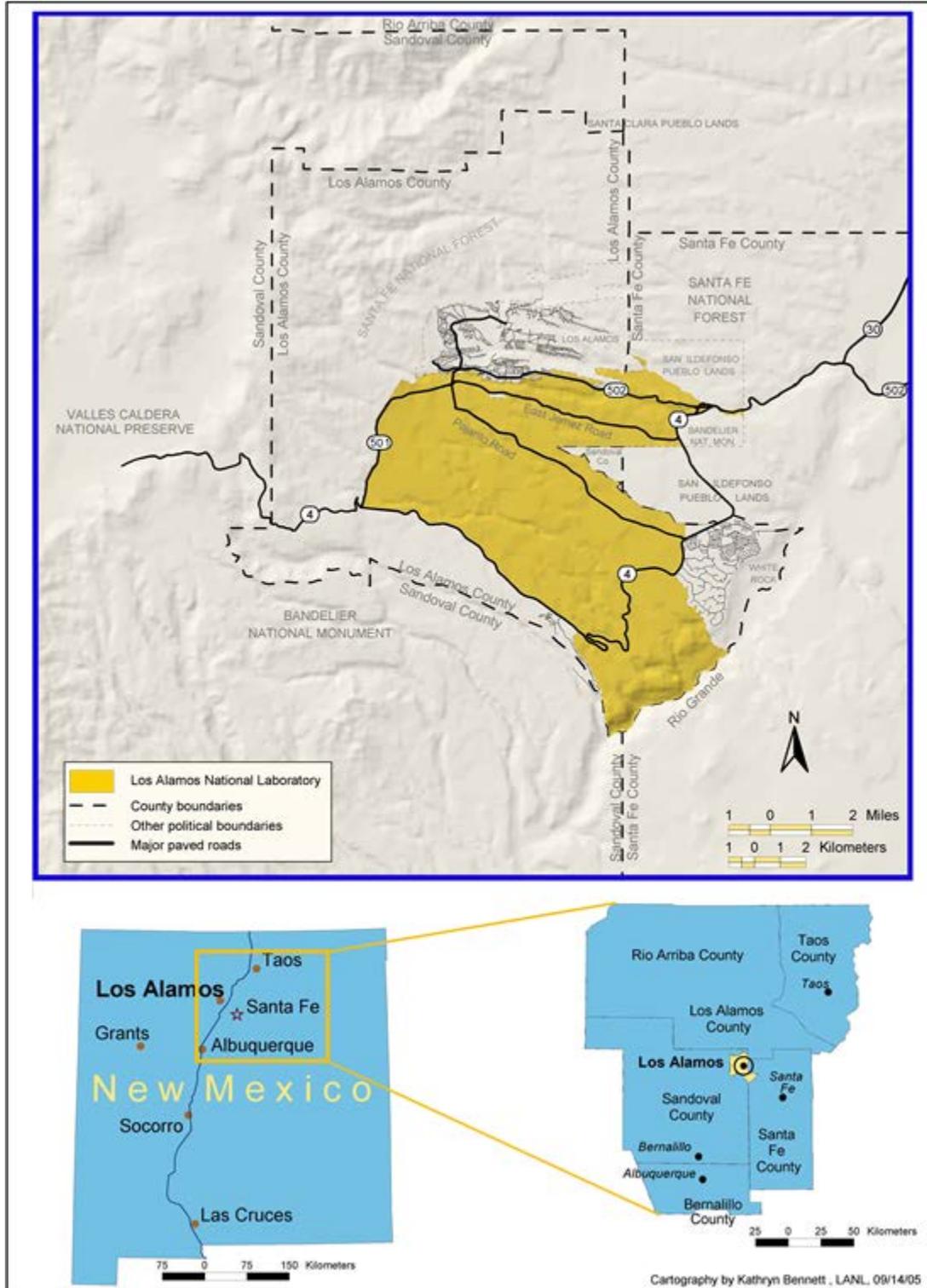


Figure 1.1-1 Location of Los Alamos National Laboratory

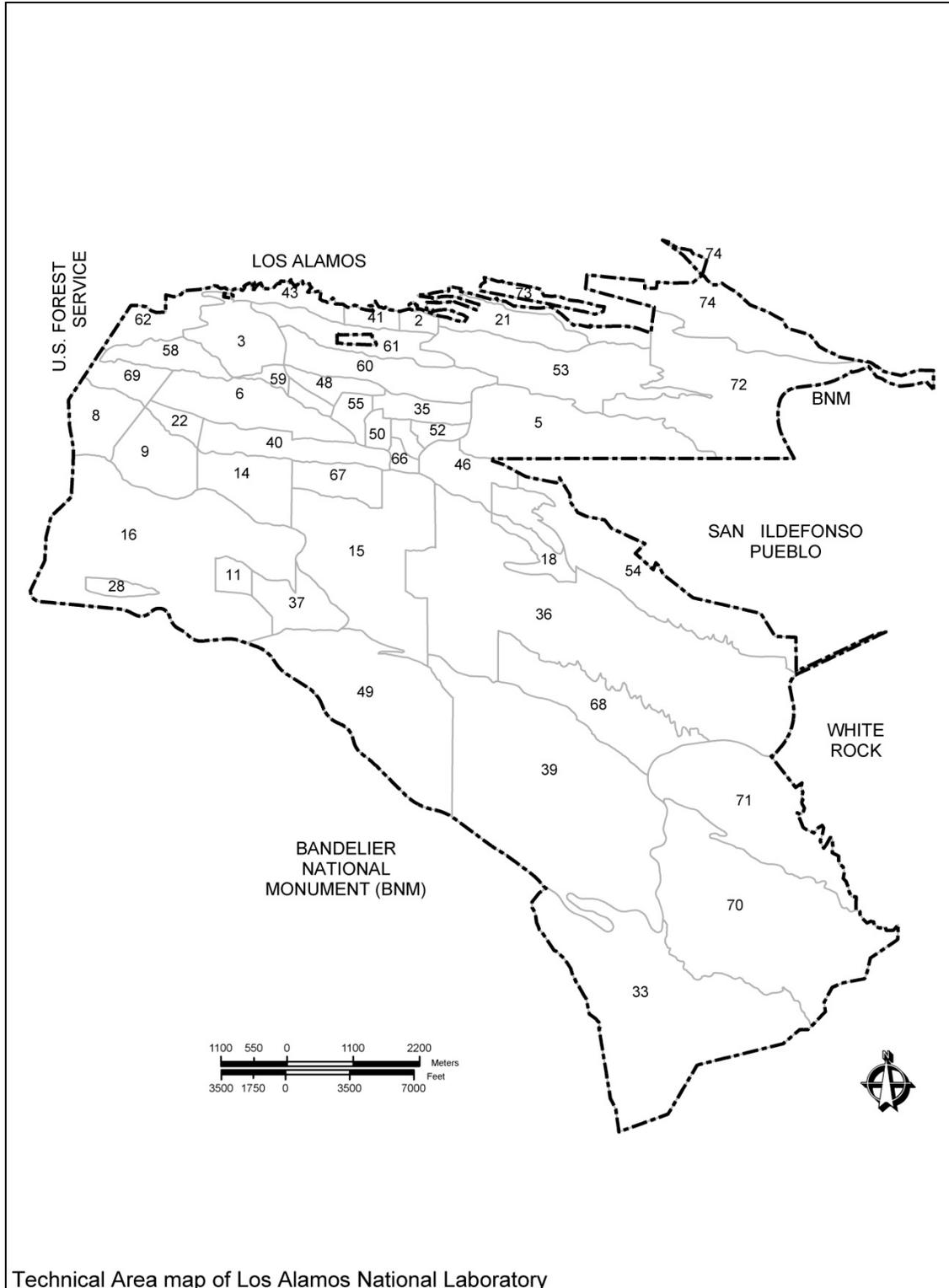


Figure 1.1-2 Technical Area Map of Los Alamos National Laboratory

1.2 Application Contents

Since the submittal of the LANL 2008 renewal application, NMED has extensively revised the permit application forms required for a Title V application. The new universal permit application form is used for both NSR and Title V applications. As appropriate, some sections are not required according to whether the application is for an NSR or Title V permit. The revised application form requires more information than prior versions to the extent all required information for a Title V permit application is now contained within the permit forms. In preparing this application, the goal in providing additional information beyond the forms themselves is to provide clarity and additional information in a narrative format which a form does not provide.

This Section 1.0 describes the Laboratory location and missions, the contents of the application, requested changes to the current permit, and provides information on insignificant activities.

Section 2.0 provides information with respect to all permitted emission units or source categories. The subsections are organized in the same manner as the existing LANL Title V permit with similar unit types grouped together. For each regulated source category, the following information is provided:

- A description of the source types and operations;
- The operating schedule for the category;
- A process flow diagram of operations;
- Emission estimates for criteria and hazardous air pollutants;
- A discussion of air pollution control equipment present;
- Discussion of emissions and operational plans during startups, shutdowns, or malfunctions;
- A figure showing the general location of each source;
- A plot plan for each source; and
- In a table format, the listing of each current applicable requirement and any proposed changes.

The completed application forms are included in this application within Appendix A. This includes the following in addition to general information regarding LANL:

- All source information including design ratings, model type, and serial numbers;
- Emission estimates for maximum emissions and requested allowable emissions;

- All emission calculations in support of estimated emissions;
- Exhaust stack parameters;
- A description of all applicable requirements applicable to LANL and discussion of selected requirements which do not apply;
- A listing of compliance tests conducted; and
- Estimates of potential greenhouse gas emissions.

Appendix B contains support information primarily for emission calculations and is organized by the same source types used in Section 2.0. Appendix C contains a copy of the most recent 2012 Annual Compliance Certification report to support compliance demonstrations for this application

1.3 Summary History of Permit P100

Permit P100 was first issued in April 2004. Since that time, the permit has been renewed once as well being revised several times. The last significant revision was issued in June 2012. For this revision, NMED changed the entire permit to conform to a new permit template and numbering system used for all Title V permits. Because the permit was comprehensively revised at that time, the current version of Permit P100 being renewed with this application is already very up to date. Table 1.3-1 below summarizes the history of the LANL Title V permit.

Table 1.3-1 Permit P100 Chronology

Permit Number	Date Issued	Purpose
P100	April 30, 2004	Initial permit.
P100-M1	June 15, 2006	Incorporated new combustion turbine into permit. Replaced existing paper shredder with new data disintegrator. Removed closed sources rock crusher and two boilers at TA-16.
P100-M2	July 16, 2007	Removed closed beryllium source at CMR facility.
P100-R1	August 7, 2009	First five-year renewal permit
P100-R1-M1	June 15, 2012	Incorporated emission units from new RLUOB facility. Revised power plant conditions to reflect revised NSR permit issued. Entire permit reformatted and renumbered.
P100-R1-M2	December 26, 2012	Removed four retired boilers from permit located at TA-48 and TA-59.
P100-R1-M3	April 26, 2013	Revised permit to reflect 40 CFR Part 63, Subpart ZZZZ applicability and approved compliance extension for diesel generator at TA-33.

1.4 Proposed Changes to Current Operating Permit

Proposed changes to existing permit conditions are all within the equipment specific requirements section of the permit. The reasons for any requested change are explained within those sections. Table 1.4-1 summarizes the requested revisions.

Table 1.4-1 Proposed Changes to Permit P100-R1-M3

Section Affected	Proposed Change
Part A Facility Specific Requirements	No changes requested.
Beryllium Activities Section A700.A and A701.A	Revise process description for TA-3-66 to better reflect three core functions.
Beryllium Activities Sections A707.A and A707.B	For TA-3-66, revise description from “polishing” to “metallographic operations” to reflect the core function.
Beryllium Activities Section A707.D	Revise reporting requirement for TA-3-66 to require semiannual emission reports in the same manner as other regulated beryllium sources.
Asphalt Production Section A605.A	Remove restriction to use only propane and cite all fuels allowed by GCP-3-2195G.
Asphalt Production Section A607.A	Insert additional requirement to observe and record pressure drop reading across fabric filter once per operational day.
Asphalt Production Section A607.C	Clarify monthly opacity reading is required only during months the plant operates.
External Combustion Section A807.D	Remove reference to initial boiler testing with fuel oil. The requirement was removed from NSR Permit 2195N by a technical revision on 9/25/2012.
Chemical Usage	No changes requested.
Degreasers	No changes requested.
Internal Combustion Section A1100.A	A new stationary emergency use diesel generator should be added to the regulated source list. The unit is exempt from NSR but not Title V permitting. It is assigned Unit No. TA-48-GEN-1.
Internal Combustion Section A1103.A	Indicate the NSPS Subpart IIII is applicable to new Unit No. TA-48-GEN-1.
Internal Combustion Section A1104.A	Request removal of the 168 hour per year restriction on standby generator pool.
Internal Combustion Section A1104.B	Request change to language in monitoring requirement to clarify intent and match language in recordkeeping requirement.
Internal Combustion Section A1104.B and C	Clarify recordkeeping requirement applies to criteria and hazardous air pollutants.
Internal Combustion Section A1104.D	This requirement from the NSPS Subpart IIII applies to new Unit No. TA-48-GEN-1.
Internal Combustion Section A1107.A and B	These NSPS Subpart IIII requirements apply to new Unit No. TA-48-GEN-1.

Section Affected	Proposed Change
Data Disintegrator Section A1204.A	An annual process restriction is requested for the number of boxes processed to lower pre-control device potential to emit.
TA-3 Power Plant	No changes requested.
Open Burning	No changes requested.
Part B General Conditions	No changes requested.

1.5 Facility-Wide Emissions

Starting with the initial operating permit application, LANL requested facility-wide emission limits for criteria and hazardous air pollutants. Facility-wide limits are not a requirement to obtain a Title V permit. These were proposed in order to lower the potential emission rate of pollutants and avoid classification of major source status for two substantial Clean Air Act programs. The first is the Prevention of Significant Deterioration (PSD) permit program for new major sources or major modifications. For this major source permit program, the potential to emit for any one criteria pollutant must exceed 250 tons per year. The second program avoided is applicable to a major source of hazardous air pollutants (HAP). Major HAP sources are regulated stringently under source category technology-based control standards at 40 CFR Part 63. A major HAP source has a potential to emit in excess of 25 tons per year of all HAPs combined, or in excess of 10 tons of any one HAP.

The current facility-wide limits applicable to LANL are in Section A106 of Permit P100-R1-M3. These emission limits have not changed since the first Title V permit issued in 2004. This application does not request any changes to the limits. LANL is required to report actual emissions from permitted sources on a semi-annual basis to NMED to show compliance with these limits. As shown in these reports, the actual emission rates remain consistently well below the allowable emission limits. Table 1.5-1 lists the facility-wide limits and for comparison actual emissions for these pollutants for the last five years.

Table 1.5-1 Facility-Wide Limits and Actual Emission Rates

Year	NO _x (tpy)	CO (tpy)	VOC (tpy)	SO ₂ (tpy)	TSP/PM ₁₀ /PM _{2.5} (tpy) ¹	HAPs (tpy) ³
2008	45.8	32.5	12.0	0.6	4.5	5.5/1.0
2009	46.8	33.5	13.5	0.7	4.4	5.2/1.2
2010	51.0	36.5	9.9	1.0	4.7	4.8/1.4
2011	53.7	38.3	9.7	1.5	4.8	3.7/0.6
2012	49.3	32.7	11.9	0.8	4.6	7.2/2.0

Year	NO _x (tpy)	CO (tpy)	VOC (tpy)	SO ₂ (tpy)	TSP/PM ₁₀ /PM _{2.5} (tpy) ¹	HAPs (tpy) ³
Emission Limits	245.0	225.0	200.0	150.0	120.0 ²	24.0/8.0

¹The value shown is the highest for any of the three forms of particulate matter.

²The emission limit is 120 tpy for each form of particulate matter.

³The first HAP value shown is for total HAP and the second is for the highest single HAP.

1.6 Insignificant Activities

Insignificant activities are considered to have minimal or no air quality impact and are therefore not required to be included in Title V permits. With the inception of a facility-wide air permit, there was a need to define those small activities which were not to be included within an operating permit. NMED developed a list of excluded activities. The current list is the NMED's *Operating Permit Program List of Insignificant Activities* dated March 24, 2005. In preparing this renewal application, existing activities were assessed against the criteria defining an insignificant activity. Table 1.6-1 describes insignificant activity sources at LANL and the basis for that determination.

Table 1.6-1 Insignificant Activities

Source Category	NMED List Citation	Basis for Designation
Boilers and Heaters	1a, 3, 4	The majority of boilers and heaters at LANL are insignificant activities under Insignificant Activity No. 3 and 4, based on size, type of fuel, and purpose of the equipment. See Section 2.3 for more details.
Cooling Towers	1a	Each cooling tower has emission rates less than 1 ton per year (tpy).
Degreasers	1a	LANL operates one permitted degreaser. See Section 2.x for details. There are no other degreaser units that use regulated solvents. Degreaser- operations facility-wide - have emission rates less than 1 tpy.
Electroplating	1a	Electroplating operations have emission rates less than 1 tpy.
Environmental Restoration	1a	Environmental restoration activities have emission rates less than 1 tpy.
Lead Melting	1a	Lead melting operations have emission rates well below 1 tpy.
Open Detonation Sites	1a	Each site where detonation experiments occur has emission rates less than 1 tpy.
Paint Booths	1a	Paint booth operations at LANL have emission rates less than 1 tpy.

Source Category	NMED List Citation	Basis for Designation
Sand Blasting	1a	Self-contained sand blasting operations were reviewed and found to have emission rates well below 1 tpy.
Internal Combustion Sources	6, 7	LANL operates numerous stationary standby generators and portable generators that meet the definition of insignificant emission units. See Section 2.7 for details.
Storage Tanks >500 gal	1a, 5	LANL has only 2 tanks greater than 500 gallons that store liquid with vapor pressure great than 10 mm Hg. These two tanks (nitric acid and hydrochloric acid) have emission rates below 1 tpy (Insignificant Activity 1a). All other tanks are either smaller than 500 gallons, or store liquids with vapor pressure less than 10 mm Hg (Insignificant Activity 5).
Surface Coating	2	Total clean-up solvent and coating use at LANL results in emissions of less than (2) tpy.
Waste Management	1a	Waste management activities at TA-50 and TA-54 do not generate emission in excess of 1 tpy
Welding	1a	Site-wide emission from annual welding rod usage is less that 1 tpy.

1.7 Permit Fee Information

20.2.70 NMAC – Operating Permits requires permit applications to include information necessary to determine the annual permit fee for Title V facilities. 20.2.71 NMAC – Operating Permit Emission Fees defines how the fee is calculated. Operating permit fees are based on allowable emission rates. Since LANL has facility-wide emission limits, the fee has been assessed against these tons per year limits for many years. This application does not seek to change the existing facility-wide emission limits in Permit P100-R1-M3. The base fee is \$20 per ton of emission but this value is increased annually by the same percentage increase if any in the Consumer Price Index. For calendar year 2012, LANL was assessed a fee of \$27,137.80 based on allowable emission rates of NO_x, CO, VOC, SO₂, and PM.

2.0 EMISSION UNITS

2.1 Asphalt Production

2.1.1 General Description of Source Category

LANL operates an existing small asphalt batch plant that produces hot mix asphalt for minor road patching and paving. The plant is primarily used for making “pothole” mix, and this is made in small batches. The plant, located at TA-60-236, was manufactured by BDM Engineering and started operation on July 19, 2005. The construction of this plant was approved under General Construction Permit GCP-3-2195G, which was issued under 20.2.72 NMAC on October 29, 2002.

The plant mixes aggregate with liquid asphalt cement to produce bituminous pavement material. Aggregate is stored in piles near the plant and is transferred to the plant using a front-end loader. The asphalt cement consists of asphaltenes, resins, and oils. This material is stored in a tank adjacent to the plant. The asphalt cement is a solid at normal ambient temperature. A propane heater has been used in the past to liquefy the asphalt cement. Propane was replaced in 2013 with a connection to a natural gas line, and natural gas is now the primary fuel used.

Rock and sand are fed into a rotary dryer where it is heated and dried using a 25 MMBtu/hr gas burner. The dried aggregate is discharged into a bucket elevator, which discharges onto a vibrating screen that separates the material into different sizes. Material is discharged into a weigh hopper and then into a mixer where liquid asphalt is added as a percentage of the total mixture. The dust from the dryer is passed through a cyclone and baghouse to clean the gas stream. The gases are discharged to the atmosphere while the particulate collected by the cyclone and baghouse are transferred into the bucket elevator by means of a screw conveyor and incorporated into the hot mix.

In the initial 2002 Title V application, LANL requested a federally enforceable permitted production limit for asphalt in order to limit criteria pollutant emissions. The proposed asphalt production limit was 13,000 tpy, 12-month rolling total. The production limit was based on potential demand and actual production rates. This production limit was incorporated within Permit P100 by NMED.

2.1.2 Operating Schedule

The normal operating schedule for the BDM asphalt plant is less than four hours per day, four days a week, when asphalt work is being performed. Asphalt may be produced year-round, but is

primarily done during warmer months. The maximum asphalt production design capacity of this plant is 60 tons per hour. No changes to the operating schedule or production limits are requested in this renewal application.

2.1.3 Process Flow Diagram

A process flow diagram for the operation of the asphalt plant is provided in Figure 2.1-1.

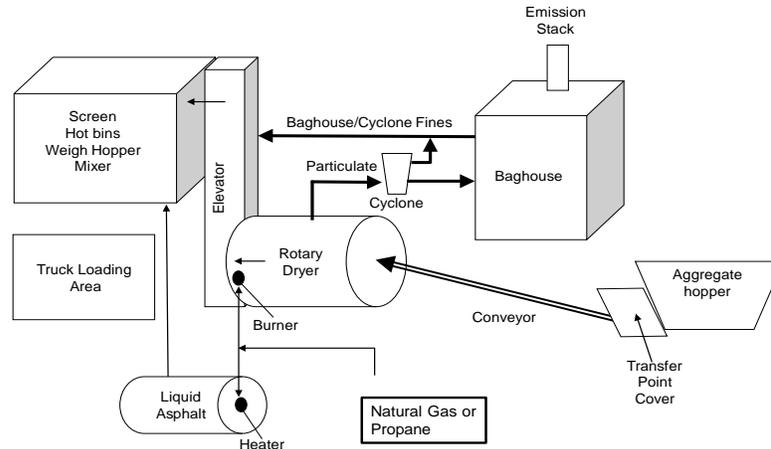


Figure 2.1-1 Process Flow Diagram for Asphalt Plant

2.1.4 Emissions

Emissions from the asphalt plant include criteria pollutants (NO_x, CO, SO₂, PM, and VOCs) and trace amounts of HAPs. Annual emissions estimates are shown in Table 2.1-1. The values represent the maximum controlled emissions considering current enforceable production restrictions and control systems. All emission calculations are shown on the UA2 application form in the calculations section.

Table 2.1-1 Emissions Estimates for Asphalt Production

Pollutant	Emissions (tpy)
NO _x	0.1
SO ₂	0.03
PM	0.05
PM ₁₀	0.03
PM _{2.5}	0.03
CO	2.8
VOC	0.1

Pollutant	Emissions (tpy)
HAP	0.05

2.1.5 Emissions Control Equipment

The BDM Engineering asphalt plant is equipped with a cyclone, Model Number 84M, and a baghouse, Model Number 18000M. The cyclone and baghouse are rated by the manufacturer, BDM Engineering, to have 70% and 99.9% efficiencies, respectively. The haul road to the asphalt plant was paved in 2006. To control fugitive emissions, the haul road is swept as needed.

2.1.6 Operational Plan

Emissions from the startup and shutdown of the asphalt plant are not expected to differ from those during normal operations. Both the cyclone and baghouse are monitored for proper operation by the operations staff during each run. Emissions of PM could increase from operations if a malfunction of either control device were to occur. During any control device malfunction, the plant operator will take whatever actions are required to prevent an increase of visible emissions.

2.1.7 Applicable Requirements

20.2.11 NMAC sets maximum PM emission rates in pounds per hour. In addition, the regulation requires a fugitive dust control system such that all particulate emissions are limited to the stack outlet. The BDM Engineering asphalt plant has a maximum design process rate of 60 tons per hour (120,000 pounds per hour). This process rate corresponds to 33.8 pounds per hour for PM, as interpolated from 20.2.11 NMAC allowable emission rates. Due to high altitude and other factors, it is believed the plant cannot operate above a maximum capacity of 45 tons per hour.

Based on the source test performed on May 18, 2009, the PM emission rate, at the test process rate of 45 tons per hour, is 0.33 pounds per hour. This is well below the 33.8 pounds per hour for a process rate of 60 tons per hour, and 32.6 pounds per hour for a process rate of 45 tons per hour.

In 2006, the haul road leading to the asphalt plant, located at TA-60 (Sigma Mesa), was paved. The paved road significantly reduced the potential of fugitive emissions from vehicle traffic. The roads are swept as needed to remove any track out and other debris, which may cause visible emissions.

The asphalt plant was assessed to determine potential applicability of the Compliance Assurance Monitoring (CAM) rule at 40 CFR Part 64. Section 64.5 (b) of the rule requires this assessment as part of

an application for renewal of a Title V permit. The CAM rule is applicable if: 1) the emission source is at a Title V source; 2) a control device is used to comply with an emission standard; and 3) the pre-control potential to emit of the controlled pollutant are equal to or greater than 100 tons per year. The pre-control device emission estimate for particulate matter shows the asphalt plant has the potential to trigger applicability of the rule. The current estimates for uncontrolled particulate matter are 208 tons per year for total suspended particulate matter or TSP. The two other regulated forms of particulate matter, PM₁₀ and PM_{2.5}, are less than 100 tons pre-control device.

Note that the projected 208 tons of pre-control device TSP emissions has never actually occurred. This emission rate would require the maximum allowed annual production rate of 13,000 tons asphalt per year to occur. Past production rates for the last five years starting with 2012 have been 845 tons, 1,124 tons, 1,410 tons, 1,340 tons and 2,079 tons. Thus, actual pre-control device particulate matter emissions have been well below the CAM applicability threshold of 100 tons per year TSP.

Rather than restrict the annual process rate further to avoid CAM applicability, it is proposed in this application for NMED to determine the plant is exempt from the CAM rule under the exemption at Part 64.2 (b) (1) *Exempt emission limitations or standards*. Specifically, exemption (vi) under this section provides for exempting an existing emission limitation or standard for which a Title V permit already specifies a continuous compliance determination. This exemption was provided for in Part 64 in recognition that Title V permits could be issued with monitoring already specified by state or local agencies which meets CAM requirements prior to an assessment during permit renewal.

Permit P100-M1-R3 currently requires the pressure drop across the baghouse to be continuously monitored and the readings recorded by a datalogger each time the rotary dryer drum is operating. The pressure data confirm whether the filter(s) are operating within the unit's specifications. Continuously monitoring pressure drop across a baghouse is the most important operational parameter to continuously track to ensure the control device is operating properly. The current permit also requires an opacity reading at least once per month on the dryer/baghouse stack. This application proposes to further enhance the current monitoring by requiring the operator to observe and manually record the pressure drop being recorded at least once during each operational day. This measure will provide additional assurance the control device is operating properly.

This existing monitoring, to be further enhanced as described, qualifies as a *continuous compliance determination method* as defined at Part 64.1 Definitions. This operation therefore should be found to be exempt from the CAM rule.

Table 2.1-3 summarizes the applicable requirements currently identified in the operating permit (P100M2) for asphalt production and recommends changes to those applicable requirements.

2.1.8 Location and Plot Plan for Asphalt Production

The location of asphalt production and a plot plan for the plant are shown in Figures 2.1-2 and 2.1-3.

Table 2.1-2 Existing Permit Conditions for Asphalt Production and Proposed Changes

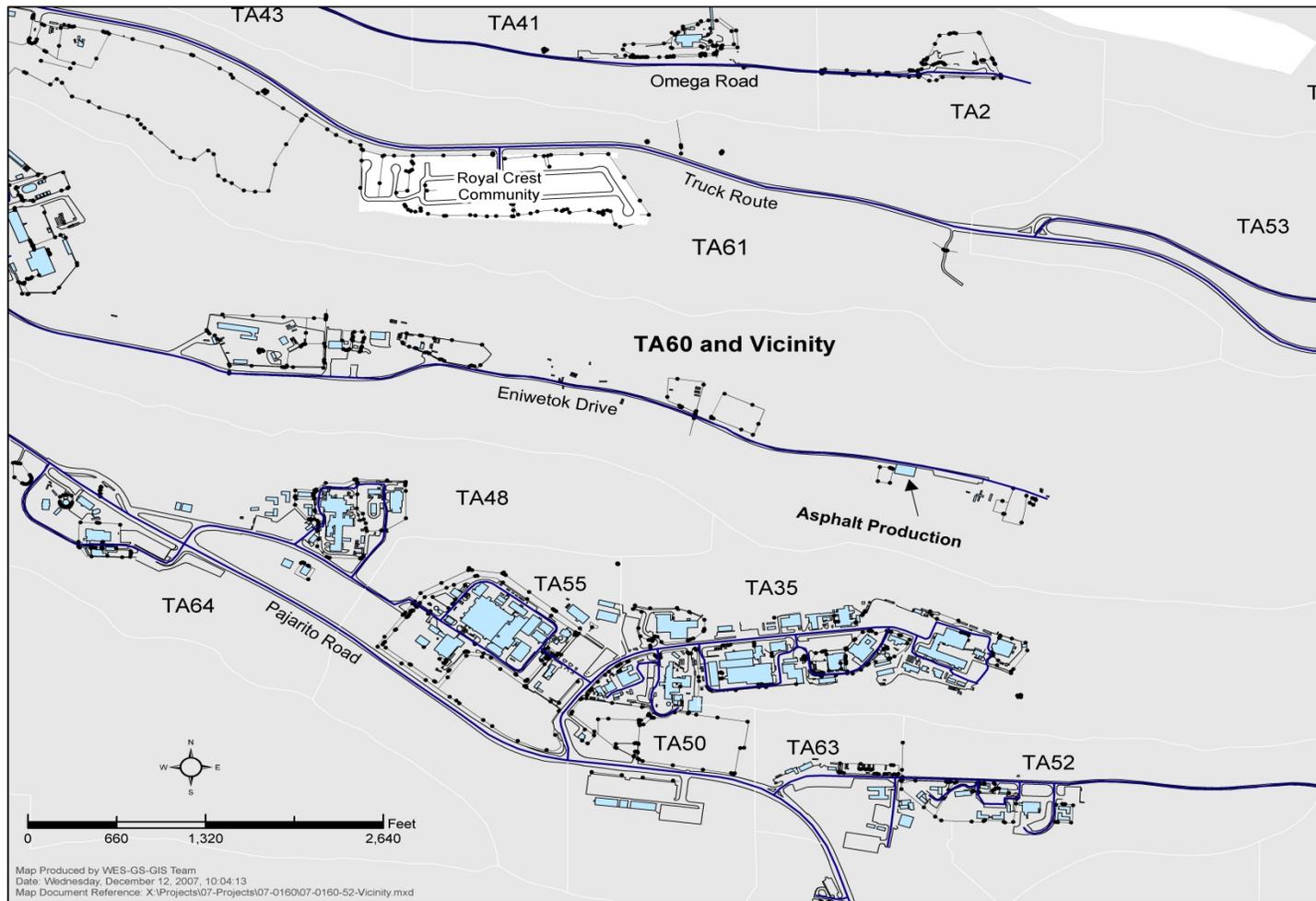
Existing P100-R1-M3 Permit Conditions – Asphalt Production							Proposed Changes														
<p>A600 Regulated Sources – Asphalt Production</p> <p>A. Table 600.A lists all of the process equipment authorized for this source category. Emission units that were identified as insignificant or trivial activities (as defined in 20.2.70.7 NMAC) and equipment not regulated pursuant to the Act are not included.</p> <p>Table 600.A: Regulated Sources List</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>Source Description/ Location</th> <th>Make Model</th> <th>Serial No.</th> <th>Capacity</th> <th>Manufacture Date</th> <th>Other</th> </tr> </thead> <tbody> <tr> <td>TA-60-BDM</td> <td>Hot Mix Asphalt Plant, TA-60</td> <td>BDM Engineering TM2000</td> <td>unknown</td> <td>60 tph</td> <td>unknown</td> <td></td> </tr> </tbody> </table>							Unit No.	Source Description/ Location	Make Model	Serial No.	Capacity	Manufacture Date	Other	TA-60-BDM	Hot Mix Asphalt Plant, TA-60	BDM Engineering TM2000	unknown	60 tph	unknown		No changes
Unit No.	Source Description/ Location	Make Model	Serial No.	Capacity	Manufacture Date	Other															
TA-60-BDM	Hot Mix Asphalt Plant, TA-60	BDM Engineering TM2000	unknown	60 tph	unknown																
<p>A601 Control Equipment – Asphalt Production</p> <p>A. Table 601.A lists all of the pollution control equipment required for the applicable regulated equipment in this source category. Each emission point is identified by the same number that was assigned to it in the permit application.</p> <p>Table 601.A: Control Equipment List</p> <table border="1"> <thead> <tr> <th>Control Equipment Unit No.</th> <th>Control Description</th> <th>Pollutant being controlled</th> <th>Control for Unit No.1</th> </tr> </thead> <tbody> <tr> <td>TA-60-BDM</td> <td>Cyclone Baghouse 99.97% efficiency</td> <td>TSP</td> <td>TA-60-BDM</td> </tr> </tbody> </table> <p>¹Control for unit number refers to a unit number from the Regulated Sources List G. Asphalt Plant Fugitive Dust</p>							Control Equipment Unit No.	Control Description	Pollutant being controlled	Control for Unit No.1	TA-60-BDM	Cyclone Baghouse 99.97% efficiency	TSP	TA-60-BDM	No changes						
Control Equipment Unit No.	Control Description	Pollutant being controlled	Control for Unit No.1																		
TA-60-BDM	Cyclone Baghouse 99.97% efficiency	TSP	TA-60-BDM																		
<p>A602 Emission Limits – Asphalt Production</p> <p>A. Table 602.A lists the emission units, and their allowable emission limits.</p> <p>Table 602.A: Allowable Emissions</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>NO_x tpy</th> <th>SO₂ tpy</th> <th>PM</th> <th>CO tpy</th> <th>VOC tpy</th> </tr> </thead> <tbody> <tr> <td>TA-60-BDM</td> <td>95.0</td> <td>50.0</td> <td>0.04 gr/dscf 33.8 lb/hr 95.0 tpy</td> <td>95.0 tpy</td> <td>95.0 tpy</td> </tr> </tbody> </table>							Unit No.	NO _x tpy	SO ₂ tpy	PM	CO tpy	VOC tpy	TA-60-BDM	95.0	50.0	0.04 gr/dscf 33.8 lb/hr 95.0 tpy	95.0 tpy	95.0 tpy	No changes		
Unit No.	NO _x tpy	SO ₂ tpy	PM	CO tpy	VOC tpy																
TA-60-BDM	95.0	50.0	0.04 gr/dscf 33.8 lb/hr 95.0 tpy	95.0 tpy	95.0 tpy																

Existing P100-R1-M3 Permit Conditions – Asphalt Production	Proposed Changes															
<p>A603 Applicable Requirements – Asphalt Production</p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 603.A.</p> <p>Table 603.A: Applicable Requirements</p> <table border="1" data-bbox="296 355 1583 565"> <thead> <tr> <th>Applicable Requirements</th> <th>Federally Enforceable</th> <th>Unit No.</th> </tr> </thead> <tbody> <tr> <td>NSR Permit GCP-3-2195G</td> <td>X</td> <td>TA-60-BDM</td> </tr> <tr> <td>20.2.11 NMAC Asphalt Process Equipment</td> <td>X</td> <td>TA-60-BDM</td> </tr> <tr> <td>40 CFR 60, Subpart A</td> <td>X</td> <td>TA-60-BDM</td> </tr> <tr> <td>40 CFR 60, Subpart I</td> <td>X</td> <td>TA-60-BDM</td> </tr> </tbody> </table>	Applicable Requirements	Federally Enforceable	Unit No.	NSR Permit GCP-3-2195G	X	TA-60-BDM	20.2.11 NMAC Asphalt Process Equipment	X	TA-60-BDM	40 CFR 60, Subpart A	X	TA-60-BDM	40 CFR 60, Subpart I	X	TA-60-BDM	<p>No changes</p>
Applicable Requirements	Federally Enforceable	Unit No.														
NSR Permit GCP-3-2195G	X	TA-60-BDM														
20.2.11 NMAC Asphalt Process Equipment	X	TA-60-BDM														
40 CFR 60, Subpart A	X	TA-60-BDM														
40 CFR 60, Subpart I	X	TA-60-BDM														
<p>A604 Operational Limitations – Asphalt Production</p> <p>A. The equipment in this source category is authorized to operate during those daylight hours occurring between one-half hour after sunrise and through one-half hour before sunset each day of the year. Annual hours of operation are limited to 4380 hrs/y. This limitation on operating hours does not apply to the use of the hot oil heater or the loading and/or hauling of asphalt products or materials. Monitoring, recordkeeping, and reporting for operational hours shall be conducted according to NSR Permit GCP-3-2195G.</p>	<p>No changes</p>															
<p>A605 Fuel Requirements – Asphalt Production</p> <p>A. Asphalt Plant Combustion Sources</p> <table border="1" data-bbox="296 902 1583 1073"> <tbody> <tr> <td>Requirement: Combustion sources located at the asphalt plant shall only use propane as fuel.</td> </tr> <tr> <td>Monitoring: N/A</td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain records in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </tbody> </table>	Requirement: Combustion sources located at the asphalt plant shall only use propane as fuel.	Monitoring: N/A	Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>This condition should reflect the fuel requirements of the asphalt plant NSR permit GCP-3-2195G, Condition III.A.3. Several fuels, including propane and natural gas, are allowed under this condition. A citation to this GCP condition is recommended rather than a restriction to propane.</p>											
Requirement: Combustion sources located at the asphalt plant shall only use propane as fuel.																
Monitoring: N/A																
Recordkeeping: The permittee shall maintain records in accordance with Section B109.																
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.																
<p>A606 20.2.61 NMAC Opacity – Asphalt Production – Not Required</p>																

Existing P100-R1-M3 Permit Conditions – Asphalt Production	Proposed Changes				
<p>A607 Asphalt Production – Other</p> <p>A. Asphalt Plant Baghouse – Differential Pressure</p> <table border="1" data-bbox="296 318 1587 647"> <tr> <td>Requirement: The baghouse shall be equipped with a device to continually measure the pressure drop across the baghouse.</td> </tr> <tr> <td>Monitoring: The permittee shall monitor the differential pressure (inches of water) across the filters by the use of a differential pressure gauge. Pressure gauge readings and the time period the rotary dryer drum operates shall be recorded by a data logger each time the rotary dryer drum is operating. The pressure data shall confirm whether the filter(s) are operating within the unit’s specifications.</td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain records of all baghouse differential pressure readings in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: The baghouse shall be equipped with a device to continually measure the pressure drop across the baghouse.	Monitoring: The permittee shall monitor the differential pressure (inches of water) across the filters by the use of a differential pressure gauge. Pressure gauge readings and the time period the rotary dryer drum operates shall be recorded by a data logger each time the rotary dryer drum is operating. The pressure data shall confirm whether the filter(s) are operating within the unit’s specifications.	Recordkeeping: The permittee shall maintain records of all baghouse differential pressure readings in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>Propose the following addition to A607: Pressure drop readings shall in addition be manually recorded once daily for days the rotary dryer drum operates.</p>
Requirement: The baghouse shall be equipped with a device to continually measure the pressure drop across the baghouse.					
Monitoring: The permittee shall monitor the differential pressure (inches of water) across the filters by the use of a differential pressure gauge. Pressure gauge readings and the time period the rotary dryer drum operates shall be recorded by a data logger each time the rotary dryer drum is operating. The pressure data shall confirm whether the filter(s) are operating within the unit’s specifications.					
Recordkeeping: The permittee shall maintain records of all baghouse differential pressure readings in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>B. Asphalt Plant Baghouse - Stack Height (Unit TA-60-BDM)</p> <table border="1" data-bbox="296 732 1587 899"> <tr> <td>Requirement: The rotary dryer/baghouse exhaust stack shall be no less than 10 meters in height.</td> </tr> <tr> <td>Monitoring: N/A</td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain records in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: The rotary dryer/baghouse exhaust stack shall be no less than 10 meters in height.	Monitoring: N/A	Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
Requirement: The rotary dryer/baghouse exhaust stack shall be no less than 10 meters in height.					
Monitoring: N/A					
Recordkeeping: The permittee shall maintain records in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>C. Asphalt Plant Baghouse – Opacity</p> <table border="1" data-bbox="296 987 1587 1252"> <tr> <td>Requirement: Visible emissions from the rotary dryer/baghouse exhaust stack shall not exhibit an opacity of 20% or greater averaged over a (6) minute period.</td> </tr> <tr> <td>Monitoring: The permittee shall perform six (6) minute opacity readings on the rotary dryer/baghouse stack at least once per month. The observations shall be conducted according to 40 CFR 60, Appendix A, Method 9.</td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain records of all opacity observations and in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: Visible emissions from the rotary dryer/baghouse exhaust stack shall not exhibit an opacity of 20% or greater averaged over a (6) minute period.	Monitoring: The permittee shall perform six (6) minute opacity readings on the rotary dryer/baghouse stack at least once per month. The observations shall be conducted according to 40 CFR 60, Appendix A, Method 9.	Recordkeeping: The permittee shall maintain records of all opacity observations and in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
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Recordkeeping: The permittee shall maintain records of all opacity observations and in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					

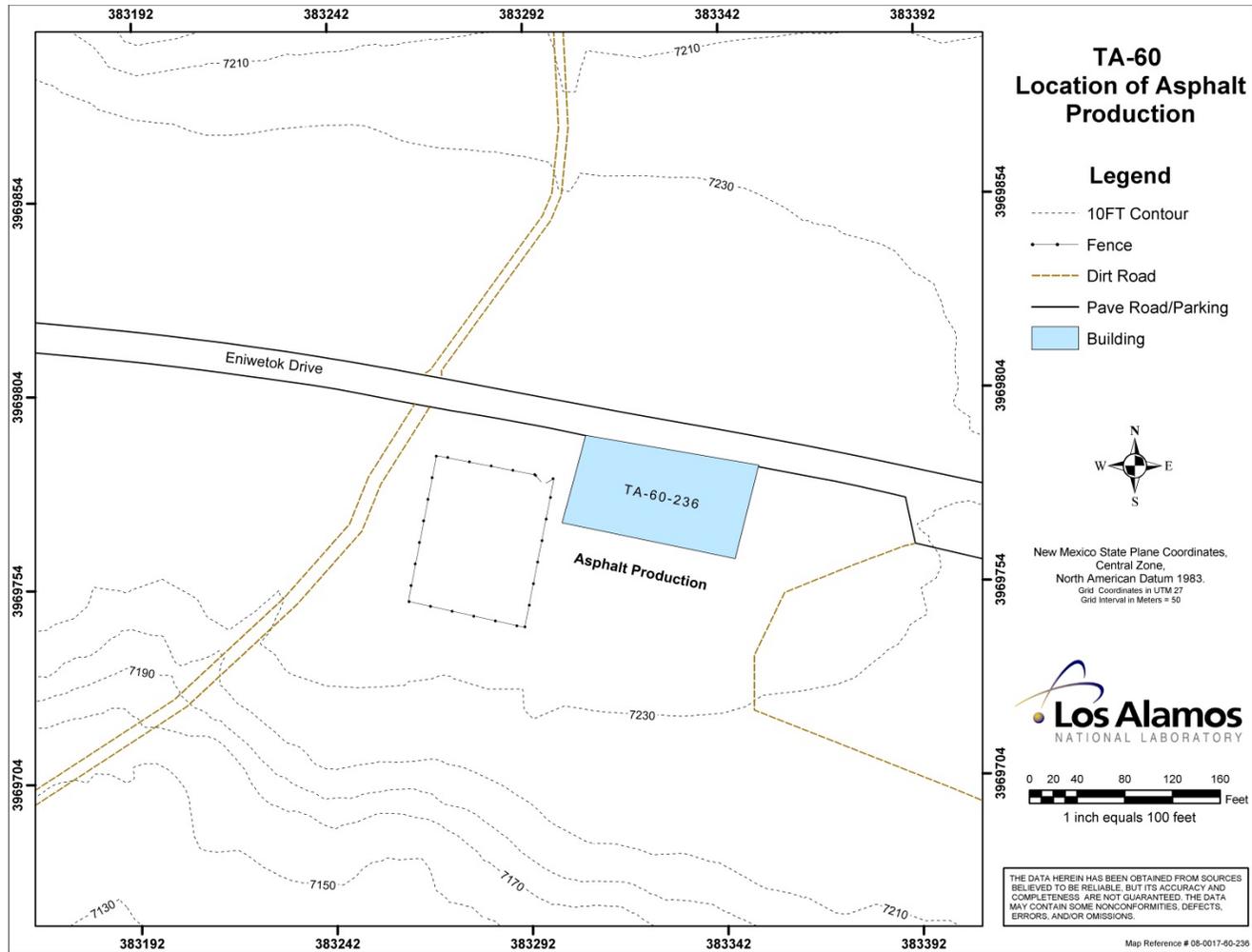
Existing P100-R1-M3 Permit Conditions – Asphalt Production	Proposed Changes				
<p>D. Asphalt Plant Baghouse – Fines Cleanout</p> <table border="1" data-bbox="296 280 1583 516"> <tr> <td data-bbox="296 280 1583 386">Requirement: The permittee shall sequester or remove particulates collected by the control equipment to prevent wind-blown particulate emissions. Recycled baghouse fines shall be recycled into the drum mixer via a closed-loop system.</td> </tr> <tr> <td data-bbox="296 386 1583 428">Monitoring: N/A</td> </tr> <tr> <td data-bbox="296 428 1583 470">Recordkeeping: The permittee shall maintain records in accordance with Section B109.</td> </tr> <tr> <td data-bbox="296 470 1583 516">Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: The permittee shall sequester or remove particulates collected by the control equipment to prevent wind-blown particulate emissions. Recycled baghouse fines shall be recycled into the drum mixer via a closed-loop system.	Monitoring: N/A	Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
Requirement: The permittee shall sequester or remove particulates collected by the control equipment to prevent wind-blown particulate emissions. Recycled baghouse fines shall be recycled into the drum mixer via a closed-loop system.					
Monitoring: N/A					
Recordkeeping: The permittee shall maintain records in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>E. Asphalt Plant Production Rate (Unit TA-60-BDM)</p> <table border="1" data-bbox="296 597 1583 802"> <tr> <td data-bbox="296 597 1583 639">Requirement: Production shall not exceed 13,000 tons per year.</td> </tr> <tr> <td data-bbox="296 639 1583 682">Monitoring: The permittee shall monitor the total daily production rate.</td> </tr> <tr> <td data-bbox="296 682 1583 756">Recordkeeping: The permittee shall calculate a weekly rolling, 12-month total production rate and maintain records in accordance with Section B109.</td> </tr> <tr> <td data-bbox="296 756 1583 802">Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: Production shall not exceed 13,000 tons per year.	Monitoring: The permittee shall monitor the total daily production rate.	Recordkeeping: The permittee shall calculate a weekly rolling, 12-month total production rate and maintain records in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
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Monitoring: The permittee shall monitor the total daily production rate.					
Recordkeeping: The permittee shall calculate a weekly rolling, 12-month total production rate and maintain records in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					

Existing P100-R1-M3 Permit Conditions – Asphalt Production	Proposed Changes
<p>F. Asphalt Plant Operations – General</p> <p>Requirement: The permittee shall: Install, operate, and maintain equipment in accordance with standard operating procedures, and Equip and operate the asphalt processing equipment such as screens, conveyor belts, and conveyor transfer points with dust control systems to control particulate matter emissions, and Operate the Plant in accordance with NSR Permit GCP-3-2195G, Section III, A, B, C, D, E, F, and H. Ensure that no visible emissions from the facility are observed crossing the perimeter of the restricted area for no more than 5 minutes during any 2 consecutive hours during facility operations.</p> <p>Monitoring: The permittee shall perform all monitoring required under NSR Permit GCP-3-2195G.</p> <p>Recordkeeping: The permittee shall maintain records of all standard operating procedures, records of all maintenance and/or replacement of dust control systems, and all records required under NSR Permit GCP-3-2195G, Section IV.B, and including records of actual hours of operation, records of all required monitoring, daily and weekly total asphalt production and the weekly rolling 12 month total production, number of haul truck trips daily including materials delivery and product, frequency of haul road sweeping, and copies of the applicant’s proposed maintenance requirements and records demonstrating conformance with said requirements. The permittee shall maintain records of all compliance test results for total suspended particulates (TSP), particulate matter (PM10), nitrogen oxides, carbon monoxide, and records of all opacity/visible emissions observations performed.</p> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
<p>G. Asphalt Plant Fugitive Dust</p> <p>Requirement: Fugitive dust emissions from asphalt processing equipment, including the system used to recycle fabric filter fines, shall exhibit no more than five (5) minutes of visible emissions during any two consecutive hours. This condition does not apply to fugitive dust emissions from other support operations such as storage piles, front end loaders, or materials handling around the asphalt process equipment.</p> <p>Monitoring: The permittee shall perform a Method 22 test at least once per month on all screens, conveyor drop points, and hoppers. The duration of the test shall be a minimum of ten (10) minutes. If visible emissions are observed for more than two (2) minutes, the Method 22 test shall continue for two (2) hours or until scheduled operation of the plant ends.</p> <p>Recordkeeping: The permittee shall maintain records of all equipment standard operating procedures, records of all maintenance and/or replacement of dust control systems, results of all visible emissions observations, and all records required under NSR Permit GCP-3-2195G.</p> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	



Location of Asphalt Production at TA-60.

Figure 2.1-2 Location of Asphalt Production at TA-60



Emission Unit: TA-60-236, Asphalt Production

Figure 2.1-3 Plot Plan for Emission Unit TA-60-236

2.2 Beryllium Activities

2.2.1 General Description of Source Category

The Laboratory uses beryllium in numerous R&D activities because of its unique metallurgic properties. Several of these activities are regulated under the NESHAP for beryllium at 40 CFR 61 Subpart C and adopted by reference in 20.2.78 NMAC. All beryllium activities regulated under this rule are required to be included in the LANL Title V operating permit. In general, activities at LANL which fall under the rule meet the broadly defined NESHAP source categories of either *machine shop* or *foundry*.

In addition to the beryllium NESHAP requirements, newer activities also were required to obtain New Source Review permits from NMED which impose additional requirements. Older activities which pre-date the NSR permit requirement were registered under the NESHAP and hence referenced as registered beryllium sources. Over time, several beryllium sources have either closed or NMED has determined they are not an air source of beryllium and removed them from the permit.

Permitted Sources

TA-3-141 Beryllium Test Facility: This source is dedicated to beryllium R&D. Beryllium activities include beryllium machining and foundry operations. Beryllium metal and beryllium formed from powders and shaped during consolidation operations are machined. Foundry operations include melting scrap beryllium into ingots in furnaces. Other activities involving beryllium conducted at this facility include powder operations, consolidation operations, joining and coating operations, inspection operations, etching, atomizing, coating/plating, pressing, welding, non-destructive measurements, near net shape processes, and other processes to support formation of parts.

TA-35-213 Target Fabrication Facility: Activities include machining of small quantities of classified beryllium parts and associated cleanup activities.

TA-55-PF4 Plutonium Facility: Beryllium machining activities include weld cutting, weld bead dressing, and metallography. Metallographic specimen preparation includes surface cutting along with grinding. Cutting and grinding operations are conducted in a lubricant bath. Foundry operations include use of a furnace to melt beryllium. Neither the original furnace nor the replacement unit has gone into operation at the time of this application. Non-regulated activities, such as beryllium welding/brazing, compatibility studies, and impact testing, are also conducted in PF4.

Registered Sources

TA-3-66 Sigma Facility: Two registered activities are conducted in this facility: beryllium electroplating/chemical milling and metallographic operations. An additional permitted machining and arc melting/casting operation is also located in the facility.

The electroplating/milling activity typically involves the removal of the surface from mechanical test specimens using acids and plating of metal onto beryllium. All activities are done in aqueous solution.

Metallographic operations involve several activities with small metallographic samples. Etching takes place through the use of chemicals or a beam from a scanning electron microscope. These activities are conducted under a vacuum with oil or are aqueous. Final polishing of metallographic specimens is performed using a wheel covered with an abrasive cloth treated with propylene glycol and/or water, which prevents beryllium particles from becoming airborne. Ion beam sputtering operations are also used to remove fine layers of surface material.

Machining operations are used to prepare small samples for metallographic observation using cutting and grinding methods. Melting and casting operations process small batch quantities of metal to form ingots for further mechanical and heat treating. These ingots may also undergo metallographic specimen preparation and other testing and quantification techniques. All activities are vented through a stack with HEPA filtration. This activity was relocated to TA-3-66 from TA-3-141 in 1996.

2.2.2 Operating Schedule

Each source has a different operating schedule, based on the needs of the particular activities conducted within the source. These operating schedules are summarized in Table 2.2-1.

Table 2.2-1 Operating Schedules for Beryllium Activities

Source	Operating Schedule
TA-3-141	The source is permitted to operate 24 hr/day, 7 day/wk, and 52 wk/yr for a total of 8,760 hr/yr.
TA-35-213	The source has a maximum operating schedule of 8 hr/day, 5 day/wk, 4 wk/mo, and 12 mo/yr. The source has a normal operating schedule of 4 hr/day, 3 day/wk, 4 wk/mo, and 12 mo/yr.
TA-55-PF4	The source is permitted to operate 24 hr/day, 7 day/wk, and 52 wk/yr for a total of 8,760 hr/yr.
TA-3-66	Operating schedules vary among these registered sources. These sources are not subject to any permit requirements and so may operate up to 8,760 hr/yr. Historically, they have operated much less during the year.

2.2.3 Process Flow Diagram

Process flow diagrams for each of the permitted sources are provided (Figures 2.2-1 to 2.2-6).

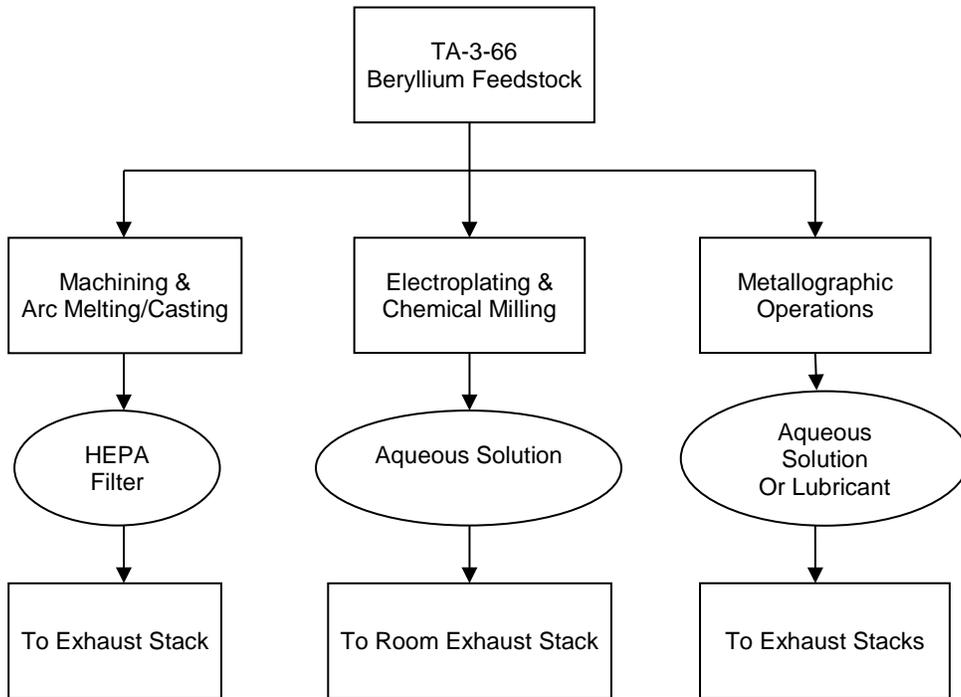


Figure 2.2-1 Process Flow Diagram for Beryllium Activities (TA-3-66)

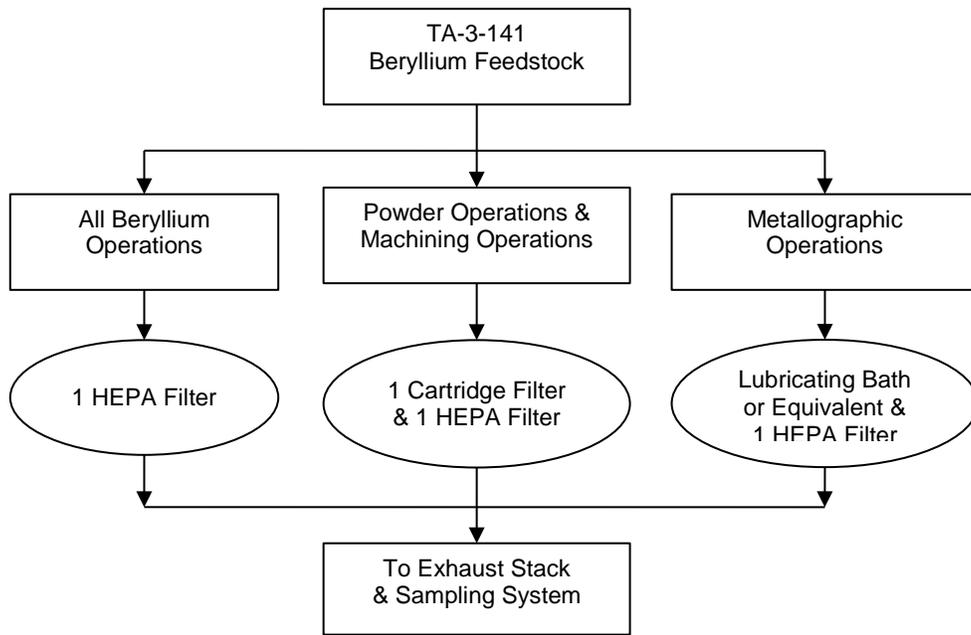


Figure 2.2-2 Process Flow Diagram for Beryllium Activities (TA-3-141)

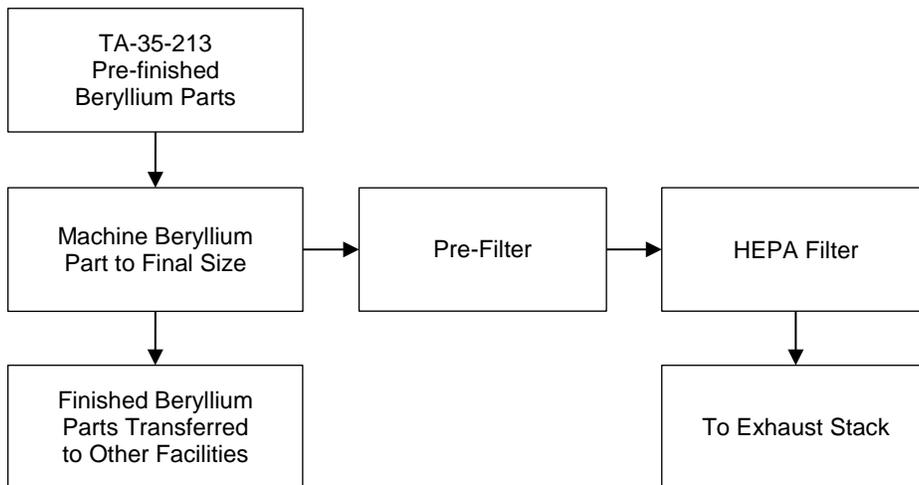


Figure 2.2-3 Process Flow Diagram for Beryllium Activities (TA-35-213)

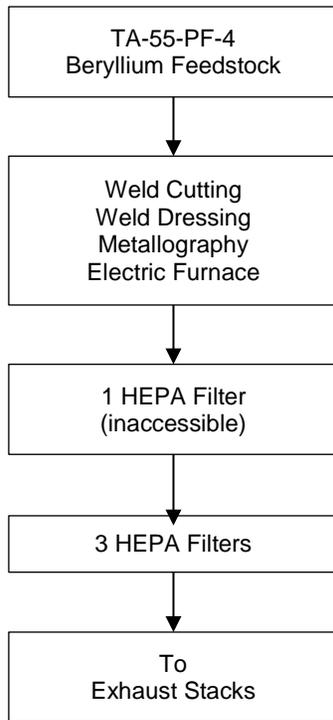


Figure 2.2-4 Process Flow Diagram for Beryllium Activities (TA-55-PF4)

2.2.4 Emissions

Emission estimates for permitted sources are shown in Table 2.2-2. All values shown are the current allowable emission limits contained in Permit P100-R1-M3. For activities which were processed through the New Source Review process, emission limits were derived from operation specific emission factors derived from classified process information. For the TA-3-66 registered activities, the higher estimate is the allowable emission standard from the beryllium NESHAP and is not intended to indicate actual emissions are expected to be higher from these activities.

To date, there has not been any detectable beryllium emission measured during compliance testing or monitoring of beryllium source activities with one exception at source TA-3-141. As required by the NSR permit and Permit P100-R1-M3, stack emissions at source TA-3-141 have been continuously monitored since the facility began operation. Over many years of operation and continuous monitoring at this source, only once has beryllium been measured above the testing minimum detection level and below the allowable emission limit. For these reasons, actual beryllium emissions from all beryllium source activities are essentially zero, noted as “less than” or “<” in LANL Title V emission reports.

Table 2.2-2 Emissions Estimates for Beryllium Activities

Source	Allowable Emissions Limits	
	Beryllium	Aluminum
TA-3-66	10 gm/24 hour ¹	Not Applicable
TA-3-1412	0.35 gm/24hr 3.5 gm/yr	Not Applicable
TA-35-2133	1.8E-04 gm/hr 0.36 gm/yr	Not Applicable
TA-55-PF44 Machining Foundry	0.12 gm/24 hr 2.99 gm/yr 3.49 × 10 ⁻⁵ gm/24 hr 8.73 × 10 ⁻⁴ gm/yr	0.12 gm/24 hr 2.99 gm/yr 3.49 × 10 ⁻⁵ gm/24 hr 8.73 × 10 ⁻⁴ gm/yr

¹ Actual emissions from registered beryllium sources are significantly lower than the standard.

² NSR Permit 634-M2

³ NSR Permit 632

⁴ NSR Permit 1081-M1-R5

2.2.5 Emissions Control Equipment

Emissions from all permitted and registered sources are mitigated through the use of one or more pollution control devices as shown in Table 2.2-3.

Table 2.2-3 Emissions Control Equipment

Source	Emissions Control Equipment
TA-3-66	Emissions from machining and arc melting/casting operations are exhausted through a HEPA filtration system before entering the atmosphere. Metallographic and electroplating/chemical milling operations are conducted in aqueous solution or lubricant bath.
TA-3-141	All processes are exhausted through a HEPA filtration system before entering the atmosphere. Powder operations, other than closed glovebox operations, and machining operations, other than the processes used in metallographic preparation, are exhausted through a cartridge filtration system then through the HEPA filtration system. Metallographic preparation activities are conducted in lubricating baths or equivalent.
TA-35-213	All processes are exhausted through a HEPA filtration system before entering the atmosphere.
TA-55-PF4	Weld cutting, weld dressing, metallography, and electric melt furnace operations are exhausted through four HEPA filters in series, each with 99.95% control efficiency.

2.2.6 Operational Plan

Emissions from beryllium operations during startup and shutdown are not expected to differ from those during normal operations. The only malfunction that might result in excess emissions would be a HEPA filter failure. Monitoring conditions are in place where appropriate to track HEPA filter status.

2.2.7 Applicable Requirements

Applicable requirements for beryllium activities originate from either NSR permit conditions or the beryllium NESHAP. Table 2.2-4 summarizes the current conditions in Permit P100-R1-M3 and recommended changes.

2.2.8 Location of Beryllium Activities

The locations of Beryllium Activities can be found in Figures 2.2-5 – 2.2-12.

Table 2.1-2 Existing Permit Conditions for Asphalt Production and Proposed Changes

Existing P100-R1-M3 Permit Conditions - Beryllium Activities			Proposed Changes																
<p>A700 Regulated Sources – Beryllium Activities</p> <p>A. Table 700.A lists all of the process equipment authorized for this source category. Emission units that were identified as insignificant or trivial activities (as defined in 20.2.70.7 NMAC) and equipment not regulated pursuant to the Act are not included.</p> <p>Table 700.A: Regulated Sources List</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>Location/Building</th> <th>Process Description</th> </tr> </thead> <tbody> <tr> <td rowspan="2">TA-3-66</td> <td rowspan="2">TA-3-66</td> <td>Sigma Facility Polishing/Electroplating/Chemical Milling</td> </tr> <tr> <td>Sigma Facility Machining/Arc Melting/Casting</td> </tr> <tr> <td>TA-3-141</td> <td>TA-3-141</td> <td>Beryllium Technology Facility</td> </tr> <tr> <td>TA-35-213</td> <td>TA-35-213</td> <td>Target Fabrication Facility</td> </tr> <tr> <td>TA-55-PF4</td> <td>TA-55-PF4</td> <td>Plutonium Facility</td> </tr> </tbody> </table>			Unit No.	Location/Building	Process Description	TA-3-66	TA-3-66	Sigma Facility Polishing/Electroplating/Chemical Milling	Sigma Facility Machining/Arc Melting/Casting	TA-3-141	TA-3-141	Beryllium Technology Facility	TA-35-213	TA-35-213	Target Fabrication Facility	TA-55-PF4	TA-55-PF4	Plutonium Facility	<p>For TA-3-66, recommend the Process Description be revised to reflect three core functions: Electroplating and Chemical Milling; Metallographic Operations; and Machining and Arc Melting/Casting</p>
Unit No.	Location/Building	Process Description																	
TA-3-66	TA-3-66	Sigma Facility Polishing/Electroplating/Chemical Milling																	
		Sigma Facility Machining/Arc Melting/Casting																	
TA-3-141	TA-3-141	Beryllium Technology Facility																	
TA-35-213	TA-35-213	Target Fabrication Facility																	
TA-55-PF4	TA-55-PF4	Plutonium Facility																	

Existing P100-R1-M3 Permit Conditions - Beryllium Activities					Proposed Changes
A701 Control Equipment – Beryllium Activities					Recommend for TA-3-66 to change Process Description to reflect the same three descriptions cited for Table 700.A. The type of control does not change.
A. Table 701.A lists all of the pollution control equipment required for the applicable regulated equipment in this source category. Each emission point is identified by the same number that was assigned to it in the permit application.					
Table 701.A: Control Equipment List					
Control Equipment Unit No.	Location/ Building	Process Description	Pollutant being controlled	Type of Control	
TA-3-66	TA-3-66	Sigma Facility Polishing/ Electroplating/ Chemical Milling	Beryllium Particulate Matter	Aqueous Solution or Lubricant Bath	
		Sigma Facility Machining/ Arc Melting/Casting	Beryllium Particulate Matter	HEPA Filter 99.95% Efficiency	
TA-3-141	TA-3-141	Beryllium Technology Facility	Beryllium Particulate Matter	Lubricating Bath/Cartridge Filtration System/HEPA Filter 99.95% Efficiency	
TA-35-213	TA-35-213	Target Fabrication Facility	Beryllium Particulate Matter	Pre-Filter 48% Efficiency, HEPA Filter 99.95% Efficiency	
TA-55-PF4	TA-55-PF4	Plutonium Facility	Beryllium and Aluminum Particulate Matter	4-Stage HEPA Filter 99.95% Efficiency	
¹ Control for unit number refers to a unit number from the Regulated Sources List					

Existing P100-R1-M3 Permit Conditions - Beryllium Activities	Proposed Changes																		
<p>A702 Emission Limits – Beryllium Activities</p> <p>A. Table 702.A lists the emission units, and their allowable emission limits. (40 CFR 61, Subpart C; NSR Permits 632; 634-M1 and 634-M2; 1081-M1, 1081M1-R1, 1081-M1-R3, 1081-M1-R5, and 1081-M1-R6)</p> <p>Table 702.A: Allowable Emissions</p> <table border="1" data-bbox="296 391 1583 889"> <thead> <tr> <th>Source</th> <th>Beryllium Particulate Matter</th> <th>Aluminum Particulate Matter</th> </tr> </thead> <tbody> <tr> <td>Sigma Facility TA-3-66</td> <td>10 gm/24 hr</td> <td>N/A</td> </tr> <tr> <td>Beryllium Technology Facility TA-3-141</td> <td>0.35 gm/24 hr 3.5 gm/yr</td> <td>N/A</td> </tr> <tr> <td>Target Fabrication Facility TA-35-213</td> <td>1.8 x 10⁻⁰⁴ gm/hr 0.36 gm/yr</td> <td>N/A</td> </tr> <tr> <td>Plutonium Facility TA-55-PF-4 Machining Operation</td> <td>0.12 gm/24 hr 2.99 gm/yr</td> <td>0.12 gm/24 hr 2.99 gm/y</td> </tr> <tr> <td>Plutonium Facility TA-55-PF-4 Foundry Operation</td> <td>3.49 x 10⁻⁰⁵ gm/24 hr 8.73 x 10⁻⁰⁴ gm/yr</td> <td>3.49 x 10⁻⁰⁵ gm/24 hr 8.73 x 10⁻⁰⁴ gm/y</td> </tr> </tbody> </table> <p>¹ gm = gram</p>	Source	Beryllium Particulate Matter	Aluminum Particulate Matter	Sigma Facility TA-3-66	10 gm/24 hr	N/A	Beryllium Technology Facility TA-3-141	0.35 gm/24 hr 3.5 gm/yr	N/A	Target Fabrication Facility TA-35-213	1.8 x 10 ⁻⁰⁴ gm/hr 0.36 gm/yr	N/A	Plutonium Facility TA-55-PF-4 Machining Operation	0.12 gm/24 hr 2.99 gm/yr	0.12 gm/24 hr 2.99 gm/y	Plutonium Facility TA-55-PF-4 Foundry Operation	3.49 x 10 ⁻⁰⁵ gm/24 hr 8.73 x 10 ⁻⁰⁴ gm/yr	3.49 x 10 ⁻⁰⁵ gm/24 hr 8.73 x 10 ⁻⁰⁴ gm/y	<p>No changes.</p>
Source	Beryllium Particulate Matter	Aluminum Particulate Matter																	
Sigma Facility TA-3-66	10 gm/24 hr	N/A																	
Beryllium Technology Facility TA-3-141	0.35 gm/24 hr 3.5 gm/yr	N/A																	
Target Fabrication Facility TA-35-213	1.8 x 10 ⁻⁰⁴ gm/hr 0.36 gm/yr	N/A																	
Plutonium Facility TA-55-PF-4 Machining Operation	0.12 gm/24 hr 2.99 gm/yr	0.12 gm/24 hr 2.99 gm/y																	
Plutonium Facility TA-55-PF-4 Foundry Operation	3.49 x 10 ⁻⁰⁵ gm/24 hr 8.73 x 10 ⁻⁰⁴ gm/yr	3.49 x 10 ⁻⁰⁵ gm/24 hr 8.73 x 10 ⁻⁰⁴ gm/y																	
<p>A703 Applicable Requirements – Beryllium Activities</p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 703.A.</p> <p>Table 703.A: Applicable Requirements</p> <table border="1" data-bbox="296 1052 1583 1274"> <thead> <tr> <th>Applicable Requirements</th> <th>Federally Enforceable</th> <th>Unit No.</th> </tr> </thead> <tbody> <tr> <td>NSR Permits 632; 634-M1 and 634-M2; 1081-M1, 1081M1-R1, 1081-M1-R3, 1081-M1-R5, and 1081-M1-R6</td> <td>X</td> <td>All Beryllium Sources Listed in Table 700.A per applicable permit</td> </tr> <tr> <td>40 CFR 61, Subpart C</td> <td>X</td> <td>All Beryllium Sources Listed in Table 700.A</td> </tr> </tbody> </table>	Applicable Requirements	Federally Enforceable	Unit No.	NSR Permits 632; 634-M1 and 634-M2; 1081-M1, 1081M1-R1, 1081-M1-R3, 1081-M1-R5, and 1081-M1-R6	X	All Beryllium Sources Listed in Table 700.A per applicable permit	40 CFR 61, Subpart C	X	All Beryllium Sources Listed in Table 700.A	<p>No changes.</p>									
Applicable Requirements	Federally Enforceable	Unit No.																	
NSR Permits 632; 634-M1 and 634-M2; 1081-M1, 1081M1-R1, 1081-M1-R3, 1081-M1-R5, and 1081-M1-R6	X	All Beryllium Sources Listed in Table 700.A per applicable permit																	
40 CFR 61, Subpart C	X	All Beryllium Sources Listed in Table 700.A																	
<p>A704 Operational Limitations – Beryllium Activities</p> <p>A. The equipment/operations in this source category are authorized to operate any time during the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with its hours of operation.</p>	<p>No changes.</p>																		

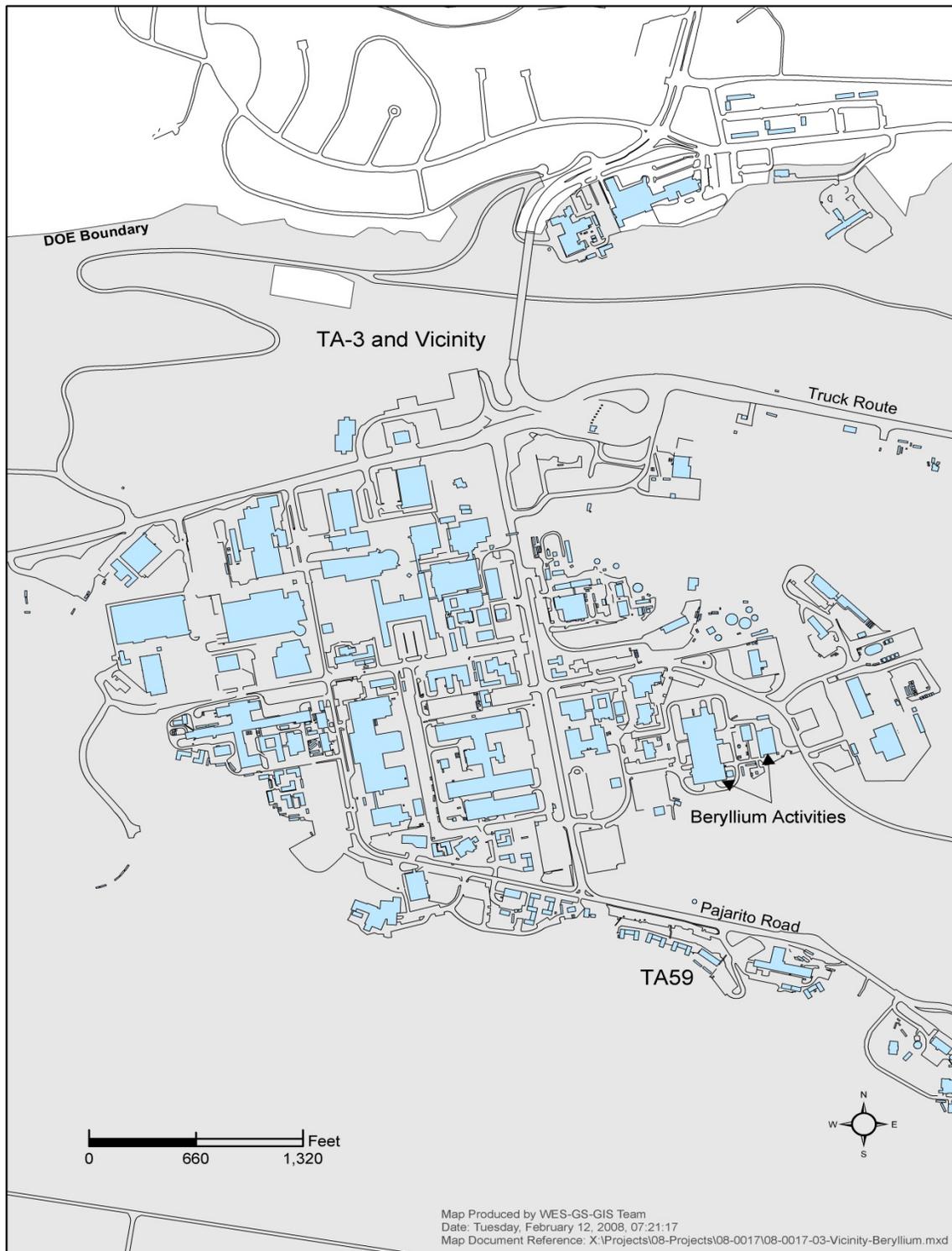
Existing P100-R1-M3 Permit Conditions - Beryllium Activities				Proposed Changes
A707 Other – Beryllium Activities				For TA-3-66, recommend changing “polishing” to metallographic operations.
A. Operational Requirements – Beryllium Activities				
Source	Operating Requirements	Process Limits	Control Equipment Requirements	
Sigma Facility TA-3-66	Beryllium operations will consist of registered polishing, electroplating /chemical milling, and relocated machining, and arc melting/casting sources.	None	Polishing and electroplating /chemical milling operations shall be conducted in aqueous solution or lubricant bath. Emissions from machining and arc melting/casting operations shall be exhausted through a HEPA filtration system prior to entering the atmosphere.	
Beryllium Technology Facility TA-3-141	The continuous emission monitor will be maintained in accordance with the Laboratory’s quality program.	Beryllium processed by the facility will not exceed 10,000 pounds per calendar year. Beryllium processed by the facility will not exceed 1000 pounds per day.	All processes shall be exhausted through a HEPA filtration system prior to entering the atmosphere. Powder operations, other than closed glovebox operations, and machining operations, other than the processes used in metallographic preparation shall be exhausted through a cartridge filtration system then through the HEPA filtration system. Metallographic preparation activities shall be conducted in lubricating baths or equivalent.	
Target Fabrication Facility TA-35-213	Beryllium operations will consist of only beryllium machining and associated cleanup activities.	None	All processes shall be exhausted through a HEPA filtration system prior to entering the atmosphere.	

Existing P100-R1-M3 Permit Conditions - Beryllium Activities				Proposed Changes
A. Operational Requirements – Beryllium Activities, <i>continued</i>				
Source	Operating Requirements	Process Limits	Control Equipment Requirements	
Plutonium Facility TA-55-PF4	Regulated beryllium activities will be ducted through the pollution control equipment and out the north or south stack of PF-4. (NSR Permit 1081-M1-R3, Specific Condition 1.b., partial, revised) The electric furnace shall be enclosed in a glove box, have a maximum operating temperature of 1600 degrees centigrade, and an inside volume space less than 1.1 cubic feet. (NSR Permit 1081-M1-R6, Specific Condition 1.d., partial, revised)	44 pounds of beryllium (20 kg) in any 24 hour period; 1100 pounds/year (500 kg/year) using a rolling total. (NSR Permit 1081-M1-R3, Specific Condition 1.c.)	Weld cutting, weld dressing, metallography, and electric furnace operations shall be controlled with 4 HEPA filters with a control efficiency of 99.95% each. (NSR Permit 1081-M1-R1, Condition 3, partial, revised) The non-accessible filters shall be replaced when the pressure drop across the filter either falls to levels indicating filter breakthrough or increases to levels indicative of excessive loading. (NSR Permit 1081-M1-R1, Condition 3, partial, revised)	

Existing P100-R1-M3 Permit Conditions - Beryllium Activities		Proposed Changes
B. Emissions Monitoring Requirements – Beryllium Activities		
Source	Monitoring Requirements	
Sigma Facility TA-3-66	A log shall be maintained during operations, which shows the number of metallographic specimens used in the polishing operation and the weight or volume of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations.	
Beryllium Technology Facility TA-3-141	Facility exhaust stack will be equipped with a continuous emission monitor used to measure beryllium emissions. Cartridge and HEPA filters shall be equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.	
Target Fabrication Facility TA-35-213	Records of the stack emission test results (see Condition 2 of NSR Permit No. 632) and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Department.	
Plutonium Facility TA-55-PF4	The HEPA filtration systems shall be equipped with a differential pressure gauge that measures the differential pressure (inches of water) across the HEPA filters while the exhaust fans are in operation. (NSR Permit 1081-M1-R3, Condition 11) Control efficiency shall be verified by daily HEPA filter pressure drop tests and annual HEPA filter challenge tests of accessible filters. (NSR Permit 1081-M1-R1, Condition 3, partial, revised) The furnace temperature shall be continuously monitored and the flow rate from the glove box containing the furnace shall be measured once during each metal melt operation. (NSR Permit 1081-M1-R6, Condition 11, revised)	

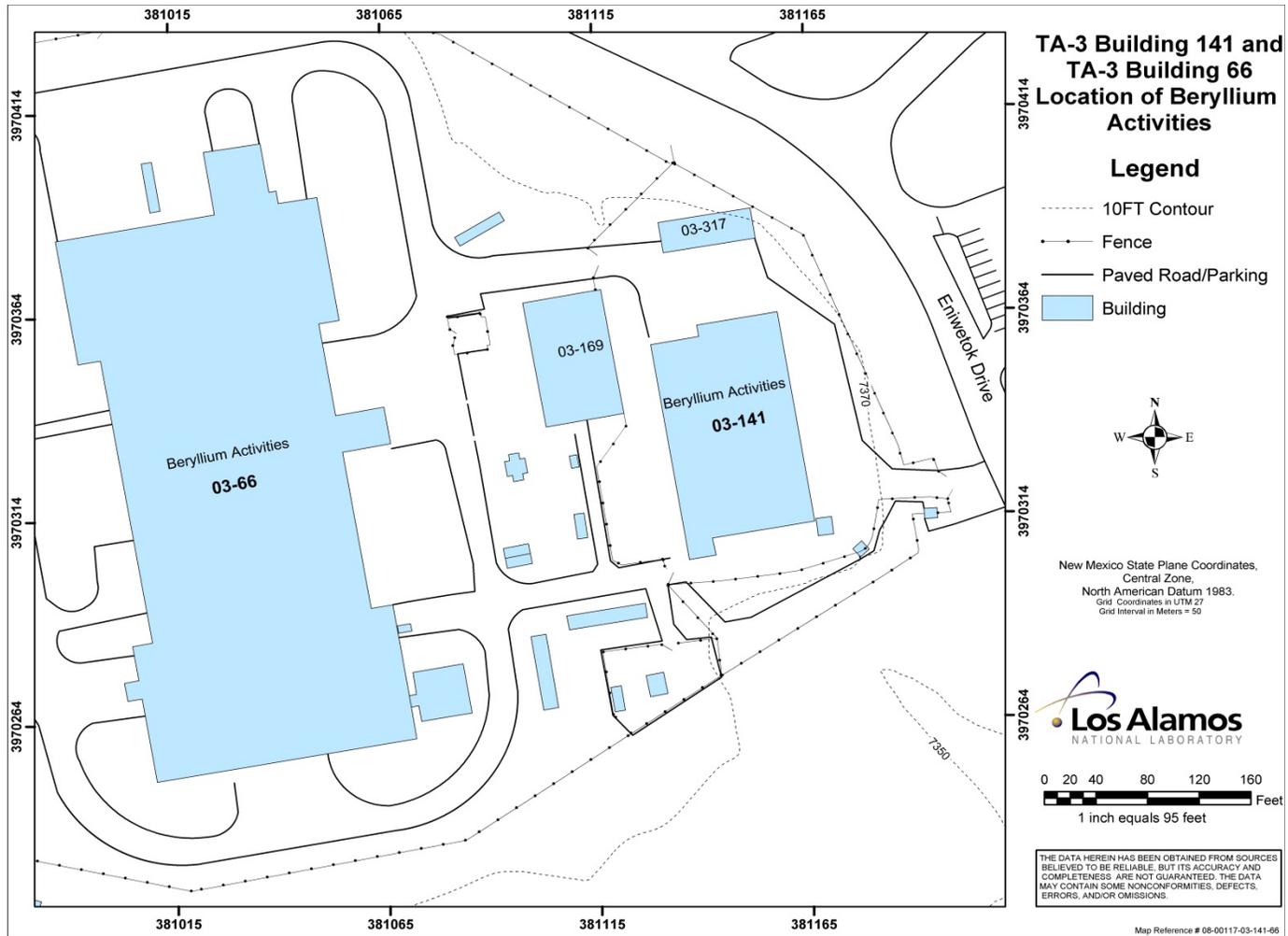
Existing P100-R1-M3 Permit Conditions - Beryllium Activities		Proposed Changes
C. Recordkeeping Requirements – Beryllium Activities		
Source	Reporting Requirements	
Sigma Facility TA-3-66	Recordkeeping for this source is specified in Condition A707.B.	
Beryllium Technology Facility TA-3-141	Generate and maintain beryllium inventory records to demonstrate compliance with the 10,000 pounds of beryllium per calendar year and the 1000 pounds of beryllium per day processing limit. Record pressure drop across the cartridge and HEPA filters once per day that the exhaust fans are in operation and the facility is occupied. Record control equipment maintenance and repair activities.	
Target Fabrication Facility TA-35-213	Recordkeeping for this source is specified in Condition A707.B.	
Plutonium Facility TA-55-PF4	Stack emission test results and facility operating parameters including a daily record of the pressure drop measured across each appropriate HEPA plenum filtration stage, when the exhaust fans are operating. (NSR Permit 1081-M1-R3, Condition 9, partial, revised) A copy of the annual HEPA test, a log of the daily pressure drop readings and a control equipment maintenance log shall be kept. This documentation shall be provided upon request. (NSR Permit 1081-M1-R1, Condition 3, partial, revised) A log of the filter replacement shall be kept and made available to Department personnel upon request. (NSR Permit 1081-M1-R1, Condition 3, partial, revised) The permittee shall keep records of the number and weight of classified parts processed during a 24-hour period and year using a rolling total. Records shall be made available to properly cleared Department personnel upon request. (NSR Permit 1081-M1-R3, Condition 9, partial, revised) The permittee shall for each use of the furnace record the following operating parameters: metal type, theoretical melting point of the metal, metal melt duration once melting is commenced, maximum furnace temperature and glove box flow rate. (NSR Permit 1081-M1-R6, Condition 9, partial, revised) A record of the furnace’s internal volume shall be maintained at the facility. (NSR Permit 1081-M1-R6, Condition 9, partial, revised)	

Existing P100-R1-M3 Permit Conditions - Beryllium Activities		Proposed Changes
D. Reporting Requirements – Beryllium Activities		For TA-3-66, recommend changing the current condition to require the same reports, including emission reports, as required for other beryllium activities. The new condition would be: "The permittee shall submit reports described in Section A109 and in accordance with Section B110.
Source	Reporting Requirements	
Sigma Facility TA-3-66	The permittee shall report in accordance Conditions A109.A, A109.C and Section B110.	
Beryllium Technology Facility TA-3-141	<p>Anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date.</p> <p>Actual date of initial startup of each new or modified source within fifteen (15) days after the startup date.</p> <p>Provide the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.</p> <p>Notify the Department within 60 days after each calendar quarter of the facility's compliance status with the permitted emission rate from the continuous monitoring system.</p> <p>Provide any data generated by activities described in the Quality Assurance Project Plan (QAPP) that will assist the Air Quality Bureau's Enforcement Section in determining the reliability of the methodology used for demonstrating compliance with the permitted emission rate within 45 days of such a request.</p> <p>The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
Target Fabrication Facility TA-35-213	The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
Plutonium Facility TA-55-PF4	<p>Stack emission test results and facility operating parameters will be made available to Department personnel upon request.</p> <p>Reports may be required to be submitted to the Department if inspections of the source indicate noncompliance with this permit or as a means of determining compliance.</p> <p>The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	



Location of Beryllium Activity at TA-3.

Figure 2.2-5 Location of Beryllium Activities at TA-3



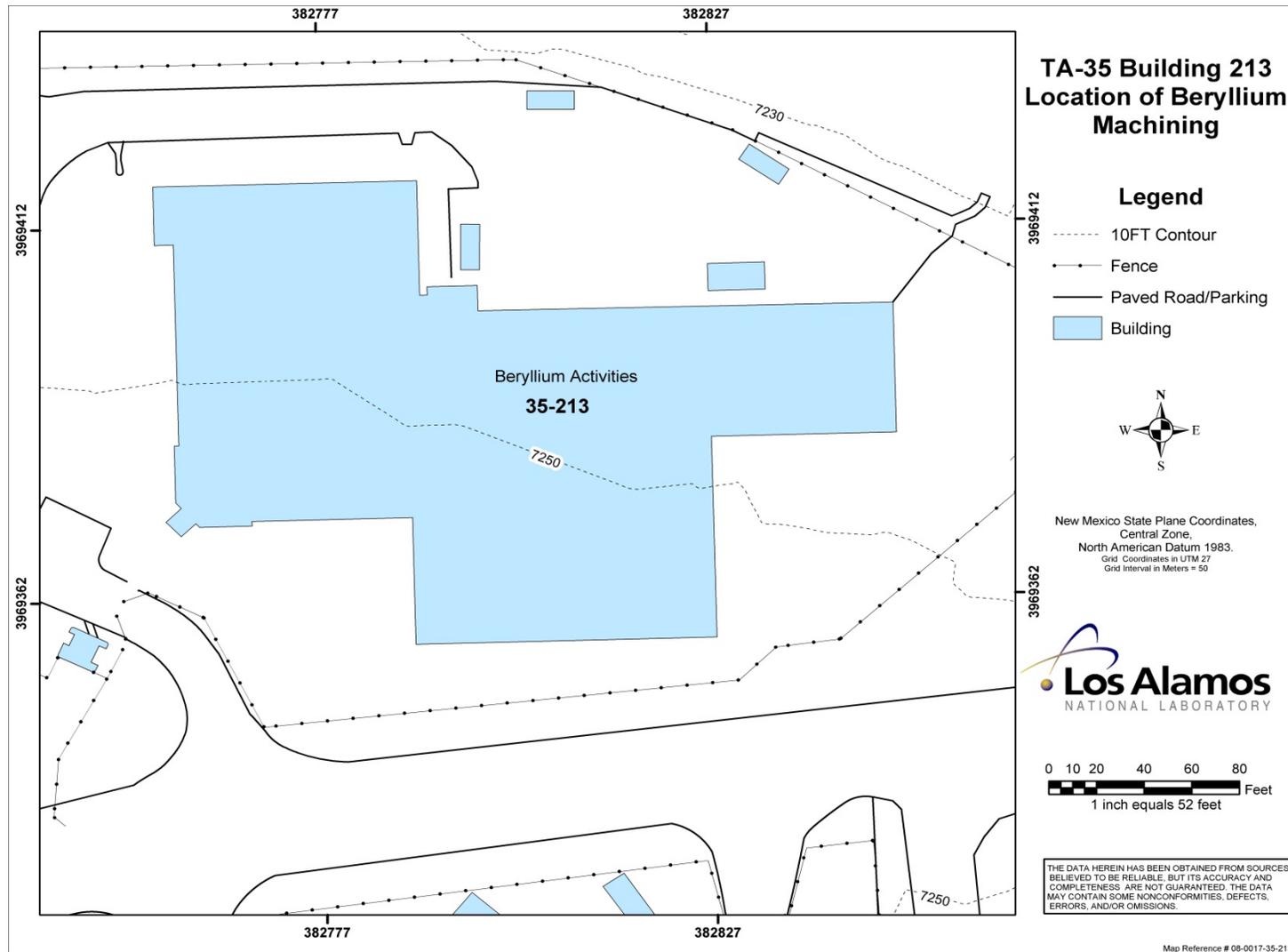
Emission Units: TA-3-141 and TA-3-66, Beryllium Activities.

Figure 2.2-6 Location of Emission Units TA-3-141 and TA-3-66, Beryllium Activities



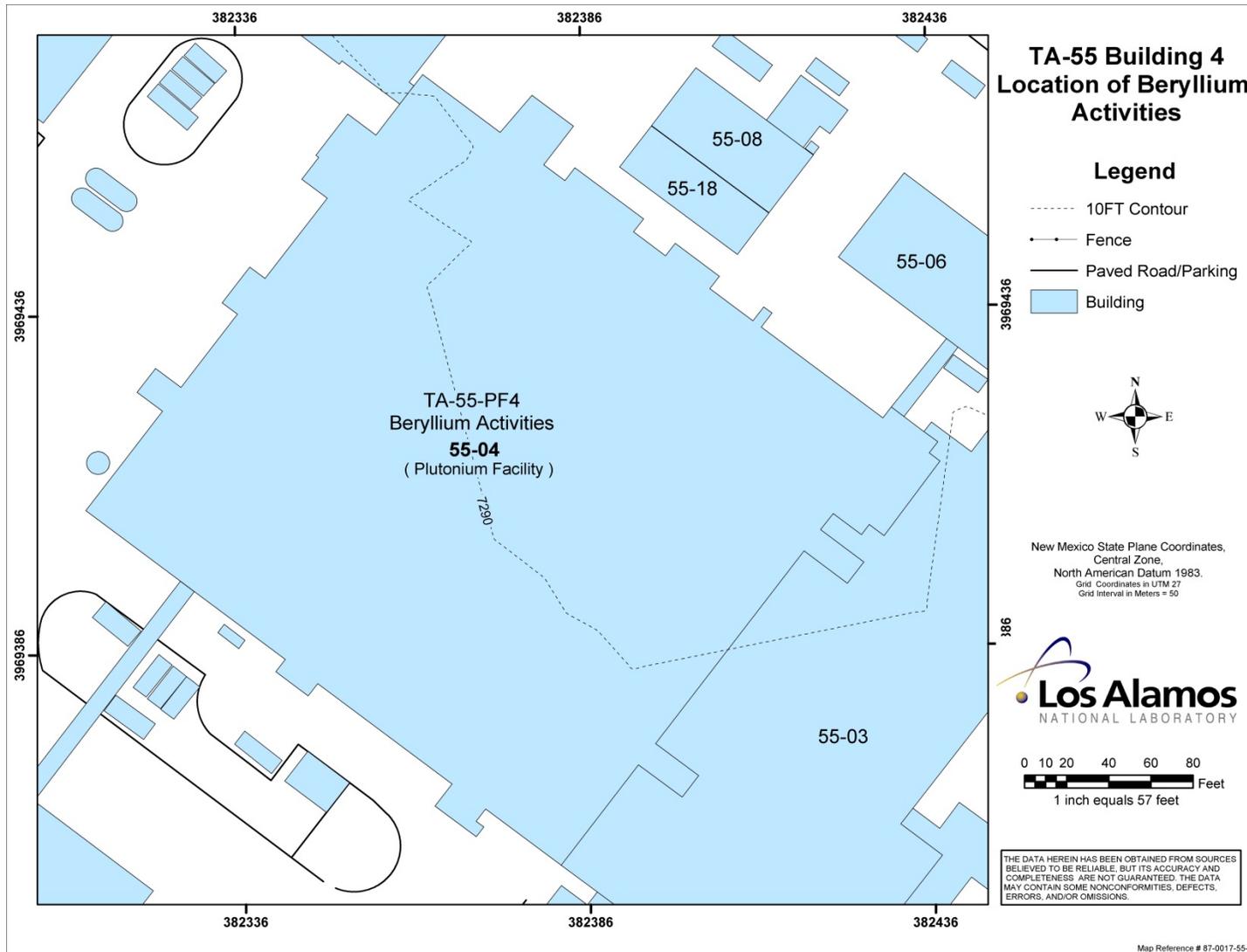
Location of Beryllium Activities at TA-55 and TA-35.

Figure 2.2-7 Location of Beryllium Activities at TA-55 and TA-35



Emission Units: TA-35-213, Beryllium Activities.

Figure 2.2-8 Location of Emission Unit TA-35-213, Beryllium Activities



Emission Unit: TA-55-PF4, Beryllium Activities.

Figure 2.2.9 Location of Emission Unit TA-55-PF4, Beryllium Activities

2.3 Boilers and Heaters

2.3.1 General Description of Source Category

LANL maintains and operates many small natural-gas-fired boilers, personal comfort heaters and furnaces, personal use water heaters, and combined comfort heating, ventilation, and air conditioning (HVAC) units with small gas heaters. There are approximately 160 small boilers that range in size from 0.075 MMBtu/hr to 14.6 MMBtu/hr for the maximum nameplate heat input capacity. There are numerous small furnaces, heaters, and HVAC units in addition to the boilers with an average size range of less than 0.5 MMBtu/hr. The majority of boilers, and all furnaces and heaters, are used solely to provide comfort heating and hot water for personal use. Larger boilers that are not included here are located at the TA-3 Power Plant and are discussed in Section 2.8. Since the previous renewal application in 2008, several boilers previously permitted have permanently shut down and have already been removed from the current permit. These are emission units TA-48-1-BS-1, TA-48-1-BS-2, TA-48-1-BS-6, TA-50-2, TA-59-1-BHW-1 and TA-59-1-BHW-2.

Because LANL is located at a high elevation, the boilers do not operate at nameplate capacity. The maximum heat input capacity, derated for altitude, is referred to as the design rate. For atmospheric boilers, the design rate reflects a 30% decrease in input rating consistent with the LANL Engineering Standards Manual specification for this altitude (derate 4% for each 1,000 feet above sea level at an average elevation of 7,500 feet). For forced draft boilers, the design rate reflects a 15% decrease in input rating.

More than 80% of the LANL boilers operate on a seasonal basis. The boilers that operate seasonally are mainly those used to provide comfort space heat and to keep water tanks and cooling towers from freezing. The majority of boilers at LANL are less than 5 MMBtu/hr in size, with only three boilers greater than 10 MMBtu/hr heat input.

A summary description of boiler size ranges and functions are provided in Table 2.3-1. As shown in Table 2.3-1, most of the boilers qualify as insignificant emissions units under NMED Title V operating permit requirements.

There are 10 gas-fired boilers that do not meet the insignificant emission unit criteria established by NMED. Each of the 10 boilers is currently within Permit P100M2. These boilers are listed in Table 2.3-2.

Heaters and furnaces are used solely to provide either hot water for personal use or building heat for personal comfort. All heaters and furnaces have a design rate less than or equal to 5 MMBtu/hr and qualify for insignificant activity #3 in the NMED insignificant activity list.

Table 2.3-1 Miscellaneous Boiler Summary Description

Percentage of Boilers Within Category	Approximate Sum of Design Ratings for Category (MMBtu/hr)	Functional Category	Design Rate Range (MMBtu/hr)	Status ¹
75.7	220.4	Comfort Heat	≤5	NMED Insignificant Activity #3
9.8	20.2	Comfort and Process Heat	<2.3	NMED Insignificant Activity #1
7.5	42.5	Comfort and Process Heat, Low NO _x	<6.3	NMED Insignificant Activity #1
6.9	90.9	Comfort and/or Process Heat	>5.3 and <12.4	Non-Exempt

¹ NMED List of Insignificant Activities, March 24, 2005.

Table 2.3-2 List of Non-Exempt Boilers

Location (Technical Area-Building)	Emission Unit No.	Equipment ID (Manufacturer/Model No.)	Maximum and Design Input Rating (MMBtu/hr)	Air Pollution Control System
TA-16-1484	TA-16-1484-BS-1	Sellers/183H.P.-SH-LN390	7.47/6.35	Low-NO _x
TA-16-1484	TA-16-1484-BS-2	Sellers/183H.P.-SH-LN390	7.476.35	Low-NO _x
TA-53-365	TA-53-365-BHW-1	Sellers/15 Seniors-2-200-w	8.37/7.11	None
TA-53-365	TA-53-365-BHW-2	Sellers/15 Seniors-2-200-w	8.37/7.11	None
TA-55-6	TA-55-6-BHW-1	Sellers/350H.P.-W-LN490	14.6/12.4	Low-NO _x
TA-55-6	TA-55-6-BHW-2	Sellers/350H.P.-W-LN490	14.6/12.4	Low-NO _x
TA-55-440	CMRR-BHW-1	Unilux/ZF1100W	11.0/9.35	Low-NO _x
TA-55-440	CMRR-BHW-2	Unilux/ZF1100W	11.0/9.35	Low-NO _x
TA-55-440	CMRR-BHW-3	Unilux/ZF1100W	11.0/9.35	Low-NO _x
TA-55-440	CMRR-BHW-4	TBD	11.0/9.35	Low-NO _x

2.3.2 Operating Schedule

The majority of the boilers, furnaces, and heaters at LANL operate seasonally. The typical heating season starts at the beginning of October and ends mid-May. During the heating season, the units can operate continuously. The process boilers operate as needed.

2.3.3 Process Flow Diagram

A general process flow diagram for an external combustion unit is provided in Figure 2.3-1.

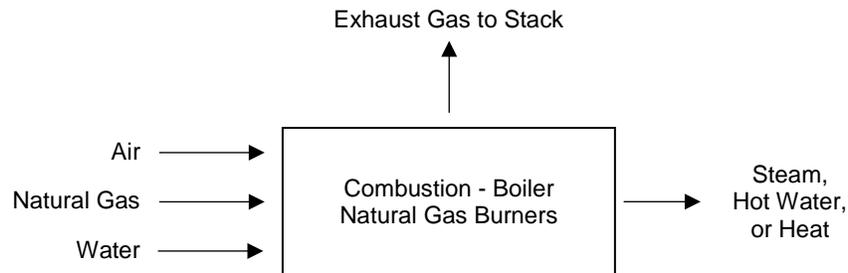


Figure 2.3-1 Process Flow Diagram for Boilers and Heaters

2.3.4 Emissions

Combustion of natural gas in boilers and heaters generates emissions of criteria pollutants (NO_x, CO, SO₂, PM, VOCs) and small quantities of HAPs. Emission estimates are shown in Table 2.3-3. The values shown represent the maximum controlled emissions considering current enforceable fuel restrictions. The emission estimates do not take credit for any reduction in NO_x emissions due to low-NO_x burners, which are present on some boilers.

Table 2.3-3 Emissions Estimates for Miscellaneous Boilers and Heaters

Criteria Pollutant	Total (tpy)
NO _x	62.9
CO	44.4
SO _x	2.1
PM, PM ₁₀ , or PM _{2.5}	4.5
VOC	8.0
HAP	1.2

2.3.5 Emissions Control Equipment

The primary air pollutant from gas-fired boilers is NO_x. The LANL Engineering Standards Manual requires new boilers to be equipped with low-NO_x burners. Low-NO_x burners reduce NO_x emissions by staging the combustion process, which partially delays combustion. This results in reduced flame temperatures and suppressed NO_x formation. A NO_x reduction of approximately 67% is achieved with this type of burner. Eight of the ten LANL permitted boilers are equipped with low-NO_x technology.

2.3.6 Operational Plan

The majority of boilers and heaters at LANL operate seasonally during cold weather months. During this operational period, the units start up and shut down automatically in response to heating demand. Typically, the systems are always operating at some level during the heating season until they are shut down in the spring. Startups and shutdowns are minimal and emissions at those times are not expected to differ substantially from steady-state emissions. The units are checked periodically during the heating season to ensure proper operation. Routine and preventive maintenance are performed during the warm weather months.

2.3.7 Applicable Requirements

Existing applicable requirements currently in permit P100-R1-M1, which apply to the miscellaneous boilers and heaters, are listed in Table 2.3-4. Any proposed changes to these conditions are noted also in the table.

2.3.8 Locations and Plot Plans for Boilers and Heaters

The locations and plot plans for permitted boilers can be found in Figures 2.3-2 through 2.3-9.

Table 2.3-4 Existing Permit Conditions for Boilers and Heaters and Proposed Changes

Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters					Proposed Changes
A800 Regulated Sources – External Combustion					No changes.
A. Table 800.A lists all of the process equipment authorized for this source category.					
Table 800.A: Regulated Sources List					
Emission Unit	Location/ Building	Manufacturer/Model/ Serial Number	Date of Construction, Modification, or Reconstruction ¹	Maximum Heat Input (nameplate) ² MMBtu/hr	
TA-16-1484-BS-1	TA-16-1484	Sellers/183H.P.-SH-LN390 S/N 100848-B	1995	7.47	
TA-16-1484-BS-2	TA-16-1484	Sellers/183H.P.-SH-LN390 S/N 100848-A	1995	7.47	
TA-53-365-BHW-1	TA-53-365	Sellers/15 Seniors-2-200-w S/N 99031-1	1988	8.37	
TA-53-365-BHW-2	TA-53-365	Sellers/15 Seniors-2-200-w S/N 99031-2	1988	8.37	
TA-55-6-BHW-1	TA-55-6	Sellers/350 H.P. W-LN490 S/N 101319-B	2001	14.6	
TA-55-6-BHW-2	TA-55-6	Sellers/350 H.P. W-LN490 S/N 101319-A	1998	14.6	
CMRR-BHW-1	TA-55-440	Unilux/ZF1100W SN A1874	2009	11.0	
CMRR-BHW-2	TA-55-440	Unilux/ZF1100W SN A1875	2009	11.0	
CMRR-BHW-3	TA-55-440	Unilux/ZF1100W SN A1876	2009	11.0	
CMRR-BHW-4	TA-55-440	TBD	TBD	11.0	
¹ Construction, Modification, or Reconstruction as defined according to 40 CFR 60. ² Emission estimates from these units shall be based on the maximum heat input rating, derated for altitude.					

Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters				Proposed Changes																																														
<p>A801 Control Equipment – External Combustion</p> <p>A. Table 801.A lists all of the pollution control equipment required for the applicable regulated equipment in this source category. Each emission point is identified by the same number that was assigned to it in the permit application.</p> <p>Table 801.A: Control Equipment List</p> <table border="1"> <thead> <tr> <th>Control Equipment Unit No.¹</th> <th>Location/Building</th> <th>Control Description</th> <th>Pollutant being controlled</th> </tr> </thead> <tbody> <tr> <td>TA-16-1484-BS-1</td> <td>TA-16-1484</td> <td>Low-NO_x Burner</td> <td>NO_x</td> </tr> <tr> <td>TA-16-1484-BS-2</td> <td>TA-16-1484</td> <td>Low-NO_x Burner</td> <td>NO_x</td> </tr> <tr> <td>TA-53-365-BHW-1</td> <td>TA-53-365</td> <td>none</td> <td>none</td> </tr> <tr> <td>TA-53-365-BHW-2</td> <td>TA-53-365</td> <td>none</td> <td>none</td> </tr> <tr> <td>TA-55-6-BHW-1</td> <td>TA-55-6</td> <td>Low-NO_x Burner</td> <td>NO_x</td> </tr> <tr> <td>TA-55-6-BHW-2</td> <td>TA-55-6</td> <td>Low-NO_x Burner</td> <td>NO_x</td> </tr> <tr> <td>CMRR-BHW-1</td> <td>TA-55-440</td> <td>Low-NO_x Burner²</td> <td>NO_x</td> </tr> <tr> <td>CMRR-BHW-2</td> <td>TA-55-440</td> <td>Low-NO_x Burner</td> <td>NO_x</td> </tr> <tr> <td>CMRR-BHW-3</td> <td>TA-55-440</td> <td>Low-NO_x Burner</td> <td>NO_x</td> </tr> <tr> <td>CMRR-BHW-4</td> <td>TA-55-440</td> <td>Low-NO_x Burner</td> <td>NO_x</td> </tr> </tbody> </table> <p>¹Control for unit number refers to a unit number from the Regulated Sources List ²Low-NO_x burners are required for Units CMRR-BHW-1 through -4 by NSR Permit 2195N, Specific Condition 1.d.</p>				Control Equipment Unit No. ¹	Location/Building	Control Description	Pollutant being controlled	TA-16-1484-BS-1	TA-16-1484	Low-NO _x Burner	NO _x	TA-16-1484-BS-2	TA-16-1484	Low-NO _x Burner	NO _x	TA-53-365-BHW-1	TA-53-365	none	none	TA-53-365-BHW-2	TA-53-365	none	none	TA-55-6-BHW-1	TA-55-6	Low-NO _x Burner	NO _x	TA-55-6-BHW-2	TA-55-6	Low-NO _x Burner	NO _x	CMRR-BHW-1	TA-55-440	Low-NO _x Burner ²	NO _x	CMRR-BHW-2	TA-55-440	Low-NO _x Burner	NO _x	CMRR-BHW-3	TA-55-440	Low-NO _x Burner	NO _x	CMRR-BHW-4	TA-55-440	Low-NO _x Burner	NO _x	No changes.		
Control Equipment Unit No. ¹	Location/Building	Control Description	Pollutant being controlled																																															
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TA-53-365-BHW-1	TA-53-365	none	none																																															
TA-53-365-BHW-2	TA-53-365	none	none																																															
TA-55-6-BHW-1	TA-55-6	Low-NO _x Burner	NO _x																																															
TA-55-6-BHW-2	TA-55-6	Low-NO _x Burner	NO _x																																															
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CMRR-BHW-3	TA-55-440	Low-NO _x Burner	NO _x																																															
CMRR-BHW-4	TA-55-440	Low-NO _x Burner	NO _x																																															
<p>A802 Emission Limits – External Combustion</p> <p>B. Table 802.A lists specific emission units and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 40 CFR 60, Subpart Dc).</p> <p>Table 802.A: Allowable Emissions</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>NO_x tpy¹</th> <th>CO tpy</th> <th>VOC tpy</th> <th>SO₂ tpy</th> <th>TSP tpy</th> <th>PM₁₀ tpy</th> </tr> </thead> <tbody> <tr> <td>Combined annual emissions for all units listed in Table 800.A²</td> <td>80.0</td> <td>80.0</td> <td>50.0</td> <td>50.0</td> <td>50.0</td> <td>50.0</td> </tr> </tbody> </table> <p>¹Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO₂ ²Excludes TA-3-22 Power Plant addressed in Section A1300.</p>				Unit No.	NO _x tpy ¹	CO tpy	VOC tpy	SO ₂ tpy	TSP tpy	PM ₁₀ tpy	Combined annual emissions for all units listed in Table 800.A ²	80.0	80.0	50.0	50.0	50.0	50.0	No changes.																																
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Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters														Proposed Changes																																																																																																																																																																					
<p>A. Table 802.B lists specific emission units and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 40 CFR 60, Subpart Dc; NSR Permit 2195N)</p> <p>Table 802.B: Allowable Emissions</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>NO_x¹ pph</th> <th>NO_x tpy</th> <th>CO pph</th> <th>CO tpy</th> <th>VOC pph</th> <th>VOC tpy</th> <th>SO₂ pph</th> <th>SO₂ tpy</th> <th>TSP pph</th> <th>TSP tpy</th> <th>PM₁₀ pph</th> <th>PM₁₀ tpy</th> <th>PM_{2.5} pph</th> <th>PM_{2.5} tpy</th> </tr> </thead> <tbody> <tr> <td>CMRR-BHW-1 (GAS)</td> <td>0.7</td> <td>2.9</td> <td>1.1</td> <td>4.8</td> <td>--²</td> <td>--</td> <td>0.1</td> <td>0.3</td> <td>0.1</td> <td>0.4</td> <td>0.1</td> <td>0.4</td> <td>0.1</td> <td>0.4</td> </tr> <tr> <td>CMRR-BHW-1 (OIL)</td> <td>1.6</td> <td></td> <td>0.5</td> <td></td> <td>--</td> <td>--</td> <td>5.8</td> <td></td> <td>0.3</td> <td></td> <td>0.2</td> <td></td> <td>0.2</td> <td></td> </tr> <tr> <td>CMRR-BHW-2 (GAS)</td> <td>0.7</td> <td>2.9</td> <td>1.1</td> <td>4.8</td> <td>--</td> <td>--</td> <td>0.1</td> <td>0.3</td> <td>0.1</td> <td>0.4</td> <td>0.1</td> <td>0.4</td> <td>0.1</td> <td>0.4</td> </tr> <tr> <td>CMRR-BHW-2 (OIL)</td> <td>1.6</td> <td></td> <td>0.5</td> <td></td> <td>--</td> <td>--</td> <td>5.8</td> <td></td> <td>0.3</td> <td></td> <td>0.2</td> <td></td> <td>0.2</td> <td></td> </tr> <tr> <td>CMRR-BHW-3 (GAS)</td> <td>0.7</td> <td>2.9</td> <td>1.1</td> <td>4.8</td> <td>--</td> <td>--</td> <td>0.1</td> <td>0.3</td> <td>0.1</td> <td>0.4</td> <td>0.1</td> <td>0.4</td> <td>0.1</td> <td>0.4</td> </tr> <tr> <td>CMRR-BHW-3 (OIL)</td> <td>1.6</td> <td></td> <td>0.5</td> <td></td> <td>--</td> <td>--</td> <td>5.8</td> <td></td> <td>0.3</td> <td></td> <td>0.2</td> <td></td> <td>0.2</td> <td></td> </tr> <tr> <td>CMRR-BHW-4 (GAS)</td> <td>0.7</td> <td>2.9</td> <td>1.1</td> <td>4.8</td> <td>--</td> <td>--</td> <td>0.1</td> <td>0.3</td> <td>0.1</td> <td>0.4</td> <td>0.1</td> <td>0.4</td> <td>0.1</td> <td>0.4</td> </tr> <tr> <td>CMRR-BHW-4 (OIL)</td> <td>1.6</td> <td></td> <td>0.5</td> <td></td> <td>--</td> <td>--</td> <td>5.8</td> <td></td> <td>0.3</td> <td></td> <td>0.2</td> <td></td> <td>0.2</td> <td></td> </tr> <tr> <td>All boilers – Oil⁴</td> <td>N/A</td> <td>2.9</td> <td>N/A</td> <td>0.9</td> <td>--</td> <td>--</td> <td>N/A</td> <td>10.4</td> <td>N/A</td> <td>0.5</td> <td>N/A</td> <td>0.3</td> <td>N/A</td> <td>0.3</td> </tr> <tr> <td>Combined Total³</td> <td></td> <td>14.5</td> <td></td> <td>20.1</td> <td></td> <td>--</td> <td></td> <td>11.6</td> <td></td> <td>2.1</td> <td></td> <td>1.9</td> <td></td> <td>1.9</td> </tr> </tbody> </table>														Unit No.	NO _x ¹ pph	NO _x tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO ₂ pph	SO ₂ tpy	TSP pph	TSP tpy	PM ₁₀ pph	PM ₁₀ tpy	PM _{2.5} pph	PM _{2.5} tpy	CMRR-BHW-1 (GAS)	0.7	2.9	1.1	4.8	-- ²	--	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4	CMRR-BHW-1 (OIL)	1.6		0.5		--	--	5.8		0.3		0.2		0.2		CMRR-BHW-2 (GAS)	0.7	2.9	1.1	4.8	--	--	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4	CMRR-BHW-2 (OIL)	1.6		0.5		--	--	5.8		0.3		0.2		0.2		CMRR-BHW-3 (GAS)	0.7	2.9	1.1	4.8	--	--	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4	CMRR-BHW-3 (OIL)	1.6		0.5		--	--	5.8		0.3		0.2		0.2		CMRR-BHW-4 (GAS)	0.7	2.9	1.1	4.8	--	--	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4	CMRR-BHW-4 (OIL)	1.6		0.5		--	--	5.8		0.3		0.2		0.2		All boilers – Oil ⁴	N/A	2.9	N/A	0.9	--	--	N/A	10.4	N/A	0.5	N/A	0.3	N/A	0.3	Combined Total ³		14.5		20.1		--		11.6		2.1		1.9		1.9	No changes.
Unit No.	NO _x ¹ pph	NO _x tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO ₂ pph	SO ₂ tpy	TSP pph	TSP tpy	PM ₁₀ pph	PM ₁₀ tpy	PM _{2.5} pph	PM _{2.5} tpy																																																																																																																																																																					
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<p>¹ Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO₂</p> <p>² The "--" symbol indicates a value that was considered negligible and not permitted under NSR 2195N.</p> <p>³ The annual tpy combined emission totals represent enforceable emission limit caps for all 4 boilers combined, fired with any combination of allowed fuel types.</p> <p>⁴ Tpy emission cap for any combination of oil fired boilers.</p>																																																																																																																																																																																			

Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters	Proposed Changes												
<p>A803 Applicable Requirements – External Combustion</p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 803.A.</p> <p>Table 803.A: Applicable Requirements</p> <table border="1" data-bbox="296 355 1583 586"> <thead> <tr> <th>Applicable Requirements</th> <th>Federally Enforceable</th> <th>Unit No.</th> </tr> </thead> <tbody> <tr> <td>NSR Permit 2195N</td> <td>X</td> <td>CMRR-BHW-1 through -4</td> </tr> <tr> <td>20.2.61 NMAC Smoke and Visible Emissions</td> <td>X</td> <td>All combustion sources</td> </tr> <tr> <td>40 CFR 60, Subpart Dc</td> <td>X</td> <td>TA-55-6-BHW-1, TA-55-BHW-2, CMRR-BHW-1 through -4</td> </tr> </tbody> </table>	Applicable Requirements	Federally Enforceable	Unit No.	NSR Permit 2195N	X	CMRR-BHW-1 through -4	20.2.61 NMAC Smoke and Visible Emissions	X	All combustion sources	40 CFR 60, Subpart Dc	X	TA-55-6-BHW-1, TA-55-BHW-2, CMRR-BHW-1 through -4	<p>No changes.</p>
Applicable Requirements	Federally Enforceable	Unit No.											
NSR Permit 2195N	X	CMRR-BHW-1 through -4											
20.2.61 NMAC Smoke and Visible Emissions	X	All combustion sources											
40 CFR 60, Subpart Dc	X	TA-55-6-BHW-1, TA-55-BHW-2, CMRR-BHW-1 through -4											
<p>A804 Operational Limitations – External Combustion</p> <p>A. All external combustion equipment except Units CMRR-BHW-1 through -4 when operating with fuel oil is authorized to operate any time during the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with its hours of operation.</p> <p>B. Units CMRR-BHW-1 through -4 shall be operated on fuel oil for no more than 48 hours per year per boiler for non-emergency maintenance and readiness testing. This condition establishes exemption from 40 CFR 63, Subpart JJJJJ (final rule signed by the EPA Administrator on 2/21/11).</p> <p>C. Total annual fuel oil consumption for Units CMRR-BHW-1 through -4 shall not exceed 289,100 gallons on a rolling 365-day total basis.</p>	<p>No changes.</p>												
<p>A805 Fuel Sulfur Requirements – External Combustion</p> <p>A. All Boilers and Heaters (except Units CMRR-BHW-1 through -4)</p> <table border="1" data-bbox="296 1036 1583 1370"> <tbody> <tr> <td>Requirement: All boilers and heaters, except Units CMRR-BHW-1 through -4 and the Power Plant addressed in Section A1300 shall combust only natural gas containing no more than 2 grains of total sulfur per 100 dry standard cubic feet.</td> </tr> <tr> <td>Monitoring: None.</td> </tr> <tr> <td>Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel gas analysis, specifying the allowable limit or less. If fuel gas analysis is used, the analysis shall not be older than one year.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </tbody> </table>	Requirement: All boilers and heaters, except Units CMRR-BHW-1 through -4 and the Power Plant addressed in Section A1300 shall combust only natural gas containing no more than 2 grains of total sulfur per 100 dry standard cubic feet.	Monitoring: None.	Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel gas analysis, specifying the allowable limit or less. If fuel gas analysis is used, the analysis shall not be older than one year.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>No changes.</p>								
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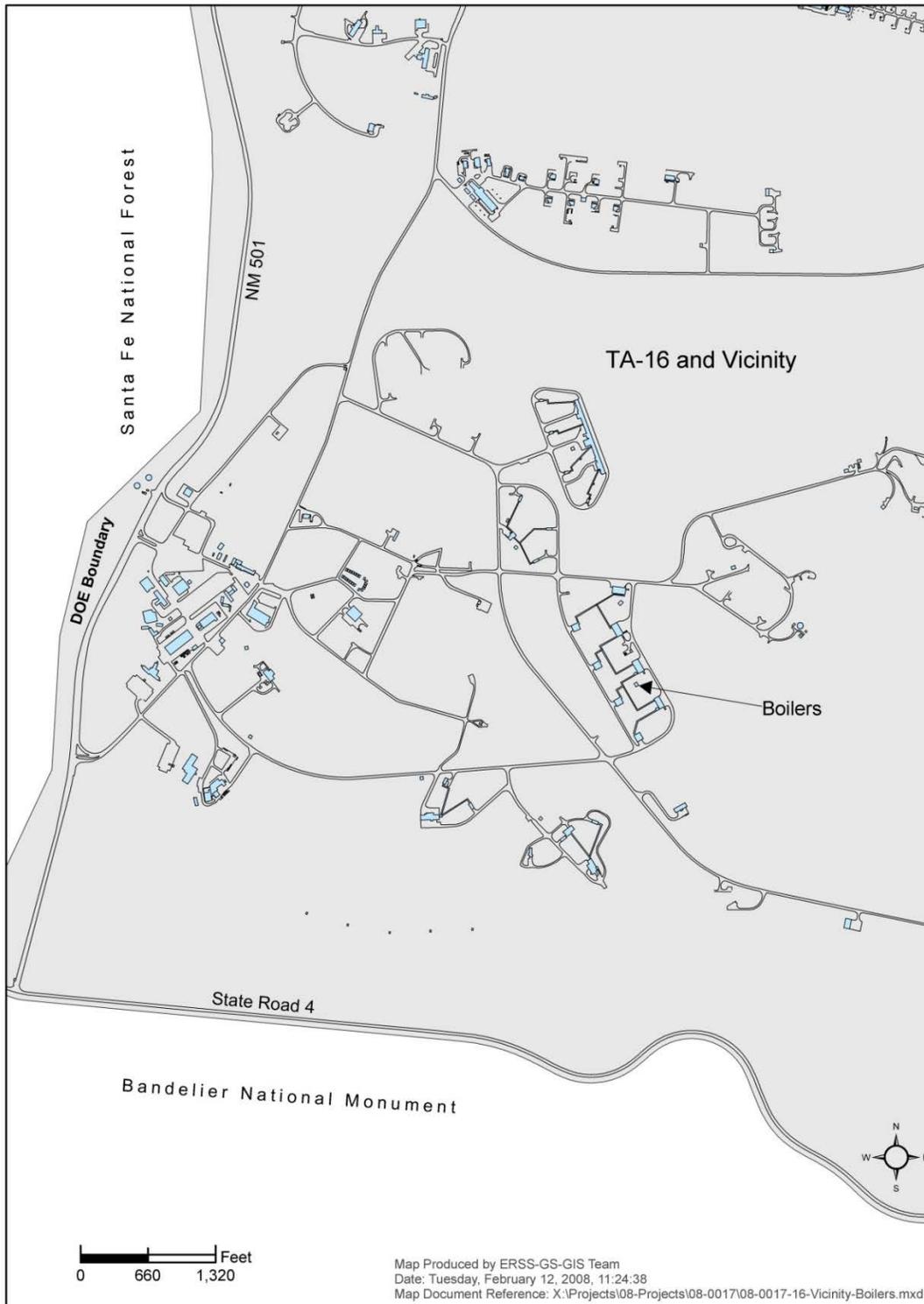
Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters	Proposed Changes				
<p>B. Units CMRR-BHW-1 through -4</p> <table border="1" data-bbox="296 277 1583 708"> <tr> <td data-bbox="296 277 1583 386"> <p>Requirement: Units CMRR-BHW-1 through -4 shall combust either natural gas containing no more than 2.0 grains of total sulfur per 100 dry standard cubic feet or No. 2 fuel oil containing no more than 0.5 wt% total sulfur. (NSR Permit 2195N, Specific Condition 1.b., partial, revised, Specific Condition 1.h., and 40 CFR 60.42c(d))</p> </td> </tr> <tr> <td data-bbox="296 386 1583 428"> <p>Monitoring: None.</p> </td> </tr> <tr> <td data-bbox="296 428 1583 664"> <p>Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit and/or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the allowable limit or less. If a fuel analysis is used, the analysis shall not be older than one year. (NSR Permit 2195N, Specific Condition 3.b., revised; 40 CFR 60.48c(e)(11); and 40 CFR 60.48c(g)(2)). Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.</p> </td> </tr> <tr> <td data-bbox="296 664 1583 708"> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </td> </tr> </table>	<p>Requirement: Units CMRR-BHW-1 through -4 shall combust either natural gas containing no more than 2.0 grains of total sulfur per 100 dry standard cubic feet or No. 2 fuel oil containing no more than 0.5 wt% total sulfur. (NSR Permit 2195N, Specific Condition 1.b., partial, revised, Specific Condition 1.h., and 40 CFR 60.42c(d))</p>	<p>Monitoring: None.</p>	<p>Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit and/or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the allowable limit or less. If a fuel analysis is used, the analysis shall not be older than one year. (NSR Permit 2195N, Specific Condition 3.b., revised; 40 CFR 60.48c(e)(11); and 40 CFR 60.48c(g)(2)). Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.</p>	<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
<p>Requirement: Units CMRR-BHW-1 through -4 shall combust either natural gas containing no more than 2.0 grains of total sulfur per 100 dry standard cubic feet or No. 2 fuel oil containing no more than 0.5 wt% total sulfur. (NSR Permit 2195N, Specific Condition 1.b., partial, revised, Specific Condition 1.h., and 40 CFR 60.42c(d))</p>					
<p>Monitoring: None.</p>					
<p>Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit and/or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the allowable limit or less. If a fuel analysis is used, the analysis shall not be older than one year. (NSR Permit 2195N, Specific Condition 3.b., revised; 40 CFR 60.48c(e)(11); and 40 CFR 60.48c(g)(2)). Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.</p>					
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>					
<p>A806 20.2.61 NMAC Opacity – External Combustion</p> <p>A. All Boilers and Heaters (except Units CMRR-BHW-1 through -4)</p> <table border="1" data-bbox="296 829 1583 1224"> <tr> <td data-bbox="296 829 1583 906"> <p>Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.</p> </td> </tr> <tr> <td data-bbox="296 906 1583 1076"> <p>Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.</p> </td> </tr> <tr> <td data-bbox="296 1076 1583 1153"> <p>Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.</p> </td> </tr> <tr> <td data-bbox="296 1153 1583 1224"> <p>Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </td> </tr> </table>	<p>Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.</p>	<p>Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.</p>	<p>Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.</p>	<p>Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
<p>Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.</p>					
<p>Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.</p>					
<p>Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.</p>					
<p>Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>					

Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters	Proposed Changes				
<p>B. Units CMRR-BHW-1 through -4: Natural Gas-Fired</p> <table border="1" data-bbox="296 277 1583 675"> <tr> <td data-bbox="296 277 1583 354">Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.</td> </tr> <tr> <td data-bbox="296 354 1583 526">Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.</td> </tr> <tr> <td data-bbox="296 526 1583 602">Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.</td> </tr> <tr> <td data-bbox="296 602 1583 675">Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.	Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.	Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.	Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.					
Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.					
Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.					
Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>A806 20.2.61 NMAC Opacity – External Combustion, <i>continued</i></p> <p>C. Units CMRR-BHW-1 through -4: Fuel Oil-Fired</p> <table border="1" data-bbox="296 797 1583 1162"> <tr> <td data-bbox="296 797 1583 873">Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.</td> </tr> <tr> <td data-bbox="296 873 1583 1013">Monitoring: The permittee shall perform a least one (1) opacity observation each day that fuel oil is used to fire any of Units CMRR-BHW-1 through -4. Opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. (NSR Permit 2195N, Specific Condition 3.c., revised)</td> </tr> <tr> <td data-bbox="296 1013 1583 1089">Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings. (NSR Permit 2195N, Specific Condition 4.b., revised)</td> </tr> <tr> <td data-bbox="296 1089 1583 1162">Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.	Monitoring: The permittee shall perform a least one (1) opacity observation each day that fuel oil is used to fire any of Units CMRR-BHW-1 through -4. Opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. (NSR Permit 2195N, Specific Condition 3.c., revised)	Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings. (NSR Permit 2195N, Specific Condition 4.b., revised)	Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.					
Monitoring: The permittee shall perform a least one (1) opacity observation each day that fuel oil is used to fire any of Units CMRR-BHW-1 through -4. Opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. (NSR Permit 2195N, Specific Condition 3.c., revised)					
Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings. (NSR Permit 2195N, Specific Condition 4.b., revised)					
Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.					

Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters	Proposed Changes				
<p>A807 Other – External Combustion</p> <p>A. Natural Gas Fuel Usage (Sources listed in Table 800.A except CMRR-BHW-1 through -4)</p> <table border="1" data-bbox="296 318 1583 818"> <tr> <td data-bbox="296 318 1583 423"> <p>Requirement: The combined natural gas fuel usage shall be limited to 870 MMscf/y. This limitation shall apply to all boilers and heaters listed in Table 800.A except Units CMRR-BHW-1 through -4, but including all other boilers and heaters at the Facility that qualify as Title V Insignificant Activities.</p> </td> </tr> <tr> <td data-bbox="296 423 1583 500"> <p>Monitoring: The permittee shall monitor the monthly total volumetric flow of natural gas to Units TA-55-6-BHW-1 and TA-55-6-BHW-2 through use of a totalizing flow meter.</p> </td> </tr> <tr> <td data-bbox="296 500 1583 776"> <p>Recordkeeping: The permittee shall:</p> <p>Calculate the monthly rolling 12-month total natural gas fuel usage for the emission units listed in Table 800.A except Units CMRR-BHW-1 through -4.</p> <p>Calculate the actual emissions rate for the emission units listed in Table 800.A except Units CMRR-BHW-1 through -4. The calculation shall be based on the actual fuel usage of Units equipped with individual flow meters and the Facility-Wide metered or estimated natural gas usage.</p> <p>Calculate the semiannual and annual total emissions rate (tons/year) for this source category and compare them to the emission limits in Table 802.A. The permittee shall maintain records in accordance with Section B109.</p> </td> </tr> <tr> <td data-bbox="296 776 1583 818"> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </td> </tr> </table>	<p>Requirement: The combined natural gas fuel usage shall be limited to 870 MMscf/y. This limitation shall apply to all boilers and heaters listed in Table 800.A except Units CMRR-BHW-1 through -4, but including all other boilers and heaters at the Facility that qualify as Title V Insignificant Activities.</p>	<p>Monitoring: The permittee shall monitor the monthly total volumetric flow of natural gas to Units TA-55-6-BHW-1 and TA-55-6-BHW-2 through use of a totalizing flow meter.</p>	<p>Recordkeeping: The permittee shall:</p> <p>Calculate the monthly rolling 12-month total natural gas fuel usage for the emission units listed in Table 800.A except Units CMRR-BHW-1 through -4.</p> <p>Calculate the actual emissions rate for the emission units listed in Table 800.A except Units CMRR-BHW-1 through -4. The calculation shall be based on the actual fuel usage of Units equipped with individual flow meters and the Facility-Wide metered or estimated natural gas usage.</p> <p>Calculate the semiannual and annual total emissions rate (tons/year) for this source category and compare them to the emission limits in Table 802.A. The permittee shall maintain records in accordance with Section B109.</p>	<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>No changes.</p>
<p>Requirement: The combined natural gas fuel usage shall be limited to 870 MMscf/y. This limitation shall apply to all boilers and heaters listed in Table 800.A except Units CMRR-BHW-1 through -4, but including all other boilers and heaters at the Facility that qualify as Title V Insignificant Activities.</p>					
<p>Monitoring: The permittee shall monitor the monthly total volumetric flow of natural gas to Units TA-55-6-BHW-1 and TA-55-6-BHW-2 through use of a totalizing flow meter.</p>					
<p>Recordkeeping: The permittee shall:</p> <p>Calculate the monthly rolling 12-month total natural gas fuel usage for the emission units listed in Table 800.A except Units CMRR-BHW-1 through -4.</p> <p>Calculate the actual emissions rate for the emission units listed in Table 800.A except Units CMRR-BHW-1 through -4. The calculation shall be based on the actual fuel usage of Units equipped with individual flow meters and the Facility-Wide metered or estimated natural gas usage.</p> <p>Calculate the semiannual and annual total emissions rate (tons/year) for this source category and compare them to the emission limits in Table 802.A. The permittee shall maintain records in accordance with Section B109.</p>					
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>					

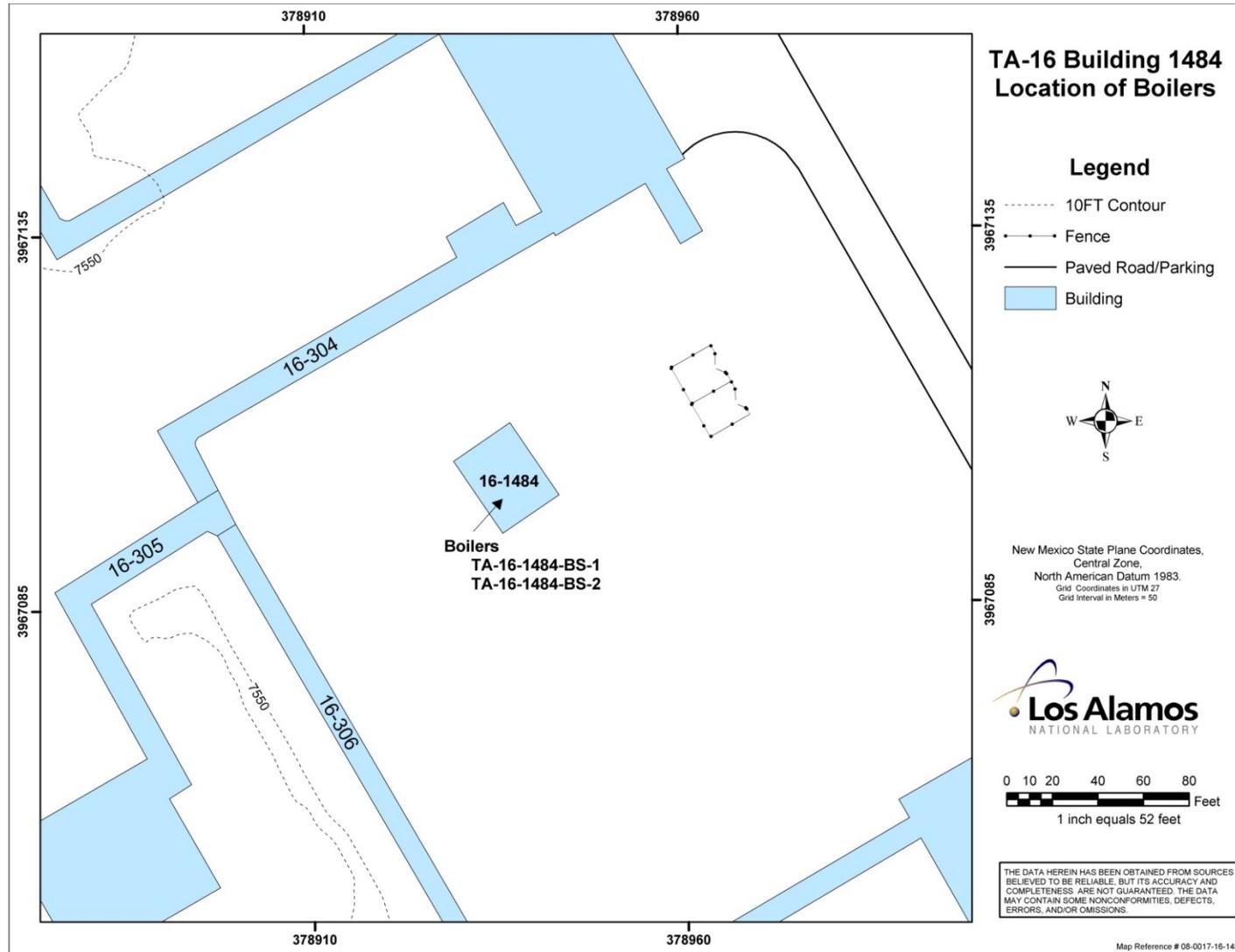
Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters	Proposed Changes				
<p>A807 Other – External Combustion, <i>continued</i></p> <p>B. Natural Gas and Fuel Oil Usage (Units CMRR-BHW-1 through -4)</p> <table border="1" data-bbox="296 318 1583 927"> <tr> <td data-bbox="296 318 1583 362"> <p>Requirement: The permittee shall comply with the emission limits in Table 802.B for each fuel type.</p> </td> </tr> <tr> <td data-bbox="296 362 1583 605"> <p>Monitoring: The permittee shall:</p> <ol style="list-style-type: none"> 1) Monitor the monthly total volumetric flow of natural gas to Units CMRR-BHW-1 through -4 using a totalizing flow meter. (NSR Permit 2195N, Specific Condition 3.a., partial, revised and 40 CFR 60.48c(g)(2)) 2) Monitor the daily fuel oil consumption during which any of the 4 CMRR boilers are fired with this fuel type. (NSR Permit 2195N, Specific Condition 3.a, partial, revised) 3) Monitor the hours of operation for each boiler when fired on fuel oil and during non-emergency maintenance and readiness testing. </td> </tr> <tr> <td data-bbox="296 605 1583 886"> <p>Recordkeeping: The permittee shall:</p> <ol style="list-style-type: none"> 1) Calculate and record the annual fuel oil usage for Units CMRR-BHW-1 through -4 as a daily rolling 365-day total. (NSR Permit 2195N, Specific Condition 1.c., partial, revised) 2) Calculate and record the semiannual and calendar year total emissions rate (tons/year) for each fuel type and for the combination of both fuels compare to the emission limits in Table 802.B. 3) Record the annual hours of operation of each boiler when fired on fuel oil during non-emergency maintenance and readiness testing and compare to the limitation at Condition A804.B. 4) The permittee shall maintain records in accordance with Section B109. </td> </tr> <tr> <td data-bbox="296 886 1583 927"> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </td> </tr> </table>	<p>Requirement: The permittee shall comply with the emission limits in Table 802.B for each fuel type.</p>	<p>Monitoring: The permittee shall:</p> <ol style="list-style-type: none"> 1) Monitor the monthly total volumetric flow of natural gas to Units CMRR-BHW-1 through -4 using a totalizing flow meter. (NSR Permit 2195N, Specific Condition 3.a., partial, revised and 40 CFR 60.48c(g)(2)) 2) Monitor the daily fuel oil consumption during which any of the 4 CMRR boilers are fired with this fuel type. (NSR Permit 2195N, Specific Condition 3.a, partial, revised) 3) Monitor the hours of operation for each boiler when fired on fuel oil and during non-emergency maintenance and readiness testing. 	<p>Recordkeeping: The permittee shall:</p> <ol style="list-style-type: none"> 1) Calculate and record the annual fuel oil usage for Units CMRR-BHW-1 through -4 as a daily rolling 365-day total. (NSR Permit 2195N, Specific Condition 1.c., partial, revised) 2) Calculate and record the semiannual and calendar year total emissions rate (tons/year) for each fuel type and for the combination of both fuels compare to the emission limits in Table 802.B. 3) Record the annual hours of operation of each boiler when fired on fuel oil during non-emergency maintenance and readiness testing and compare to the limitation at Condition A804.B. 4) The permittee shall maintain records in accordance with Section B109. 	<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
<p>Requirement: The permittee shall comply with the emission limits in Table 802.B for each fuel type.</p>					
<p>Monitoring: The permittee shall:</p> <ol style="list-style-type: none"> 1) Monitor the monthly total volumetric flow of natural gas to Units CMRR-BHW-1 through -4 using a totalizing flow meter. (NSR Permit 2195N, Specific Condition 3.a., partial, revised and 40 CFR 60.48c(g)(2)) 2) Monitor the daily fuel oil consumption during which any of the 4 CMRR boilers are fired with this fuel type. (NSR Permit 2195N, Specific Condition 3.a, partial, revised) 3) Monitor the hours of operation for each boiler when fired on fuel oil and during non-emergency maintenance and readiness testing. 					
<p>Recordkeeping: The permittee shall:</p> <ol style="list-style-type: none"> 1) Calculate and record the annual fuel oil usage for Units CMRR-BHW-1 through -4 as a daily rolling 365-day total. (NSR Permit 2195N, Specific Condition 1.c., partial, revised) 2) Calculate and record the semiannual and calendar year total emissions rate (tons/year) for each fuel type and for the combination of both fuels compare to the emission limits in Table 802.B. 3) Record the annual hours of operation of each boiler when fired on fuel oil during non-emergency maintenance and readiness testing and compare to the limitation at Condition A804.B. 4) The permittee shall maintain records in accordance with Section B109. 					
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>					

Existing Permit P100-R1-M3 Permit Conditions - Boilers and Heaters	Proposed Changes				
<p>A807 Other – External Combustion, <i>continued</i></p> <p>C. 40 CFR 60, Subpart Dc (Units TA-55-6-BHW-1, TA-55-6-BHW-2, CMRR-BHW-1 through -4)</p> <table border="1" data-bbox="296 318 1583 719"> <tr> <td>Requirement: Units TA-55-6-BHW-1, TA-55-6-BHW-2, CMRR-BHW-1 through -4 are subject to 40 CFR 60, Subparts A and Dc, including the initial notification requirements of Subpart A and the specific requirements of Subpart Dc.</td> </tr> <tr> <td>Monitoring: The permittee shall perform all monitoring required by 40 CFR 60, Subparts A and Dc, including (but not limited to) 40 CFR 60.47c.</td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain all records required 40 CFR 60, Subparts A and Dc, including (but not limited to) those specified by 40 CFR 60.48c(f)(1), (g), and (i). (NSR Permit 2195N, Specific Condition 4.a., revised)</td> </tr> <tr> <td>Reporting: The permittee shall: <ol style="list-style-type: none"> 1) Submit reports described in Section A109 and in accordance with Section B110. 2) Submit reports as required by 40 CFR 60, Subparts A and Dc, including (but not limited to) those required by 40 CFR 60.48c(a)(1) – (3) and 40 CFR 60.48c(d), (e)(11), (f)(1), and (j). (NSR Permit 2195N, Specific Condition 4.a., revised) </td> </tr> </table>	Requirement: Units TA-55-6-BHW-1, TA-55-6-BHW-2, CMRR-BHW-1 through -4 are subject to 40 CFR 60, Subparts A and Dc, including the initial notification requirements of Subpart A and the specific requirements of Subpart Dc.	Monitoring: The permittee shall perform all monitoring required by 40 CFR 60, Subparts A and Dc, including (but not limited to) 40 CFR 60.47c.	Recordkeeping: The permittee shall maintain all records required 40 CFR 60, Subparts A and Dc, including (but not limited to) those specified by 40 CFR 60.48c(f)(1), (g), and (i). (NSR Permit 2195N, Specific Condition 4.a., revised)	Reporting: The permittee shall: <ol style="list-style-type: none"> 1) Submit reports described in Section A109 and in accordance with Section B110. 2) Submit reports as required by 40 CFR 60, Subparts A and Dc, including (but not limited to) those required by 40 CFR 60.48c(a)(1) – (3) and 40 CFR 60.48c(d), (e)(11), (f)(1), and (j). (NSR Permit 2195N, Specific Condition 4.a., revised) 	
Requirement: Units TA-55-6-BHW-1, TA-55-6-BHW-2, CMRR-BHW-1 through -4 are subject to 40 CFR 60, Subparts A and Dc, including the initial notification requirements of Subpart A and the specific requirements of Subpart Dc.					
Monitoring: The permittee shall perform all monitoring required by 40 CFR 60, Subparts A and Dc, including (but not limited to) 40 CFR 60.47c.					
Recordkeeping: The permittee shall maintain all records required 40 CFR 60, Subparts A and Dc, including (but not limited to) those specified by 40 CFR 60.48c(f)(1), (g), and (i). (NSR Permit 2195N, Specific Condition 4.a., revised)					
Reporting: The permittee shall: <ol style="list-style-type: none"> 1) Submit reports described in Section A109 and in accordance with Section B110. 2) Submit reports as required by 40 CFR 60, Subparts A and Dc, including (but not limited to) those required by 40 CFR 60.48c(a)(1) – (3) and 40 CFR 60.48c(d), (e)(11), (f)(1), and (j). (NSR Permit 2195N, Specific Condition 4.a., revised) 					
<p>D. Initial Compliance Testing (Units CMRR-1 through -4)</p> <table border="1" data-bbox="296 805 1583 1101"> <tr> <td>Requirement: Initial compliance tests are required for each boiler, Units CMRR-BHW-1 through -4. The tests shall be conducted for NOx and CO for each fuel type. Tests shall be conducted for TSP, PM10, and PM2.5 for fuel oil use only. (NSR Permit 2195N, Specific Condition 6.a., partial, revised)</td> </tr> <tr> <td>Monitoring: Compliance testing shall be conducted in accordance with Section B111. The reference to initial startup of the source at B111.A(2) shall be defined as initial startup for each fuel type; compliance testing on fuel oil in accordance with B111 is not required until after the source has achieved startup on fuel oil.</td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain records in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: Initial compliance tests are required for each boiler, Units CMRR-BHW-1 through -4. The tests shall be conducted for NOx and CO for each fuel type. Tests shall be conducted for TSP, PM10, and PM2.5 for fuel oil use only. (NSR Permit 2195N, Specific Condition 6.a., partial, revised)	Monitoring: Compliance testing shall be conducted in accordance with Section B111. The reference to initial startup of the source at B111.A(2) shall be defined as initial startup for each fuel type; compliance testing on fuel oil in accordance with B111 is not required until after the source has achieved startup on fuel oil.	Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>Initial compliance testing requirements were changed by technical permit revision 2195N-R2 on 9/25/12. Testing for fuel oil is no required.</p>
Requirement: Initial compliance tests are required for each boiler, Units CMRR-BHW-1 through -4. The tests shall be conducted for NOx and CO for each fuel type. Tests shall be conducted for TSP, PM10, and PM2.5 for fuel oil use only. (NSR Permit 2195N, Specific Condition 6.a., partial, revised)					
Monitoring: Compliance testing shall be conducted in accordance with Section B111. The reference to initial startup of the source at B111.A(2) shall be defined as initial startup for each fuel type; compliance testing on fuel oil in accordance with B111 is not required until after the source has achieved startup on fuel oil.					
Recordkeeping: The permittee shall maintain records in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					



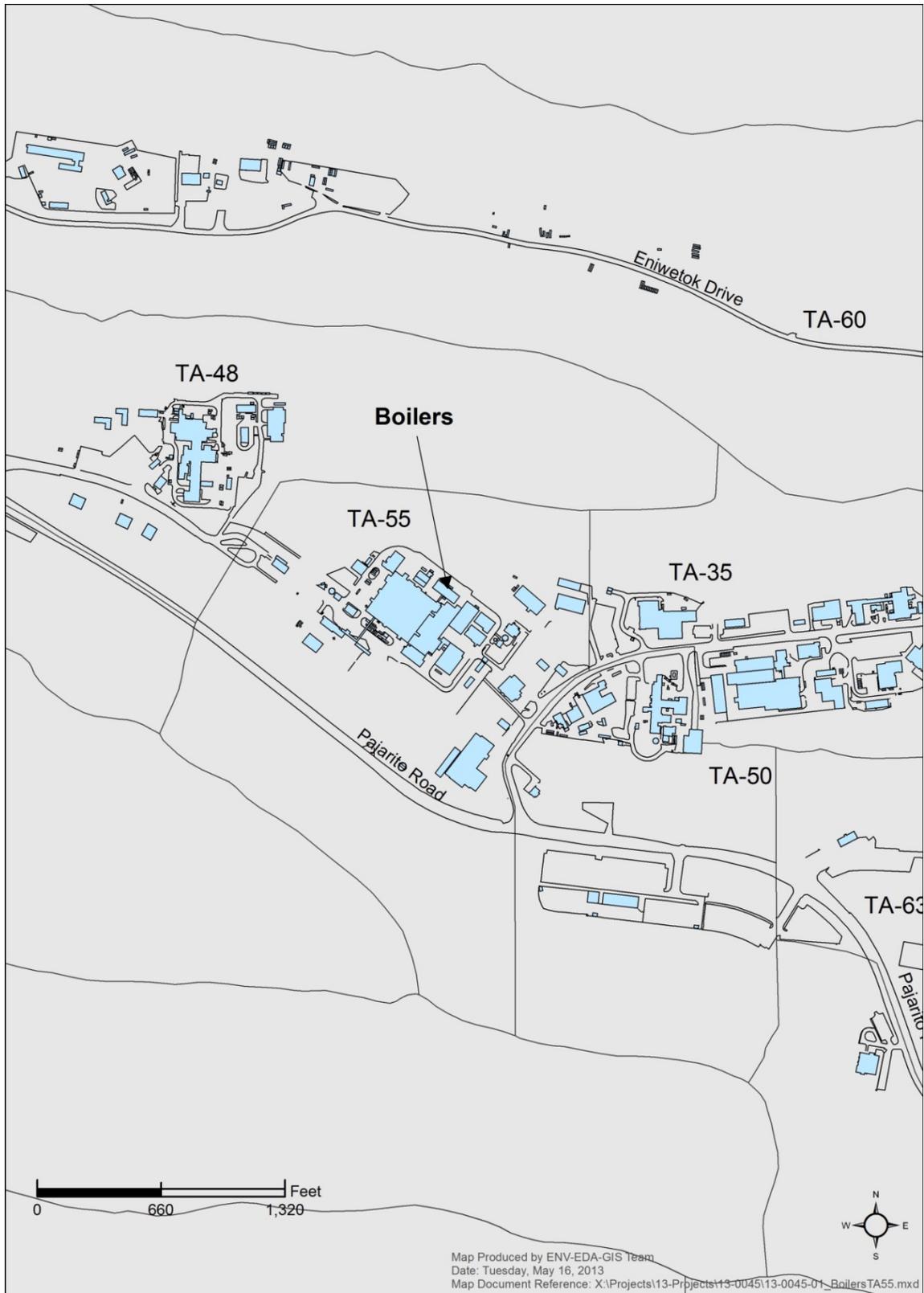
Location of Boilers at TA-16.

Figure 2.3-2 Location of Boilers at TA-16



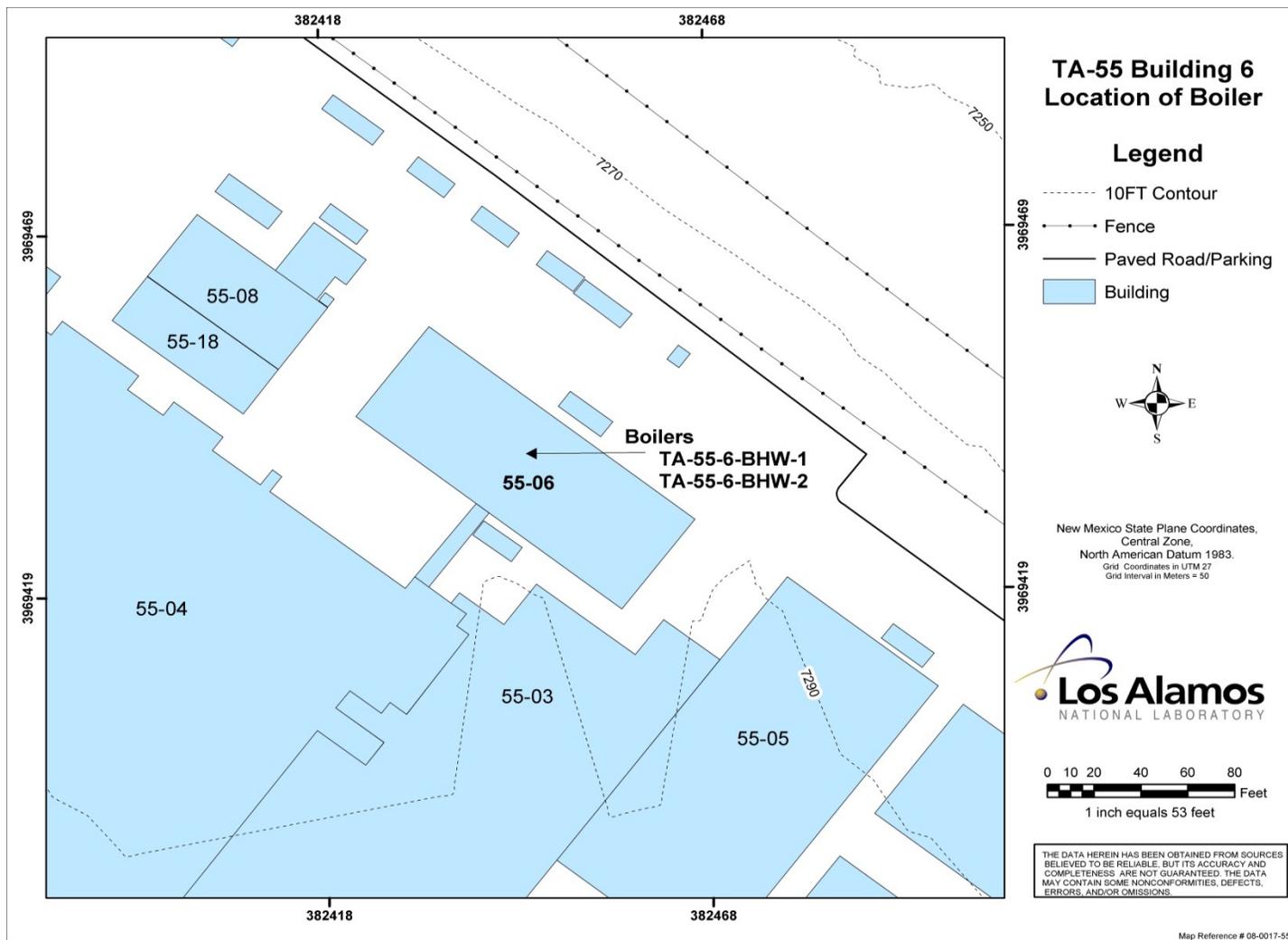
Emission Units: TA-16-1484-BS-1 and BS-2, Boilers.

Figure 2.3-3 Plot Plan for Emission Units TA-16-1484-BS-1 and TA-16-1484-BS-2, Boilers



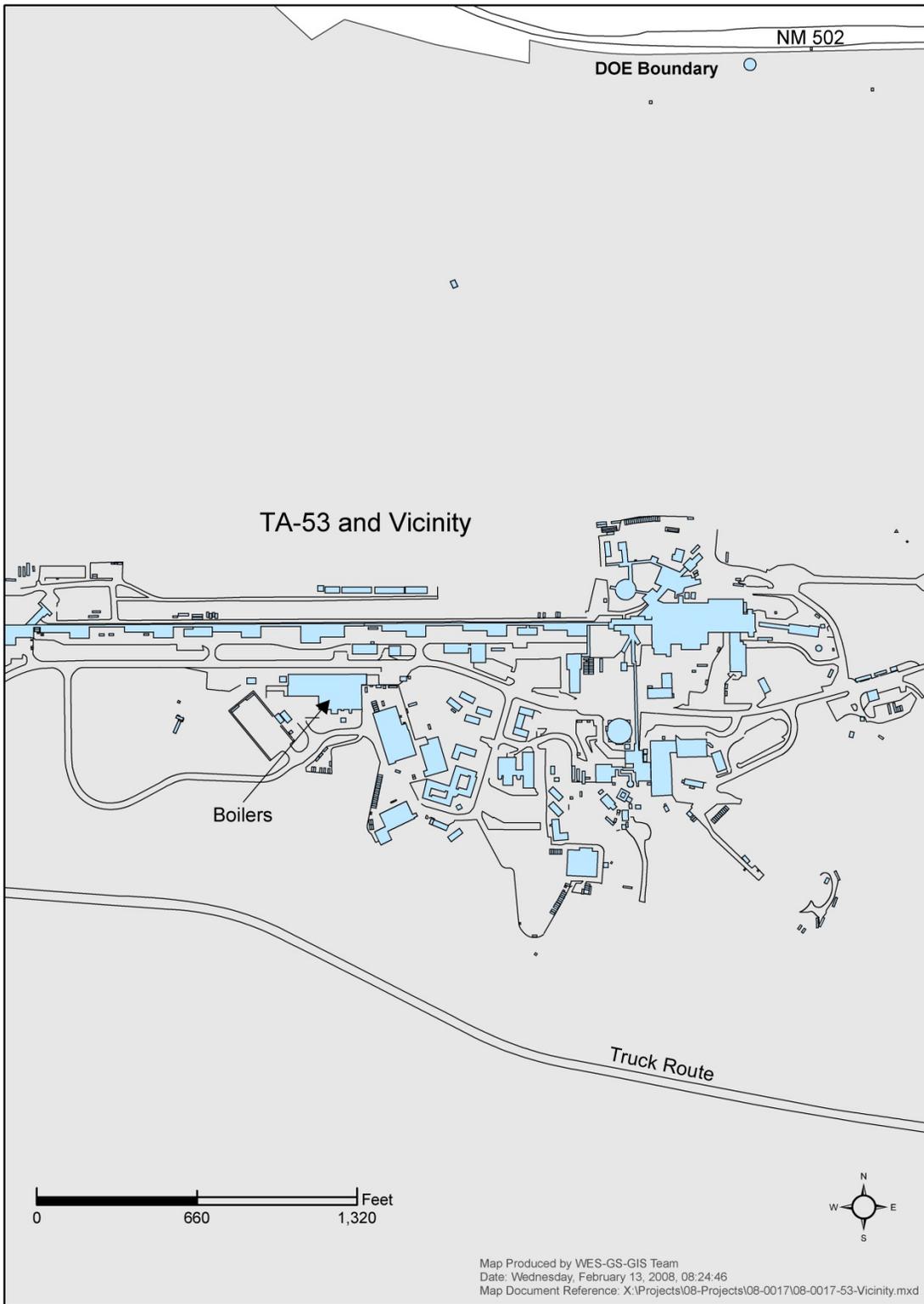
Location of Boilers at TA-55.

Figure 2.3-4 Location of Boilers at TA-55



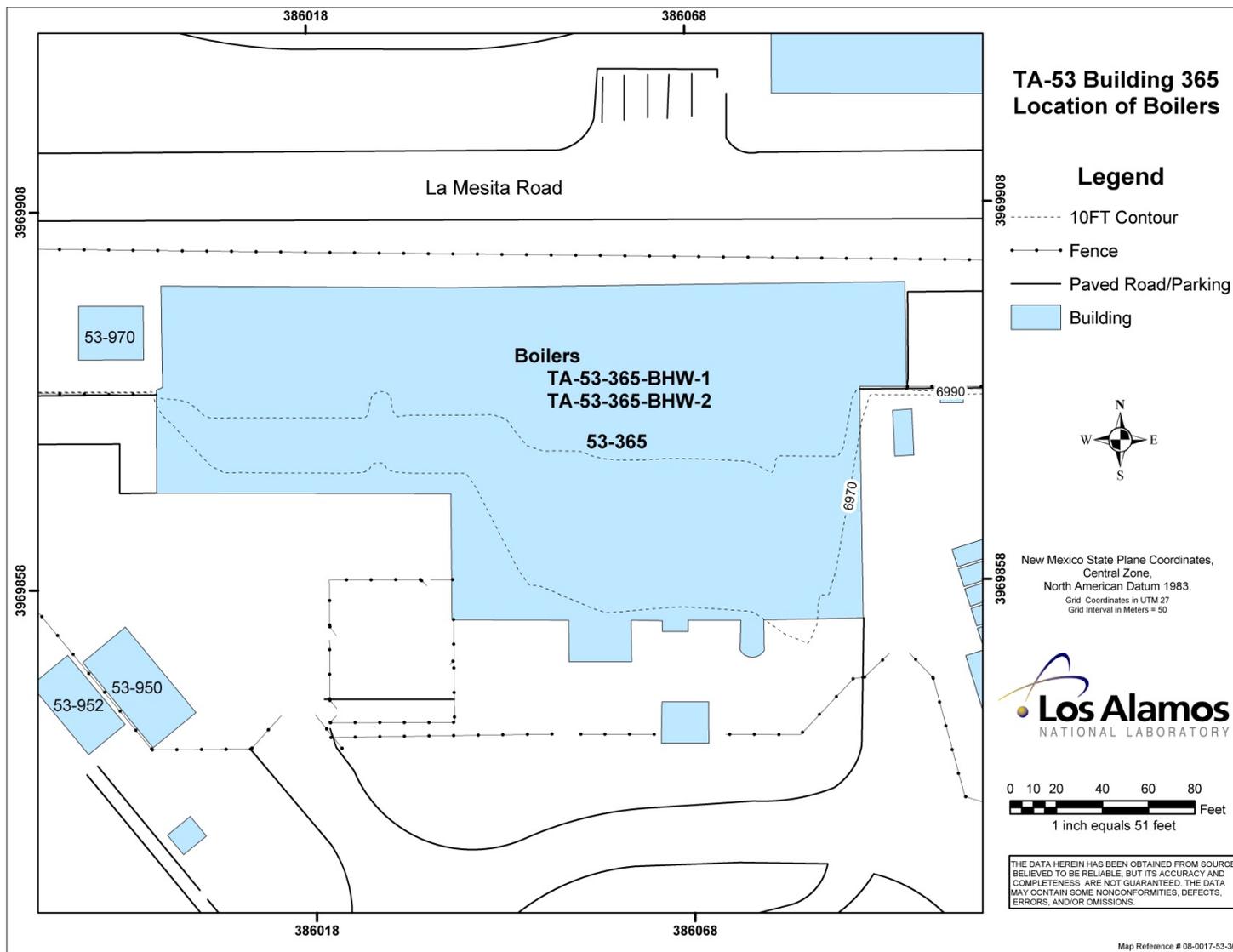
Emission Units: TA-55-6-BHW-1 and BHW-2, Boilers.

Figure 2.3-5 Plot Plan for Emission Units TA-55-6-BHW-1 and TA-55-6-BHW-2, Boilers



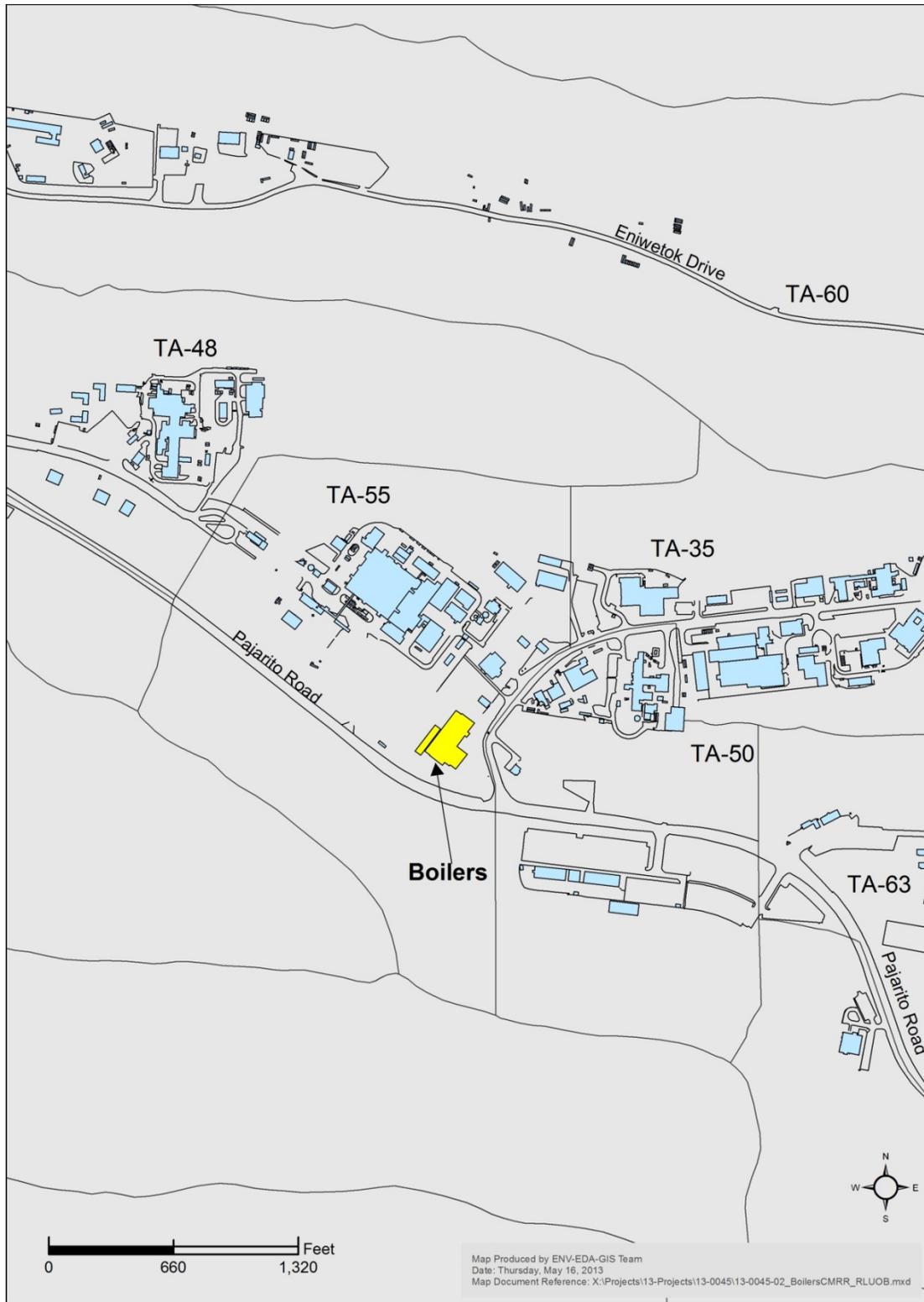
Location of boilers at TA-53.

Figure 2.3-6 Location of Boilers at TA-53



Emission Units: TA-53-365-BHW-1 and BHW-2, Boilers.

Figure 2.3-7 Plot Plan for Emission Units TA-53-365-BHW-1 and TA-53-365-BHW-2, Boilers



Location of Boilers at CMRR-RULOB TA-55-440.

Figure 2.3-8 Location of Boilers at CMRR-RLUOB TA-55-440

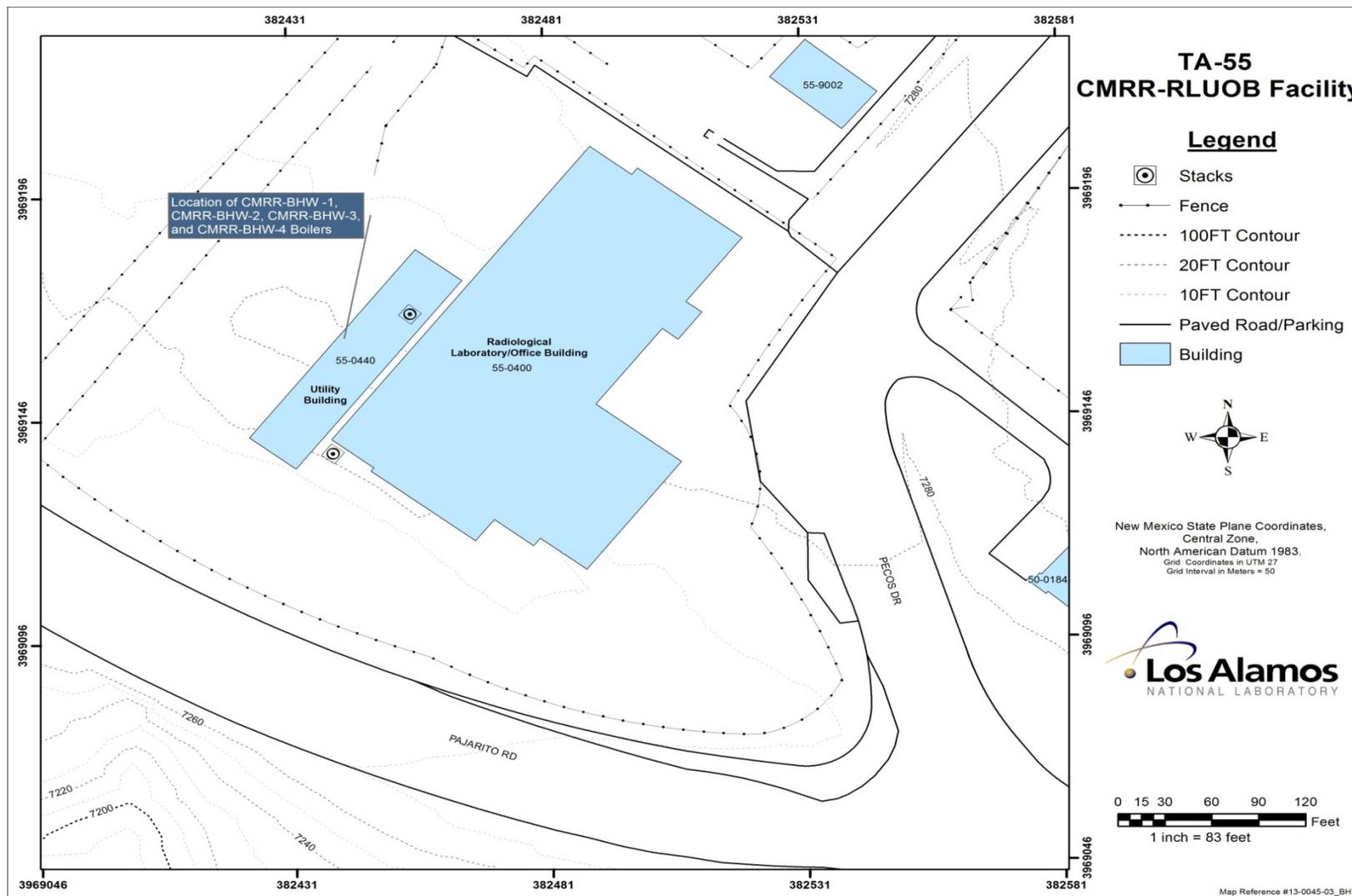


Figure 2.3-9 Plot Plan for Emission Units CMRR-BHW-1 through 4, Boilers

2.4 Chemical Usage

2.4.1 General Description of Source Category

LANL scientists conduct a wide variety of research and development (R&D) activities. The R&D activities often involve the use of small quantities of various chemicals. Air emissions from these activities cannot be permitted or estimated in conventional ways because the activities and chemicals being used are constantly changing. However, as described below actual air emissions can be conservatively estimated through the use of purchase information.

Chemicals are used in hundreds of different areas of the Laboratory. For safety reasons, many activities occur under lab hoods with forced ventilation out a stack or into general building exhaust systems. However, other activities occur in open areas of buildings, outdoors, or in other research locations. There are no defined stacks or point sources for this category.

Chemical use throughout the Laboratory is tracked diligently through a chemical inventory tracking system. Purchases of regulated chemicals go through a central purchasing system before they are brought on-site. When chemicals are brought on-site, they are bar-coded and entered into a facility-wide chemical tracking database. Based on the past five year's analysis, approximately 30,000 separate chemical purchase line-items are entered into the database each year.

2.4.2 Operating Schedule

There are no set operating schedules for R&D activities. Chemical use can occur at any time. For the purpose of this application, the operating schedule is 8760 hours per year.

2.4.3 Process Flow Diagram

Figure 2.4-1 shows a simplified process flow diagram of emissions from chemical use.

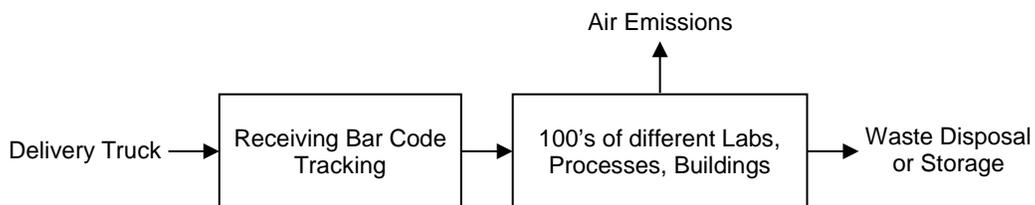


Figure 2.4-1 Process Flow Diagram for R & D Chemical Usage

2.4.4 Emissions

As required under 20.2.73 NMAC, LANL submits estimates of VOC and HAP emissions from Laboratory-wide chemical use in the annual emission inventory report. For each year, the emission estimates for chemical usage as reported in the annual emission inventory report are a sum of the emission estimates for chemical usage from the two Title V Semiannual Emissions Reports. For the most part, the emission estimates reported are based on a very conservative assumption that the total amount of regulated chemicals purchased is equivalent to total emissions. This is a very conservative approach because it assumes all chemicals purchased are used and evaporate as air emissions. It does not take into account chemicals that are purchased and remain in a process, or the amount of chemicals that are disposed of as waste. Occasionally, process knowledge is used to refine the emission estimates. Chemicals used for activities that qualify as trivial or exempt activities are deleted from the analysis (e.g., grounds and building maintenance, calibration of laboratory equipment, etc.). Table 2.4-1 summarizes the actual VOC and HAP emissions from chemical use for the past five years, as reported in the 20.2.73 NMAC Emissions Inventory submittal for LANL. For the past 5 years, the highest individual HAP as reported on the annual emission inventory report is shown in Table 2.4-2.

Table 2.4-1 Past Actual VOC and HAP Emissions from Chemical Use

Year	VOC (tons)	Total HAPs (tons)
2008	9.0	4.5
2009	10.4	4.4
2010	6.7	3.8
2011	6.4	2.6
2012	8.8	6.2

Table 2.4-2 Past Actual Highest Individual HAP Emission

Year	Estimated Emissions (ton/year)
2008	1.0 (hydrochloric acid)
2009	1.2 (cyanide compounds)
2010	1.4 (methyl chloroform)
2011	0.6 (hexane)
2012	2.0 (cyanide compounds)

2.4.5 Emissions Control Equipment

There are no air pollution controls required or noted in this application for chemical usage for research and development activities.

2.4.6 Operational Plan

Since there is no specific equipment associated with miscellaneous chemical use, there are no startup, shutdown, or emergency emissions to be addressed.

2.4.7 Applicable Requirements

There are currently no applicable regulatory requirements for emissions from chemical use other than the existing requirements in Permit P100-R1-M1. LANL is proposing in this application to maintain the current permit conditions for this activity. Table 2.4-3 lists existing applicable requirements for chemical use.

Existing P100-R1-M3 Permit Conditions – Chemical Usage	Proposed Changes								
<p>A904 Operational Limitations – Chemical Usage</p> <p>A. The Chemical Usage source category is authorized for continuous operation. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.</p> <p>B. For Unit CMRR-CHEM, the permittee shall obtain a NSR permit revision prior to the use of any TAP that is expected to be emitted in excess of the stack-height-corrected screening level at 202.72.502 NMAC. (NSR Permit 2195N, Specific Condition 1.g, revised)</p>	<p>No changes.</p>								
<p>A907 Other – Chemical Usage</p> <p>A. Emission calculations (Unit LANL-FW-CHEM)</p> <table border="1" data-bbox="296 542 1583 842"> <tr> <td>Requirement: The permittee shall comply with the facility-wide VOC and HAP emission limits at Table 106.B.</td> </tr> <tr> <td>Monitoring: The permittee shall monitor facility-wide chemical purchasing and site location using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a semi-annual basis, and categorized as VOC, HAP, or a combination of these categories.</td> </tr> <tr> <td>Recordkeeping: The permittee shall record the quantity of total VOC emitted and the quantity of each individual and total HAPs on a semi-annual basis. These records shall be maintained in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.</td> </tr> </table> <p>B. Emission calculations (Unit CMRR-CHEM)</p> <table border="1" data-bbox="296 917 1583 1313"> <tr> <td>Requirement: The permittee shall comply with the source-specific VOC emission limit at Table 902.A and the facility-wide VOC and HAP emission limits at Table 106.B. (NSR Permit 2195N, Specific Condition 2.a., revised)</td> </tr> <tr> <td>Monitoring: The permittee shall monitor chemical purchasing for the CMRR-CHEM facility using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a monthly basis, and categorized as VOC, HAP, TAP, or a combination of these categories. (NSR Permit 2195N, Specific Condition 4.c., revised)</td> </tr> <tr> <td>Recordkeeping: The permittee shall record the quantity of total VOC and TAP, each individual HAP, and the total HAPs emitted on a monthly rolling, 12-month total basis. These records shall be maintained in accordance with Section B109. (NSR Permit 2195N, Specific Condition 4.c., revised)</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.</td> </tr> </table>	Requirement: The permittee shall comply with the facility-wide VOC and HAP emission limits at Table 106.B.	Monitoring: The permittee shall monitor facility-wide chemical purchasing and site location using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a semi-annual basis, and categorized as VOC, HAP, or a combination of these categories.	Recordkeeping: The permittee shall record the quantity of total VOC emitted and the quantity of each individual and total HAPs on a semi-annual basis. These records shall be maintained in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.	Requirement: The permittee shall comply with the source-specific VOC emission limit at Table 902.A and the facility-wide VOC and HAP emission limits at Table 106.B. (NSR Permit 2195N, Specific Condition 2.a., revised)	Monitoring: The permittee shall monitor chemical purchasing for the CMRR-CHEM facility using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a monthly basis, and categorized as VOC, HAP, TAP, or a combination of these categories. (NSR Permit 2195N, Specific Condition 4.c., revised)	Recordkeeping: The permittee shall record the quantity of total VOC and TAP, each individual HAP, and the total HAPs emitted on a monthly rolling, 12-month total basis. These records shall be maintained in accordance with Section B109. (NSR Permit 2195N, Specific Condition 4.c., revised)	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.	<p>No changes.</p>
Requirement: The permittee shall comply with the facility-wide VOC and HAP emission limits at Table 106.B.									
Monitoring: The permittee shall monitor facility-wide chemical purchasing and site location using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a semi-annual basis, and categorized as VOC, HAP, or a combination of these categories.									
Recordkeeping: The permittee shall record the quantity of total VOC emitted and the quantity of each individual and total HAPs on a semi-annual basis. These records shall be maintained in accordance with Section B109.									
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.									
Requirement: The permittee shall comply with the source-specific VOC emission limit at Table 902.A and the facility-wide VOC and HAP emission limits at Table 106.B. (NSR Permit 2195N, Specific Condition 2.a., revised)									
Monitoring: The permittee shall monitor chemical purchasing for the CMRR-CHEM facility using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a monthly basis, and categorized as VOC, HAP, TAP, or a combination of these categories. (NSR Permit 2195N, Specific Condition 4.c., revised)									
Recordkeeping: The permittee shall record the quantity of total VOC and TAP, each individual HAP, and the total HAPs emitted on a monthly rolling, 12-month total basis. These records shall be maintained in accordance with Section B109. (NSR Permit 2195N, Specific Condition 4.c., revised)									
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.									

2.5 Degreasers

2.5.1 General Description of Source Category

There is one solvent cleaning machine, or degreaser, at LANL that uses a regulated halogenated solvent. The active degreaser, TA-55-DG-1, is located within a fully enclosed glove box that is vented from the top through a three-stage HEPA filtration system. It is used for parts cleaning and has a capacity of 20 liters. The degreaser is an ultrasonic cold batch type cleaning machine and uses trichloroethylene (CAS No. 79-01-6) as the solvent. The solvent is not heated or boiled.

Parts in an ultrasonic degreaser are cleaned by cavitation which is the rapid formation and violent collapse of minute bubbles or cavities in the cleaning fluid. This activity creates a highly effective and unique penetrating action that is effective in removing residue and leaves the surface clean and undamaged.

Additional degreasers are used at LANL. None of these additional degreasers use halogenated solvents. They qualify as insignificant emission units under Insignificant Activity #1. In addition, a few of the degreasers containing non-halogenated solvents are used in shops that are dedicated to facility maintenance activities and qualify as Trivial Activity #2.

2.5.2 Operating Schedule

The degreaser is used sporadically for short periods of time, depending on the amount of parts that are cleaned. When the degreaser is not being used, the lid is kept closed or the solvent is removed. LANL is not proposing to limit solvent use, hours of operation or emissions specifically from the degreasers.

2.5.3 Process Flow Diagram

A general process flow diagram is presented in Figure 2.5-1.

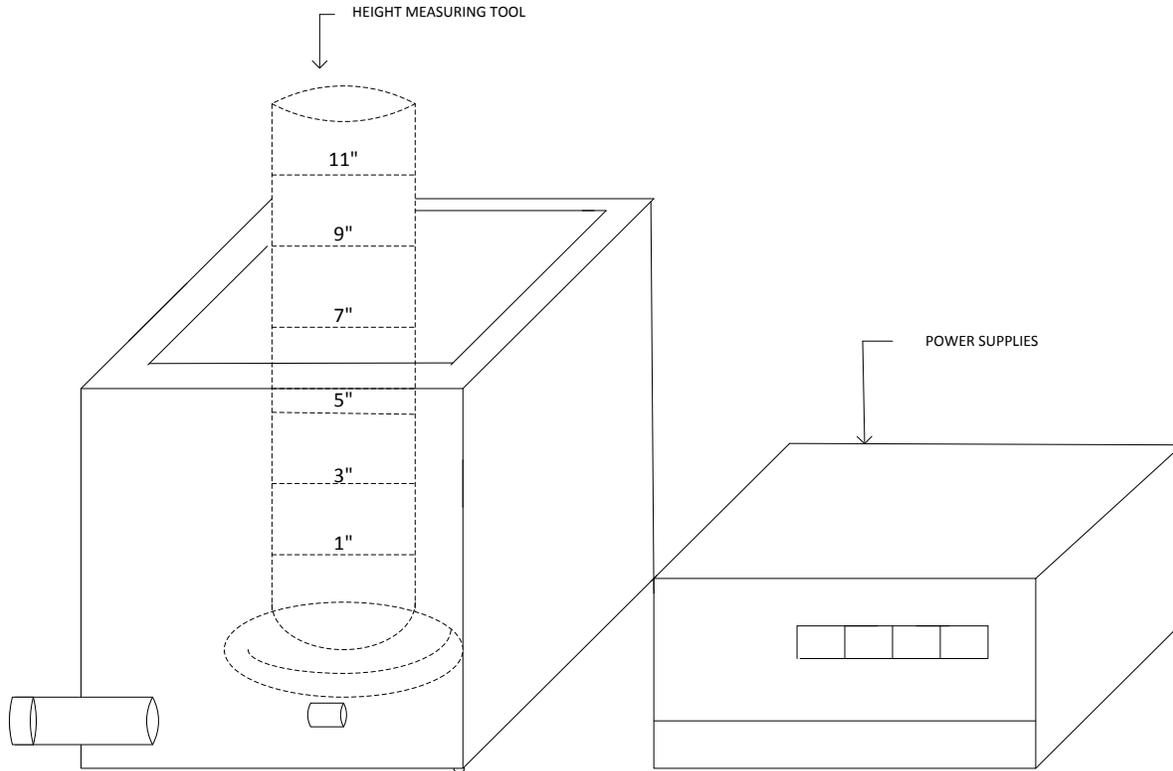


Figure 2.5-1 Process Flow Diagram for the Degreaser

2.5.4 Emissions

Actual air emissions are estimated on a mass balance approach. Maximum emissions or potential to emit cannot be estimated for this source type. Before a degreaser is used, the amount of solvent present in the degreaser is recorded (i.e., initial amount). The addition or removal of any solvent is also recorded. Based on the amounts added or removed, the new amount of solvent is recorded (i.e., final amount). Air emissions are calculated as the difference between the final amount of solvent from the previous use and the initial amount of solvent for the next use.

Based on the dimensions of the degreaser tanks, the tank depth corresponds to a known volume. The tank contents are monitored with a graduated dipstick. Each addition or removal of solvent is recorded in depth (inches) and converted to its corresponding volume.

For informational purposes emissions estimates based on actual records of use are shown in Table 2.5-1. The pollutant emitted, trichloroethylene, is categorized as both a HAP and VOC. Allowable emissions of HAPs and VOCs are limited on a facility-wide basis and are discussed in Chapter 1.

Table 2.5-1 Past Actual Emissions Estimates from Degreaser TA-55-DG-1

Year	Trichloroethylene (lbs)
2010	19.2
2011	20.9
2012	12.7

2.5.5 Emissions Control Equipment

The degreaser is located within a fully enclosed glove box that is vented from the top through a three-stage HEPA filtration system. This system does not remove solvent vapors. Other than being totally enclosed in the glove box, there are currently no physical controls on the degreaser to reduce or eliminate emissions. Work practice standards are in place to minimize air emissions as required by the applicable rule at 40 CFR Part 63, Subpart T NESHAP. Subpart T does not require control equipment for this type and size of degreaser.

2.5.6 Operational Plan

Emissions from the cold batch type degreaser during startup and shutdown are not expected to differ from those during normal operations. The only malfunction that might result in excess emissions would be a solvent spill or equipment leak. Since the degreaser is located inside a glovebox, the glovebox would serve as secondary containment should spills or leaks occur. LANL personnel routinely check for spills and leaks and correct such situations immediately upon discovery.

2.5.7 Applicable Requirements

Applicable requirements present in current Title V permit P100-R1-M1 are shown in Table 2.5-2. They represent primarily the work practice standards required by 40 CFR 63 Subpart T for cold batch degreasers using halogenated solvents. LANL is not requesting any changes to these existing conditions.

2.5.8 Location and Plot Plan for Degreaser

The location and plot plan for the degreaser is found in Figures 2.5-2 and 2.5-3.

Table 2.5-2 Existing Permit Conditions for the Degreaser and Proposed Changes

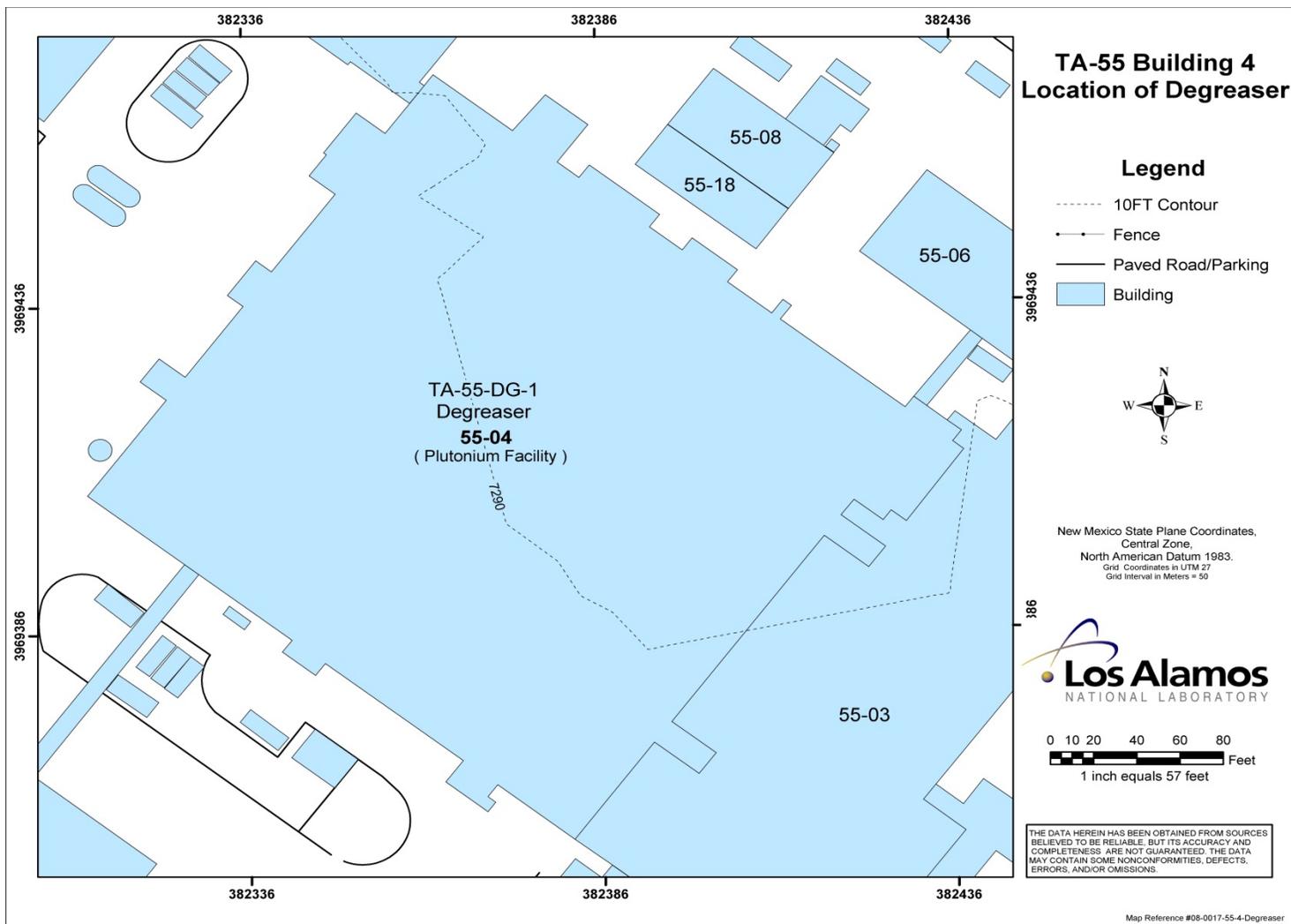
Existing P100-R1-M3 Permit Conditions - Degreaser	Proposed Changes						
<p>A1000 Regulated Sources – Degreasers</p> <p>A. Table 1000.A lists all of the process equipment authorized for this source category.</p> <p>Table 1000.A: Regulated Sources List</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>Source Description/Location</th> <th>Emissions Type</th> </tr> </thead> <tbody> <tr> <td>TA-55-DG-1</td> <td>Ultrasonic Cold Batch</td> <td>VOCs, HAPs</td> </tr> </tbody> </table>	Unit No.	Source Description/Location	Emissions Type	TA-55-DG-1	Ultrasonic Cold Batch	VOCs, HAPs	<p>No changes.</p>
Unit No.	Source Description/Location	Emissions Type					
TA-55-DG-1	Ultrasonic Cold Batch	VOCs, HAPs					
<p>A1002 Emission Limits –Degreasers</p> <p>A. Table 1002.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC).</p> <p>Table 1002.A: Allowable Emissions</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>VOC/HAPs (tpy)</th> </tr> </thead> <tbody> <tr> <td>TA-55-DG-1</td> <td>--¹</td> </tr> </tbody> </table> <p>¹The VOC emissions from this source category are included in the facility-wide allowable emissions limit established in Table 106.B: 200 tpy VOC, 8.0 tpy per individual HAP, and 24.0 tpy of combined total HAPs. Any VHAPs that are also defined as a VOC shall be included in the VOC total.</p>	Unit No.	VOC/HAPs (tpy)	TA-55-DG-1	-- ¹	<p>No changes.</p>		
Unit No.	VOC/HAPs (tpy)						
TA-55-DG-1	-- ¹						
<p>A1003 Applicable Requirements – Degreasers</p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 1003.A.</p> <p>Table 1003.A: Applicable Requirements</p> <table border="1"> <thead> <tr> <th>Applicable Requirements</th> <th>Federally Enforceable</th> <th>Unit No.</th> </tr> </thead> <tbody> <tr> <td>40 CFR 63, Subpart T National Emission Standards for Halogenated Solvent Cleaning</td> <td style="text-align: center;">X</td> <td>TA-55-DG-1</td> </tr> </tbody> </table>	Applicable Requirements	Federally Enforceable	Unit No.	40 CFR 63, Subpart T National Emission Standards for Halogenated Solvent Cleaning	X	TA-55-DG-1	<p>No changes.</p>
Applicable Requirements	Federally Enforceable	Unit No.					
40 CFR 63, Subpart T National Emission Standards for Halogenated Solvent Cleaning	X	TA-55-DG-1					
<p>A1004 Operational Limitations – Degreasers</p> <p>A. The Degreasers source category is authorized for continuous operation. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.</p>							

Existing P100-R1-M3 Permit Conditions - Degreaser	Proposed Changes
<p>A1007 Other – Degreasers</p> <p>A. Operational Requirements (Degreasers)</p> <div style="border: 1px solid black; padding: 5px;"> <p>Requirement: The permittee shall comply with the applicable requirements according to 40 CFR 63, Subpart T, including, but not limited to:</p> <ol style="list-style-type: none"> 1) Ensure the degreaser is closed with a tight fitting cover whenever not in use, and 2) Maintain a freeboard ratio of 0.75 or greater, and 3) Collect and store all waste solvent and wipe rags in closed containers, and 4) Perform flushing within the freeboard area only, and 5) Allow cleaned parts to drip for 15 seconds or until dripping stops, and 6) Do not exceed the fill line on the solvent level, and 7) Wipe up spills immediately, and 8) Do not create observable splashing with agitation device, and 9) Ensure that the degreaser is not exposed to drafts greater than 40 meters/min, and 10) Do not clean sponges, fabric, wood, or paper. </div> <div style="border: 1px solid black; padding: 5px;"> <p>Monitoring: The permittee shall monitor and record the amount of solvent added to the degreaser.</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Recordkeeping: The permittee shall:</p> <p>Calculate the actual emissions rate (pounds/month) of VOC and HAPs based on the quantity of solvent lost to evaporation on a monthly basis.</p> <p>Calculate the semi-annual emissions rate (tons/year) for this source category and add to the facility-wide emission rates in Table 106.B.</p> <p>Maintain records of the degreaser solvent content and quantity added and work practice checklists.</p> <p>The permittee shall maintain records in accordance with Section B109.</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </div>	<p>No changes.</p>



Location of Degreaser at TA-55.

Figure 2.5-2 Location of Degreaser at TA-55



Emission Unit: TA-55-DG-1, Degreaser.

Figure 2.5-3 Plot Plan for Emission Unit TA-55-DG-1, Degreaser

2.6 Internal Combustion Sources

2.6.1 General Description of Source Category

LANL maintains and operates approximately 200 stationary and portable electrical generators with design capacities ranging from less than 1 kW to 1,600 kW. Stationary generators are primarily used on standby (emergency) status to provide power to critical systems at LANL during power outages. The stationary generators are fueled by natural gas or diesel. Portable generators are used 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 diesel. Within this category, there are also four stationary fire pumps located at LANL powered by diesel engines. The fire pumps are only used during an emergency should water pressure be lost.

NMED has two EPA-approved lists which exempt small emission sources with minor air emissions from Title V permit requirements. One list contains activities referenced as trivial (NMED List of Trivial Activities, January 10, 1996) and the second list contains activities termed insignificant (NMED List of Insignificant Activities, March 24, 2005). Trivial activities are not required to be included in permit applications and are exempt from permitting. Categories of insignificant sources are required to be listed in permit applications, but the activities themselves are also exempt from permitting. References in the paragraphs below are to the numbered activities in these NMED lists.

Stationary Standby Generators – Title V Insignificant Activity. LANL maintains a pool of approximately 40 stationary standby generators at various locations throughout the Laboratory. All of these generators meet the definition of standby equipment under 20.2.70 NMAC and are used solely to provide emergency backup power for less than 500 hours annually. Therefore all of these units are defined as insignificant sources and exempt from the Title V operating permit program (Insignificant Activity #7). Even though these stationary generators are exempt from permitting, LANL proposes to continue to track and report emissions from these sources in the semiannual emissions reports required by Permit P100-R1-M1.

Generators – Title V Permitted Units. LANL operates one stationary and three portable generators that are used to support research-related activities at TA-33. Each unit has gone through NSR permitting and is currently in Permit P100-R1-M1 (Unit Nos. TA-33-G1, G2, G3 and G4). Three stationary standby generators located at the RLUOB facility were exempt from NSR permitting but are not exempt from Title V due to applicable NSPS requirements. These three generators are also currently within

Permit P100-R1-M1 (Unit Nos. CMRR-GEN-1, GEN-2 and GEN-3). One additional stationary standby generator located at TA-48 is also exempt from NSR permitting but is not exempt from Title V due to applicable NSPS requirements. LANL is proposing to include this generator within Permit P100.

Portable Generators. LANL maintains a pool of approximately 135 portable generators used for temporary power at remote locations and to provide emergency back-up power. Many of these portable generators qualify as trivial activities based on size. Trivial Activity #21 exempts small portable generators that can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device from one location to another.

Some of the portable generators do not qualify as trivial activities, but are considered insignificant emission units based on rated capacity and fuel type. Insignificant Activity #6 is for portable engines with design capacity less than or equal to 200 horsepower if fueled by diesel or natural gas, and less than 500 horsepower if fueled by gasoline. Insignificant Activity #7 exempts emergency generators used less than 500 hours per year.

Stationary Fire Pump Engines. The four fire pump engines range in size from 110 to 225 hp. These are used only during emergencies. The engines pre-date the stationary engine NSPS and are not subject to it. The engines are also not subject to the stationary engine RICE NESHAP under the emergency engine exemption for institutional facilities. These engines are exempt from Title V under NMED trivial activity #5 as fire control equipment.

Table 2.6-1 summarizes the categories of internal combustion equipment at LANL.

Table 2.6-1 Types of Internal Combustion Sources at LANL

Equipment Description	Approximate Total of Design Rating	Fuel	Operational Status	Permitting Status
Stationary Standby Generators – Title V Insignificant Activity	16,713 engine kW	Natural Gas Diesel	Standby emergency	Exempt- Insignificant Activity #7
Generators – Title V Permitted Units	9,638 engine hp	Diesel	Periodic for experimental research or Standby emergency	Currently or proposed to be within Permit P100-R1-M1.
Portable Generators	3,500 generator kW	Gasoline Diesel	Standby emergency or portable temporary use	Exempt -Trivial Activity #21, and IEU #6 and 7

Equipment Description	Approximate Total of Design Rating	Fuel	Operational Status	Permitting Status
Fire Pump Engines	765 engine hp	Diesel	Standby emergency	Exempt – Trivial Activity #5

2.6.2 Operating Schedule

Stationary Standby Generators – Title V Insignificant Activity. These stationary standby generators operate whenever commercially available power is not available. These engines also are run periodically for testing and maintenance. Normally each generator is tested for approximately one hour per month. Past actual hours of operation for this pool of generators have typically been 10 to 15 hours per year. For the purpose of this application, the generators can operate at any time during the year.

Generators – Title V Permitted Units. Each generator in this category has an annual operating restriction either due to NSR permit conditions or the stationary engine NSPS. All annual operating restrictions are either currently in Permit P100-R1-M1 or proposed in this application. Standby emergency use generators subject to the stationary engine NSPS are limited to 100 hours per year operation for maintenance and readiness testing, with no limits for emergency use. The portable generators used at TA-33 are limited to 500 hours use per year. The stationary generator at TA-33 has operating restrictions approximately equal to 900 hours of operation per year and can only operate 8 hours per day between 7 AM and 5 PM.

Portable Generators. Portable generators operate on a temporary basis which can occur at any time.

Stationary Fire Pump Engines. These four engines operate only during emergencies or for periodic testing and maintenance.

2.6.3 Process Flow Diagram

A general process flow diagram for an internal combustion unit is provided in Figure 2.6-1.

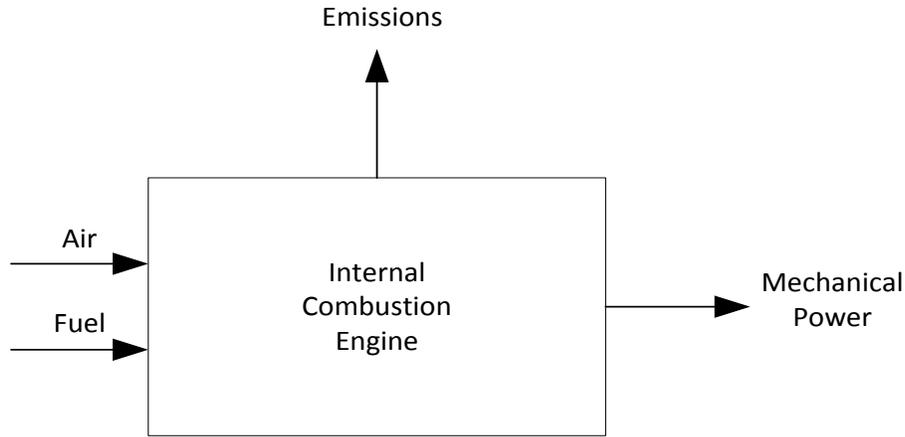


Figure 2.6.1 Process Flow Diagram for Internal Combustion Sources

2.6.4 Emissions

Emissions from internal combustion engines include the criteria pollutants (NO_x, CO, SO₂, PM, and VOCs) and trace amounts of HAPs. All emission calculations and emission factors for this source category are shown on the included UA2 application within the worksheet “Internal Combustion”. Emission estimates are shown below in Table 2.6-2 for the permitted and stationary standby generator engine categories. The values shown represent annual maximum emissions considering any enforceable operating restriction such as hours of operation.

Table 2.6-2 Emissions Estimates for Internal Combustion Engines

	Stationary Standby Generators – Title V Insignificant Activity (tpy)	Generators – Title V Permitted Units (tpy)	Total (tpy)
NO _x	47.4	26.0	73.4
CO	10.6	23.0	33.6
SO _x	1.5	0.7	2.2
PM	2.0	1.1	3.1
VOC	2.0	1.5	3.5
HAPs	0.01	0.006	0.02

2.6.5 Emissions Control Equipment

There are no air pollution controls on the internal combustion engines.

2.6.6 Operational Plan

Diesel and gasoline engines may have increased particulate emissions at startup until the engine is warmed up. This is a normal condition for older engines in this category. LANL is required to conduct opacity readings on recently permitted engines during cold startups and take corrective action if an opacity limit is exceeded. Increased emissions during shutdowns or malfunctions are not anticipated from this type of equipment.

2.6.7 Applicable Requirements

The current applicable requirements for this source category are shown in Table 2.6-3. Included within the table are any proposed revisions to these existing conditions. Several changes are proposed in order to clarify existing permit conditions. For the new stationary standby generator (TA-48-GEN-1) which is subject to the stationary engine CI NSPS at Subpart IIII, several citations to this unit and NSPS requirements should be made. Note that by letter of October 11, 2012 to LANL, EPA Region VI determined emergency use stationary engines at LANL are exempt from the requirements of the Part 63 Subpart ZZZZ RICE NESHAP.

LANL is requesting at this time to remove the existing 168 hour annual operating restriction per engine which is applicable to the standby generator pool. This restriction was proposed by LANL in the 2002 Title V application as a means to provide additional assurance that the proposed facility-wide emission limits would not be exceeded. There is no regulatory requirement to have an hourly restriction on these units. Now having almost a ten year history of tracking hours and emissions from these units, it is clear their contribution to facility-wide emissions is very minor. In the last five years, average operating hours per engine have ranged from 10 to 15 hours. The highest pollutants emitted, NO_x, has ranged from 4 to 6 tons per year. In addition, any new stationary generator will be limited to 100 hours of operation per year under the stationary engine NSPS requirements. Under this request, emissions from these units would still be calculated and reported.

2.6.8 Location and Plot Plans for Internal Combustion Sources

The location and plot plans for permitted internal combustion sources at LANL can be found in Figures 2.6-2 through 2.6.7.

Table 2.7-6 Existing Permit Conditions for Internal Combustions Sources and Proposed Changes

Existing P100-R1-M3 Permit Conditions – Internal Combustion Sources							Proposed Changes
A1100 Regulated Sources – Internal Combustion							A diesel generator should be added to the regulated source list. See Table A on the UA2 application form for information on TA-48-GEN-1. This is an emergency unit exempt from NSR permitting but not Title V.
A. Table 1100.A lists all of the process equipment authorized for this source category.							
Table 1100.A: Regulated Sources List							
Unit No.	Source Location	Source Type	Make/Model	Serial No.	Capacity	Manufacture Date	
TA-33-G-1	TA-33	CI-RICE, Stationary Generator	Kohler/1600 ROZD71	375801	1600 kW (electrical output)	1996	
TA-33-G-2	TA-33	CI-RICE, Portable Generator	Kohler/20EORZ	2025460	20 kW (electrical output)	2003	
TA-33-G-3	TA-33	CI-RICE, Portable Generator	Kohler/20EORZ	2025461	20 kW (electrical output)	2003	
TA-33-G-4	TA-33	CI-RICE, Portable Generator	Caterpillar/3306	6PK01065	225 kW (electrical output)	1999	
Standby Generators	Facility-Wide	CI – and SI-RICE Generators: diesel, natural gas, and propane.	Various	Various	Various	Unknown	
CMRR-GEN-1	Near TA-55-0400 (CMRR-RULOB)	CI-RICE Stationary Generator	Cummins/DFLE-5754172	106970810	2220 hp (mechanical input)	9/06	
CMRR-GEN-2	Near TA-55-0400 (CMRR-RULOB)	CI-RICE Stationary Generator	Cummins/DFLE-5754172	106970811	2220 hp (mechanical input)	9/06	
CMRR-GEN-3	Near TA-55-0400 (CMRR-RULOB)	CI-RICE Stationary Generator	Cummins/DFLE-5754172	106970812	2220 hp (mechanical input)	9/06	
A1101 Control Equipment – Internal Combustion – Not Required							

Existing P100-R1-M3 Permit Conditions – Internal Combustion Sources												Proposed Changes																																																																	
<p>A1102 Emission Limits – Internal Combustion</p> <p>Table 1102.A: Allowable Emissions</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>NO_x pph</th> <th>NO_x tpy</th> <th>CO pph</th> <th>CO tpy</th> <th>VOC pph</th> <th>VOC tpy</th> <th>SO₂ pph</th> <th>SO₂ tpy</th> <th>TSP pph</th> <th>TSP tpy</th> <th>PM₁₀ pph</th> <th>PM₁₀ tpy</th> </tr> </thead> <tbody> <tr> <td>TA-33-G-1</td> <td>40.3</td> <td>18.1</td> <td>33.7</td> <td>15.2</td> <td>0.7</td> <td>0.3</td> <td>5.5</td> <td>2.5</td> <td>1.4</td> <td>0.6</td> <td>1.4</td> <td>0.6</td> </tr> <tr> <td>TA-33-G-2</td> <td>0.83</td> <td>0.21</td> <td>0.2</td> <td>0.1</td> <td>0.1</td> <td>--¹</td> <td>--</td> <td>--</td> <td>--</td> <td>--</td> <td>--</td> <td>--</td> </tr> <tr> <td>TA-33-G-3</td> <td>0.83</td> <td>0.21</td> <td>0.2</td> <td>0.1</td> <td>0.1</td> <td>--¹</td> <td>--</td> <td>--</td> <td>--</td> <td>--</td> <td>--</td> <td>--</td> </tr> <tr> <td>TA-33-G-4</td> <td>9.33</td> <td>2.33</td> <td>5.7</td> <td>1.4</td> <td>0.75</td> <td>0.2</td> <td>0.62</td> <td>0.16</td> <td>--</td> <td>--</td> <td>--</td> <td>--</td> </tr> </tbody> </table> <p>¹The VOC emissions from this source category are included in the facility-wide allowable emissions limit established in condition A106.B: 200 tpy VOC, 8.0 tpy per individual HAP, and 24.0 tpy of combined HAPs.</p>												Unit No.	NO _x pph	NO _x tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO ₂ pph	SO ₂ tpy	TSP pph	TSP tpy	PM ₁₀ pph	PM ₁₀ tpy	TA-33-G-1	40.3	18.1	33.7	15.2	0.7	0.3	5.5	2.5	1.4	0.6	1.4	0.6	TA-33-G-2	0.83	0.21	0.2	0.1	0.1	-- ¹	--	--	--	--	--	--	TA-33-G-3	0.83	0.21	0.2	0.1	0.1	-- ¹	--	--	--	--	--	--	TA-33-G-4	9.33	2.33	5.7	1.4	0.75	0.2	0.62	0.16	--	--	--	--	No changes.
Unit No.	NO _x pph	NO _x tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO ₂ pph	SO ₂ tpy	TSP pph	TSP tpy	PM ₁₀ pph	PM ₁₀ tpy																																																																	
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<p>A1103 Applicable Requirements – Internal Combustion</p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 1103.A</p> <p>Table 1103.A: Applicable Requirements</p> <table border="1"> <thead> <tr> <th>Applicable Requirements</th> <th>Federally Enforceable</th> <th>Unit No.</th> </tr> </thead> <tbody> <tr> <td>NSR Permit 2195F-R3</td> <td>X</td> <td>TA-33-G-1</td> </tr> <tr> <td>NSR Permit 2195P</td> <td>X</td> <td>TA-33-G-2 through -4</td> </tr> <tr> <td>NSR Permit 2195N-R1</td> <td>X</td> <td>CMRR-GEN-1 through -3</td> </tr> <tr> <td>20.2.61 NMAC Smoke and Visible Emissions</td> <td>X</td> <td>All Internal Combustion Sources</td> </tr> <tr> <td>20.2.77 New Source Performance Standards</td> <td>X</td> <td>Applicable to CMRR-GEN-1 through -3; potentially applicable to any RICE at the facility</td> </tr> <tr> <td>40 CFR 60, Subpart A, General Provisions</td> <td>X</td> <td rowspan="2">Applicable to CMRR-GEN-1 through -3; potentially applicable to any CI-RICE at the facility</td> </tr> <tr> <td>40 CFR 60 Subpart IIII, Stationary CI-RICE</td> <td>X</td> </tr> <tr> <td>40 CFR 63, Subpart A, General Provisions</td> <td>X</td> <td rowspan="2">TA-33-G-1</td> </tr> <tr> <td>40 CFR 63 Subpart ZZZZ, HAPs from Stationary RICE</td> <td>X</td> </tr> <tr> <td>40 CFR 89, Control of Emissions from New and In-Use Nonroad Compression Ignition Engines</td> <td>X</td> <td>TA-33-G-2 through -4</td> </tr> </tbody> </table>												Applicable Requirements	Federally Enforceable	Unit No.	NSR Permit 2195F-R3	X	TA-33-G-1	NSR Permit 2195P	X	TA-33-G-2 through -4	NSR Permit 2195N-R1	X	CMRR-GEN-1 through -3	20.2.61 NMAC Smoke and Visible Emissions	X	All Internal Combustion Sources	20.2.77 New Source Performance Standards	X	Applicable to CMRR-GEN-1 through -3; potentially applicable to any RICE at the facility	40 CFR 60, Subpart A, General Provisions	X	Applicable to CMRR-GEN-1 through -3; potentially applicable to any CI-RICE at the facility	40 CFR 60 Subpart IIII, Stationary CI-RICE	X	40 CFR 63, Subpart A, General Provisions	X	TA-33-G-1	40 CFR 63 Subpart ZZZZ, HAPs from Stationary RICE	X	40 CFR 89, Control of Emissions from New and In-Use Nonroad Compression Ignition Engines	X	TA-33-G-2 through -4	20.2.77 NMAC NSPS Subpart IIII apply to new unit TA-48-GEN-1. Regards to the statements “potentially applicable to any RICE at the facility”, that is only true for any RICE LANL may install after the date of this application. All units subject to these rules have been identified in this application.																																		
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Existing P100-R1-M3 Permit Conditions – Internal Combustion Sources	Proposed Changes				
<p>A1104 Operational Limitations – Internal Combustion</p> <p>A. Hours of Operation for Gensets in the Standby Generator Pool</p> <table border="1" data-bbox="296 318 1583 553"> <tr> <td>Requirement: The facility Standby Generator Pool is limited to an average of 168 hrs per year per genset.</td> </tr> <tr> <td>Monitoring: The permittee shall monitor the hours of operation or each genset that is assigned to the Standby Generator Pool.</td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain semi-annual records of the hours of operation in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: The facility Standby Generator Pool is limited to an average of 168 hrs per year per genset.	Monitoring: The permittee shall monitor the hours of operation or each genset that is assigned to the Standby Generator Pool.	Recordkeeping: The permittee shall maintain semi-annual records of the hours of operation in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>Request removal of Subsection A. The 168 hour limit has been demonstrated not to be necessary to limit emissions from the standby generator pool and there is no applicable requirement for this restriction. Emissions will still be reported against facility-wide limits.</p>
Requirement: The facility Standby Generator Pool is limited to an average of 168 hrs per year per genset.					
Monitoring: The permittee shall monitor the hours of operation or each genset that is assigned to the Standby Generator Pool.					
Recordkeeping: The permittee shall maintain semi-annual records of the hours of operation in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>B. Hours of Operation and Emission Limits for Unit TA-33-G-1</p> <table border="1" data-bbox="296 651 1583 1122"> <tr> <td> <p>Requirements: Unit TA-33-G-1 is limited to 12,000 kWh/day and 1,350,000 kWh/y. (NSR Permit 2195F-R3, Specific Condition 1.b., partial)</p> <p>Unit TA-33-G-1 is limited to eight (8) hours of daily operation at full capacity. Operation shall occur between the hours of 7:00 AM and 5:00 PM. (NSR Permit 2195F-R3, Specific Condition 1.c.)</p> </td> </tr> <tr> <td> <p>Monitoring: The permittee shall monitor the time(s) of operation each day, and the daily and monthly rolling 12-month total kilowatt-hours of operation for Unit TA-33-G-1 using a non-resettable kilowatt-hour meter. (NSR Permit 2195F-R3, Specific Condition 1.b., partial, revised)</p> </td> </tr> <tr> <td> <p>Recordkeeping: The permittee shall maintain the following records and in accordance with Section B109:</p> <ol style="list-style-type: none"> 1) The permittee shall keep records of the time(s) of operation each day, and the daily, monthly, and the monthly rolling 12-month total kilowatt-hours of operation of the genset listed above, as indicated on the non-resettable kilowatt-hour meter. (NSR Permit 2195F-R3, Specific Condition 4.a. and 4.b., revised) 2) The permittee shall calculate the annual emissions of all pollutants from Unit TA-33-G-1. </td> </tr> <tr> <td> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </td> </tr> </table>	<p>Requirements: Unit TA-33-G-1 is limited to 12,000 kWh/day and 1,350,000 kWh/y. (NSR Permit 2195F-R3, Specific Condition 1.b., partial)</p> <p>Unit TA-33-G-1 is limited to eight (8) hours of daily operation at full capacity. Operation shall occur between the hours of 7:00 AM and 5:00 PM. (NSR Permit 2195F-R3, Specific Condition 1.c.)</p>	<p>Monitoring: The permittee shall monitor the time(s) of operation each day, and the daily and monthly rolling 12-month total kilowatt-hours of operation for Unit TA-33-G-1 using a non-resettable kilowatt-hour meter. (NSR Permit 2195F-R3, Specific Condition 1.b., partial, revised)</p>	<p>Recordkeeping: The permittee shall maintain the following records and in accordance with Section B109:</p> <ol style="list-style-type: none"> 1) The permittee shall keep records of the time(s) of operation each day, and the daily, monthly, and the monthly rolling 12-month total kilowatt-hours of operation of the genset listed above, as indicated on the non-resettable kilowatt-hour meter. (NSR Permit 2195F-R3, Specific Condition 4.a. and 4.b., revised) 2) The permittee shall calculate the annual emissions of all pollutants from Unit TA-33-G-1. 	<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>Request change to monitoring in Subsection B to clarify and match language in Recordkeeping. New language would be: "...and the daily, monthly, and the monthly rolling 12-month total kilowatt-hours..."</p>
<p>Requirements: Unit TA-33-G-1 is limited to 12,000 kWh/day and 1,350,000 kWh/y. (NSR Permit 2195F-R3, Specific Condition 1.b., partial)</p> <p>Unit TA-33-G-1 is limited to eight (8) hours of daily operation at full capacity. Operation shall occur between the hours of 7:00 AM and 5:00 PM. (NSR Permit 2195F-R3, Specific Condition 1.c.)</p>					
<p>Monitoring: The permittee shall monitor the time(s) of operation each day, and the daily and monthly rolling 12-month total kilowatt-hours of operation for Unit TA-33-G-1 using a non-resettable kilowatt-hour meter. (NSR Permit 2195F-R3, Specific Condition 1.b., partial, revised)</p>					
<p>Recordkeeping: The permittee shall maintain the following records and in accordance with Section B109:</p> <ol style="list-style-type: none"> 1) The permittee shall keep records of the time(s) of operation each day, and the daily, monthly, and the monthly rolling 12-month total kilowatt-hours of operation of the genset listed above, as indicated on the non-resettable kilowatt-hour meter. (NSR Permit 2195F-R3, Specific Condition 4.a. and 4.b., revised) 2) The permittee shall calculate the annual emissions of all pollutants from Unit TA-33-G-1. 					
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>					

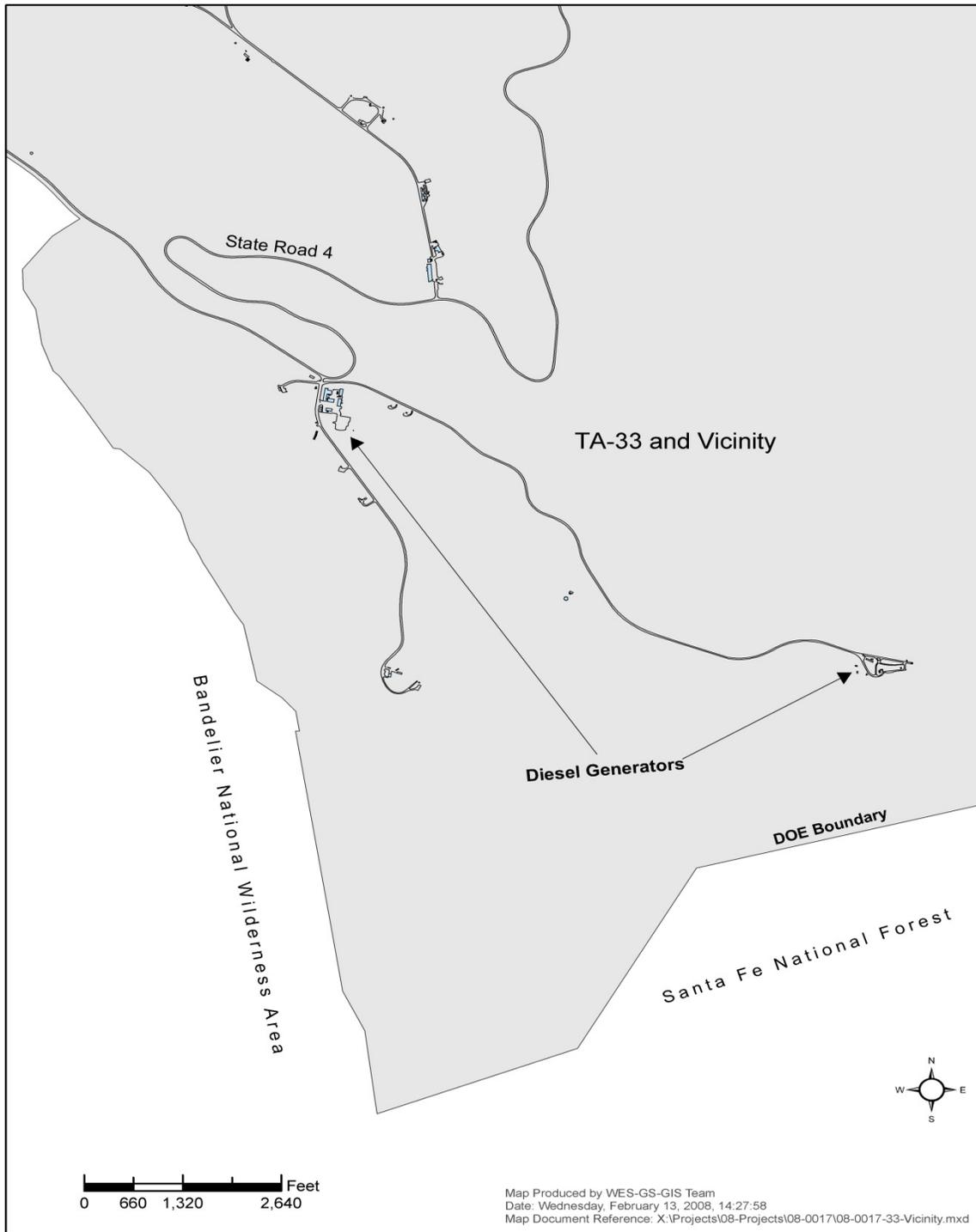
Existing P100-R1-M3 Permit Conditions – Internal Combustion Sources	Proposed Changes
<p>C. Hours of Operation and Emission Limits for Units TA-33-G-2 through -4</p> <p>Requirements: Units TA-33-G-2 through -4 are authorized to operate 500 hours per generator per calendar year. (NSR Permit 2195P, Specific Condition 1.b.) Units TA-33-G-2 through -4 shall each be certified to be in compliance with applicable non-road emission standards in 40 CFR 89. (NSR Permit 2195P, Specific Condition 1.c.)</p> <p>Monitoring: The permittee shall monitor the total hours of operation for each genset, Units TA-33-G-2 through -4, using a non-resettable hour meter.</p> <p>Recordkeeping: The permittee shall:</p> <ol style="list-style-type: none"> 1) Record the total hours operation of the gensets listed above, as indicated on the non-resettable hour meter. (NSR Permit 2195P, Specific Condition 4.a., revised) 2) Calculate and record the semi-annual emissions of all pollutants from each genset, Units TA-33-G-2 through -4. 3) Maintain a copy of the engine certification to the applicable non road emission standards in 40 CFR 89. (NSR Permit 2195P, Specific Condition 4.c.) <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>In Subsection B and C, clarify intent in Recordkeeping by replacing “all pollutants” with “criteria and hazardous air pollutants”.</p>
<p>D. Hours of Operation and Emission Limits for Units CMRR-GEN-1 through -3</p> <p>Requirements: Units CMRR-GEN-1 through -3 are authorized to operate 100 hours per generator per calendar year for maintenance checks and readiness testing.</p> <p>Monitoring: The permittee shall monitor the daily and calendar year total hours of operation for each genset, Units CMRR-GEN-1 through -3, using a non-resettable hour meter.</p> <p>Recordkeeping: The permittee shall:</p> <ol style="list-style-type: none"> 1) Maintain records of the total hours of operation for the gensets listed above on a semi-annual basis, as indicated on the non-resettable hour meter. 2) Calculate and record the annual emissions of all pollutants listed in Tables 102.A and 102.B from each genset, Units CMRR-GEN-1 through -3. <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>New emergency generator TA-48-GEN-1 should be added to Subsection D requirements which come from the stationary engine NSPS at Subpart IIII.</p>

Existing P100-R1-M3 Permit Conditions – Internal Combustion Sources	Proposed Changes				
<p>A1105 Fuel Sulfur Requirements – Internal Combustion</p> <p>A. CI-RICE – Subject to RICE NESHAP Subpart ZZZZ and Non-emergency > 300 hp</p> <table border="1" data-bbox="296 318 1583 683"> <tr> <td data-bbox="296 318 1583 391">Requirement: CI-RICE used at the facility shall combust only diesel fuel containing no more than 500 ppmw total sulfur.</td> </tr> <tr> <td data-bbox="296 391 1583 435">Monitoring: None.</td> </tr> <tr> <td data-bbox="296 435 1583 638">Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.</td> </tr> <tr> <td data-bbox="296 638 1583 683">Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: CI-RICE used at the facility shall combust only diesel fuel containing no more than 500 ppmw total sulfur.	Monitoring: None.	Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>No changes.</p>
Requirement: CI-RICE used at the facility shall combust only diesel fuel containing no more than 500 ppmw total sulfur.					
Monitoring: None.					
Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>A1106 20.2.61 NMAC Opacity – Internal Combustion</p> <p>A CI-RICE (except Units TA-33-G-2 through -4)</p> <table border="1" data-bbox="296 805 1583 1138"> <tr> <td data-bbox="296 805 1583 849">Requirement: All combustion units shall not exceed 20% opacity.</td> </tr> <tr> <td data-bbox="296 849 1583 987">Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year as qualified by the Section B108.D monitoring provisions. This requirement excludes Insignificant and Trivial Activities.</td> </tr> <tr> <td data-bbox="296 987 1583 1060">Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.</td> </tr> <tr> <td data-bbox="296 1060 1583 1138">Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: All combustion units shall not exceed 20% opacity.	Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year as qualified by the Section B108.D monitoring provisions. This requirement excludes Insignificant and Trivial Activities.	Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.	Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>No changes.</p>
Requirement: All combustion units shall not exceed 20% opacity.					
Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year as qualified by the Section B108.D monitoring provisions. This requirement excludes Insignificant and Trivial Activities.					
Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.					
Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.					

Existing P100-R1-M3 Permit Conditions – Internal Combustion Sources	Proposed Changes				
<p>B. CI-RICE (Units TA-33-G-2 through -4)</p> <table border="1" data-bbox="296 277 1583 643"> <tr> <td data-bbox="296 277 1583 321"> <p>Requirement: All combustion units shall not exceed 20% opacity.</p> </td> </tr> <tr> <td data-bbox="296 321 1583 493"> <p>Monitoring: During initial daily cold startup of each genset (Units TA-33-G-2 through -4), opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Corrective action shall be taken if opacity in excess of 20% is observed. Opacity measurements shall be reduced to one observation per year per genset whenever four (4) consecutive observations are 20% or less opacity. (NSR Permit 2195P, Specific Conditions 3.a.i and 3.a.ii, revised)</p> </td> </tr> <tr> <td data-bbox="296 493 1583 570"> <p>Recordkeeping: The permittee shall maintain records of all Method 9 observations and all corrective actions. (NSR Permit 2195P, Specific Condition 4.b., revised) Records shall be maintained in accordance with Section B109.</p> </td> </tr> <tr> <td data-bbox="296 570 1583 643"> <p>Reporting: The permittee shall report date, time, and results of all Method 9 observations and corrective actions. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </td> </tr> </table>	<p>Requirement: All combustion units shall not exceed 20% opacity.</p>	<p>Monitoring: During initial daily cold startup of each genset (Units TA-33-G-2 through -4), opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Corrective action shall be taken if opacity in excess of 20% is observed. Opacity measurements shall be reduced to one observation per year per genset whenever four (4) consecutive observations are 20% or less opacity. (NSR Permit 2195P, Specific Conditions 3.a.i and 3.a.ii, revised)</p>	<p>Recordkeeping: The permittee shall maintain records of all Method 9 observations and all corrective actions. (NSR Permit 2195P, Specific Condition 4.b., revised) Records shall be maintained in accordance with Section B109.</p>	<p>Reporting: The permittee shall report date, time, and results of all Method 9 observations and corrective actions. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
<p>Requirement: All combustion units shall not exceed 20% opacity.</p>					
<p>Monitoring: During initial daily cold startup of each genset (Units TA-33-G-2 through -4), opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Corrective action shall be taken if opacity in excess of 20% is observed. Opacity measurements shall be reduced to one observation per year per genset whenever four (4) consecutive observations are 20% or less opacity. (NSR Permit 2195P, Specific Conditions 3.a.i and 3.a.ii, revised)</p>					
<p>Recordkeeping: The permittee shall maintain records of all Method 9 observations and all corrective actions. (NSR Permit 2195P, Specific Condition 4.b., revised) Records shall be maintained in accordance with Section B109.</p>					
<p>Reporting: The permittee shall report date, time, and results of all Method 9 observations and corrective actions. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>					

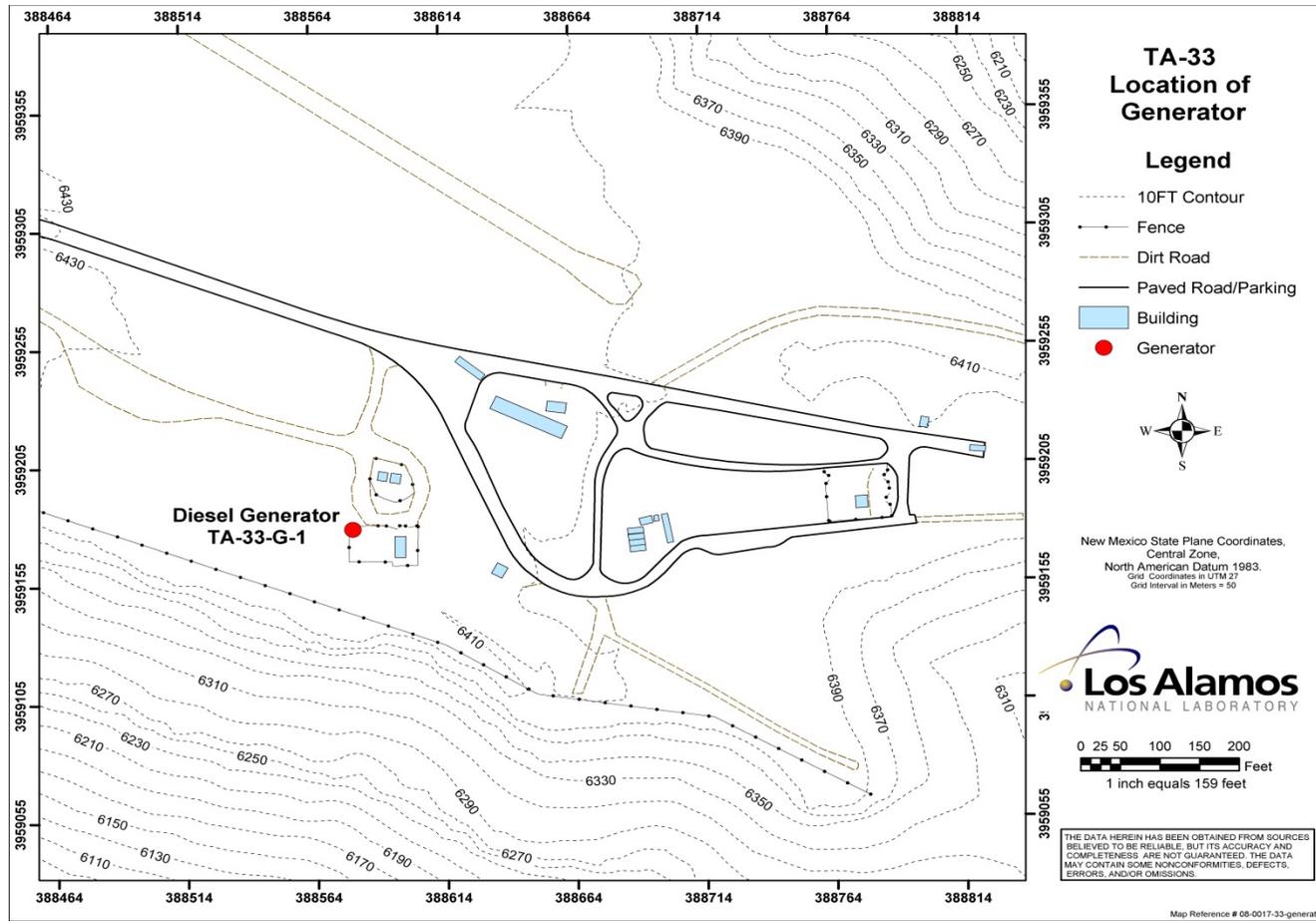
Existing P100-R1-M3 Permit Conditions – Internal Combustion Sources	Proposed Changes
<p>A1107 Other – Internal Combustion</p> <p>A. NSPS 40 CFR 60, Subpart IIII - General Requirements.</p> <p>Requirements: Any CI-RICE will be subject to 40 CFR 60, Subparts A and IIII if the source is constructed (ordered) and manufactured after the applicability dates in 40 CFR 60.4200 and is not otherwise exempt. Units CMRR-GEN-1 through -3 are subject to Subpart IIII according to 40 CFR 60.4200(a)(2). These engines shall comply with all requirements under Subpart IIII, including, but not limited to the following general requirements: The permittee shall install a non-resettable hour meter if one is not already installed (40 CFR 60.4209(a)). The permittee shall operate and maintain the stationary CI RICE and control device according to the manufacturer’s written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may change only those settings that are permitted by the manufacturer (40 CFR 60.4211(a)). Stationary CI RICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel shall use diesel fuel that meets, at a minimum, the following standards of 40 CFR 80.510(b) for nonroad diesel fuel (40 CFR 60.4207(b)): Sulfur content. (i) 15 ppm maximum for nonroad (NR) diesel fuel. Cetane index or aromatic content, as follows: (i) A minimum cetane index of 40; or (ii) A maximum aromatic content of 35 volume percent. Notifications are not required for these units according to 40 CFR 60.4214(b)(5).</p> <p>Monitoring: None.</p> <p>Recordkeeping: The permittee shall maintain the following records as applicable, all records required by 40 CFR 60, Subparts A and IIII, and in accordance with Section B109: Compliance with Requirement 2 shall be demonstrated by maintaining records of the maintenance conducted on the affected stationary CI RICE. Compliance with Requirement 3 shall be demonstrated by maintaining the test records, certification, or specification sheet provided by the fuel supplier.</p> <p>Reporting: The permittee shall submit reports described in Section A109, report as required by 40 CFR 60, Subparts A and IIII, and in accordance with Section B110.</p>	<p>New emergency generator TA-48-GEN-1 is subject to Subpart IIII and should be cited in Subsections A and B.</p>

Existing P100-R1-M3 Permit Conditions – Internal Combustion Sources	Proposed Changes				
<p>B. NSPS 40 CFR 60 Subpart IIII - Emission Standards at 40 CFR 60.4205(a) and (c).</p> <table border="1" data-bbox="296 277 1583 886"> <tr> <td data-bbox="296 277 1583 321">Requirement: Units CMRR-GEN-1 through -3 are subject to the emission standards in 40 CFR 60.4205.</td> </tr> <tr> <td data-bbox="296 321 1583 365">Monitoring: None.</td> </tr> <tr> <td data-bbox="296 365 1583 813"> <p>Recordkeeping: The permittee shall maintain the following records as applicable, all records required by 40 CFR 60, Subparts A and IIII, and in accordance with Section B109: The permittee shall demonstrate compliance with the emission standard according to one of the methods specified in 40 CFR 60.4211(b)(1) through (5) as follows:</p> <ol style="list-style-type: none"> 1) The engine shall be certified according to 40 CFR part 89 or 40 CFR 94, as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer’s specifications, or 2) Maintain records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this Subpart, or 3) Maintain records of engine manufacturer data indicating compliance with the standards, or 4) Maintain records of control device vendor data indicating compliance with the standards, or 5) Conduct an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212, as applicable. </td> </tr> <tr> <td data-bbox="296 813 1583 886">Reporting: The permittee shall submit reports described in Section A109, report as required by 40 CFR 60, Subparts A and IIII and in accordance with Section B110.</td> </tr> </table>	Requirement: Units CMRR-GEN-1 through -3 are subject to the emission standards in 40 CFR 60.4205.	Monitoring: None.	<p>Recordkeeping: The permittee shall maintain the following records as applicable, all records required by 40 CFR 60, Subparts A and IIII, and in accordance with Section B109: The permittee shall demonstrate compliance with the emission standard according to one of the methods specified in 40 CFR 60.4211(b)(1) through (5) as follows:</p> <ol style="list-style-type: none"> 1) The engine shall be certified according to 40 CFR part 89 or 40 CFR 94, as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer’s specifications, or 2) Maintain records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this Subpart, or 3) Maintain records of engine manufacturer data indicating compliance with the standards, or 4) Maintain records of control device vendor data indicating compliance with the standards, or 5) Conduct an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212, as applicable. 	Reporting: The permittee shall submit reports described in Section A109, report as required by 40 CFR 60, Subparts A and IIII and in accordance with Section B110.	
Requirement: Units CMRR-GEN-1 through -3 are subject to the emission standards in 40 CFR 60.4205.					
Monitoring: None.					
<p>Recordkeeping: The permittee shall maintain the following records as applicable, all records required by 40 CFR 60, Subparts A and IIII, and in accordance with Section B109: The permittee shall demonstrate compliance with the emission standard according to one of the methods specified in 40 CFR 60.4211(b)(1) through (5) as follows:</p> <ol style="list-style-type: none"> 1) The engine shall be certified according to 40 CFR part 89 or 40 CFR 94, as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer’s specifications, or 2) Maintain records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this Subpart, or 3) Maintain records of engine manufacturer data indicating compliance with the standards, or 4) Maintain records of control device vendor data indicating compliance with the standards, or 5) Conduct an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212, as applicable. 					
Reporting: The permittee shall submit reports described in Section A109, report as required by 40 CFR 60, Subparts A and IIII and in accordance with Section B110.					
<p>C. RICE MACT 40 CFR 63, Subpart ZZZZ</p> <table border="1" data-bbox="296 967 1583 1365"> <tr> <td data-bbox="296 967 1583 1143">Requirement: Any RICE at the facility will be subject to 40 CFR 63, Subparts A and ZZZZ if the source meets the applicability criteria in 40 CFR 63.6585 and 63.6590 and not otherwise exempt. The permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart ZZZZ. Unit No. TA-33-G-1 is subject to this requirement and shall be in compliance with Subpart ZZZZ on or before May 3, 2014 rather than the initial compliance date specified in the Subpart.</td> </tr> <tr> <td data-bbox="296 1143 1583 1219">Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.</td> </tr> <tr> <td data-bbox="296 1219 1583 1295">Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not limited to 63.6655 and 63.10.</td> </tr> <tr> <td data-bbox="296 1295 1583 1365">Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10.</td> </tr> </table>	Requirement: Any RICE at the facility will be subject to 40 CFR 63, Subparts A and ZZZZ if the source meets the applicability criteria in 40 CFR 63.6585 and 63.6590 and not otherwise exempt. The permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart ZZZZ. Unit No. TA-33-G-1 is subject to this requirement and shall be in compliance with Subpart ZZZZ on or before May 3, 2014 rather than the initial compliance date specified in the Subpart.	Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.	Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not limited to 63.6655 and 63.10.	Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10.	
Requirement: Any RICE at the facility will be subject to 40 CFR 63, Subparts A and ZZZZ if the source meets the applicability criteria in 40 CFR 63.6585 and 63.6590 and not otherwise exempt. The permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart ZZZZ. Unit No. TA-33-G-1 is subject to this requirement and shall be in compliance with Subpart ZZZZ on or before May 3, 2014 rather than the initial compliance date specified in the Subpart.					
Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.					
Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not limited to 63.6655 and 63.10.					
Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10.					



Location of Diesel Generators at TA-33.

Figure 2.6-2 Location of Diesel Generators at TA-33



Emission Unit: TA-33-G-1, Diesel Generator.
Emission Units: TA-33-G-2, TA-33-G-3, TA-33-G-4 are mobile.

Figure 2.6.3 Plot Plan for Emission Unit TA-33-G-1 (Emission Units TA-33-G-2, TA-33-G-3, TA-33-G-4 are portable)

A topographic map showing the general location of the TA-55 CMRR-RLUOB facility

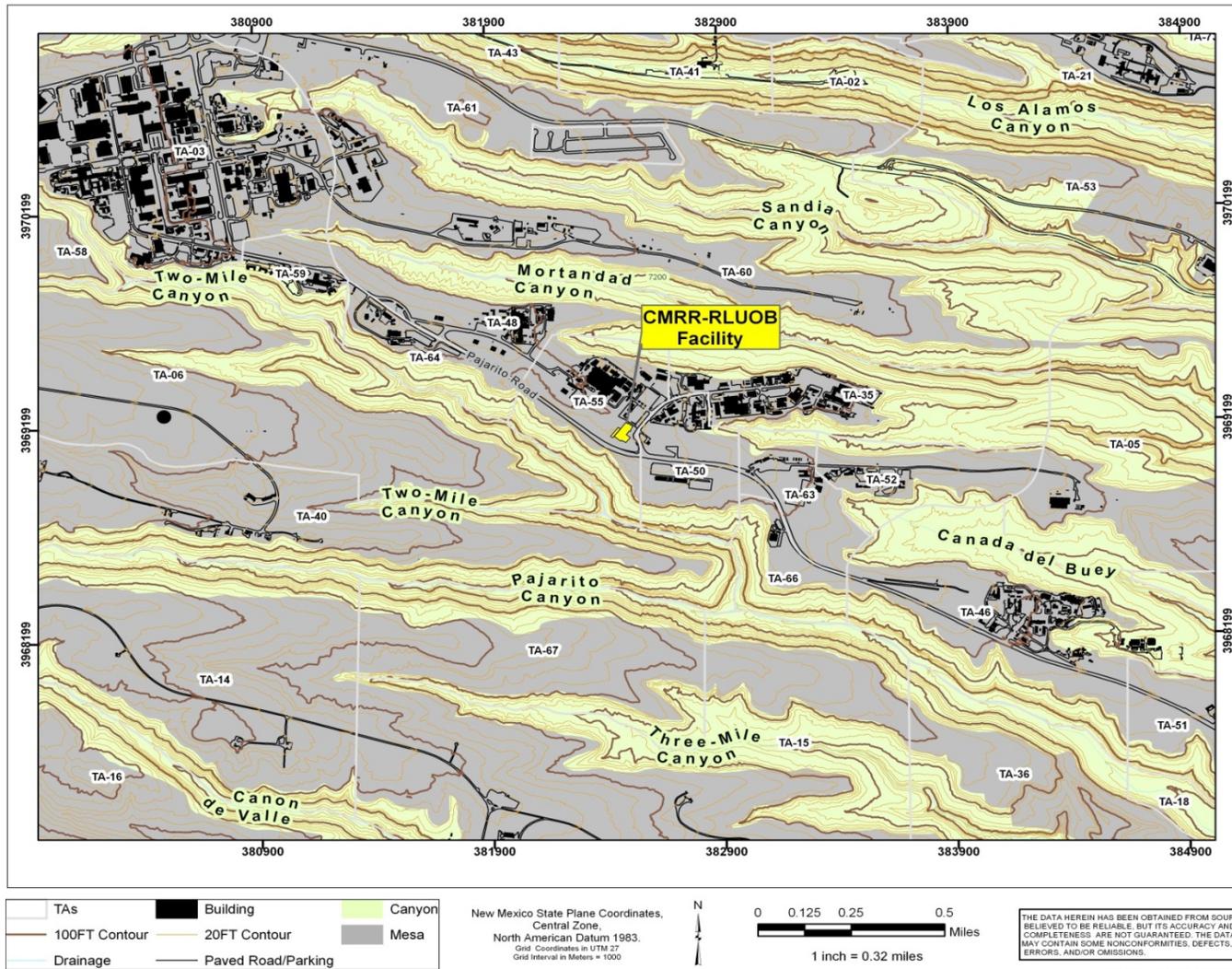


Figure 2.6-4 Location of Generators at CMRR-RLUOB

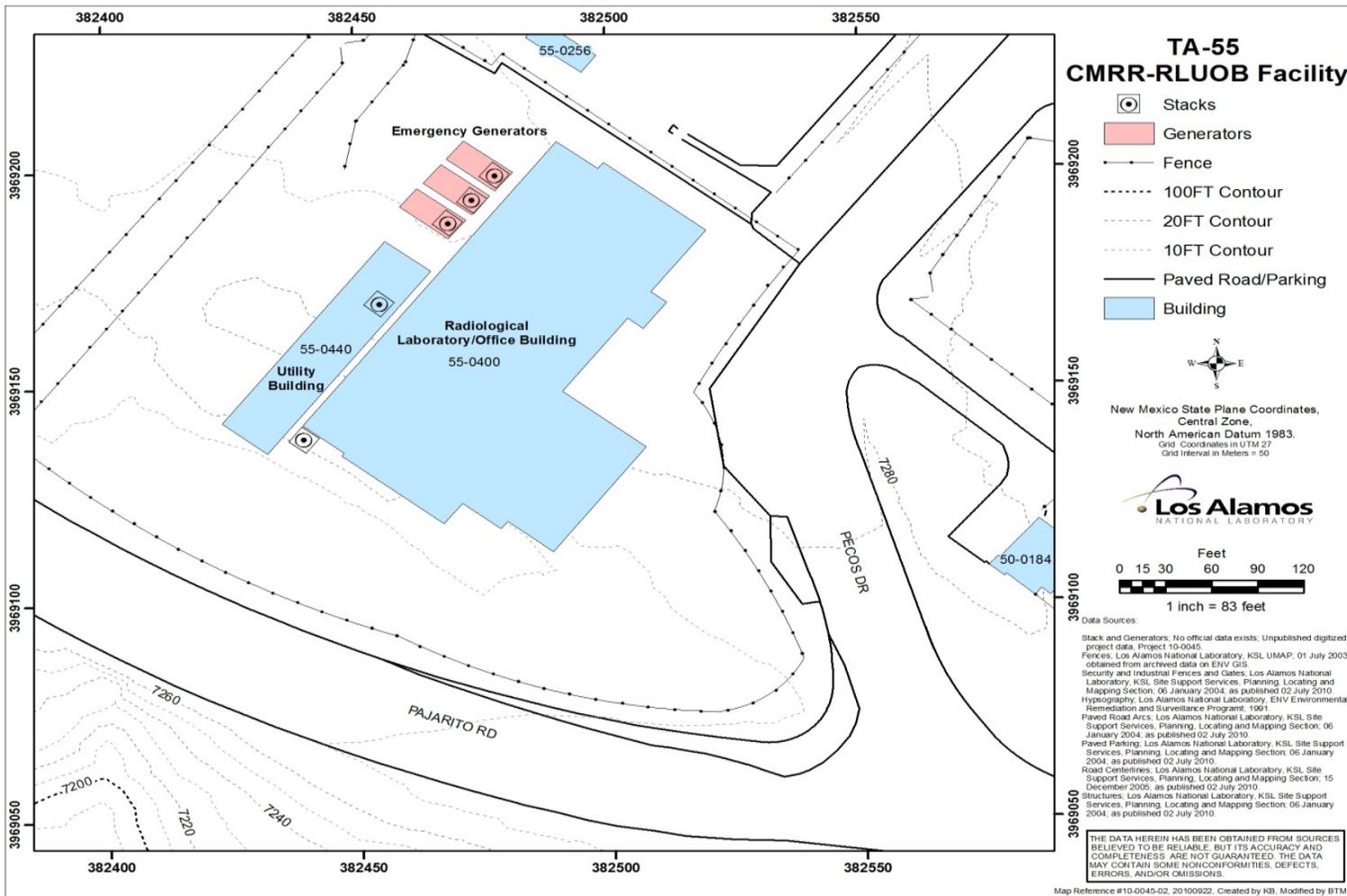
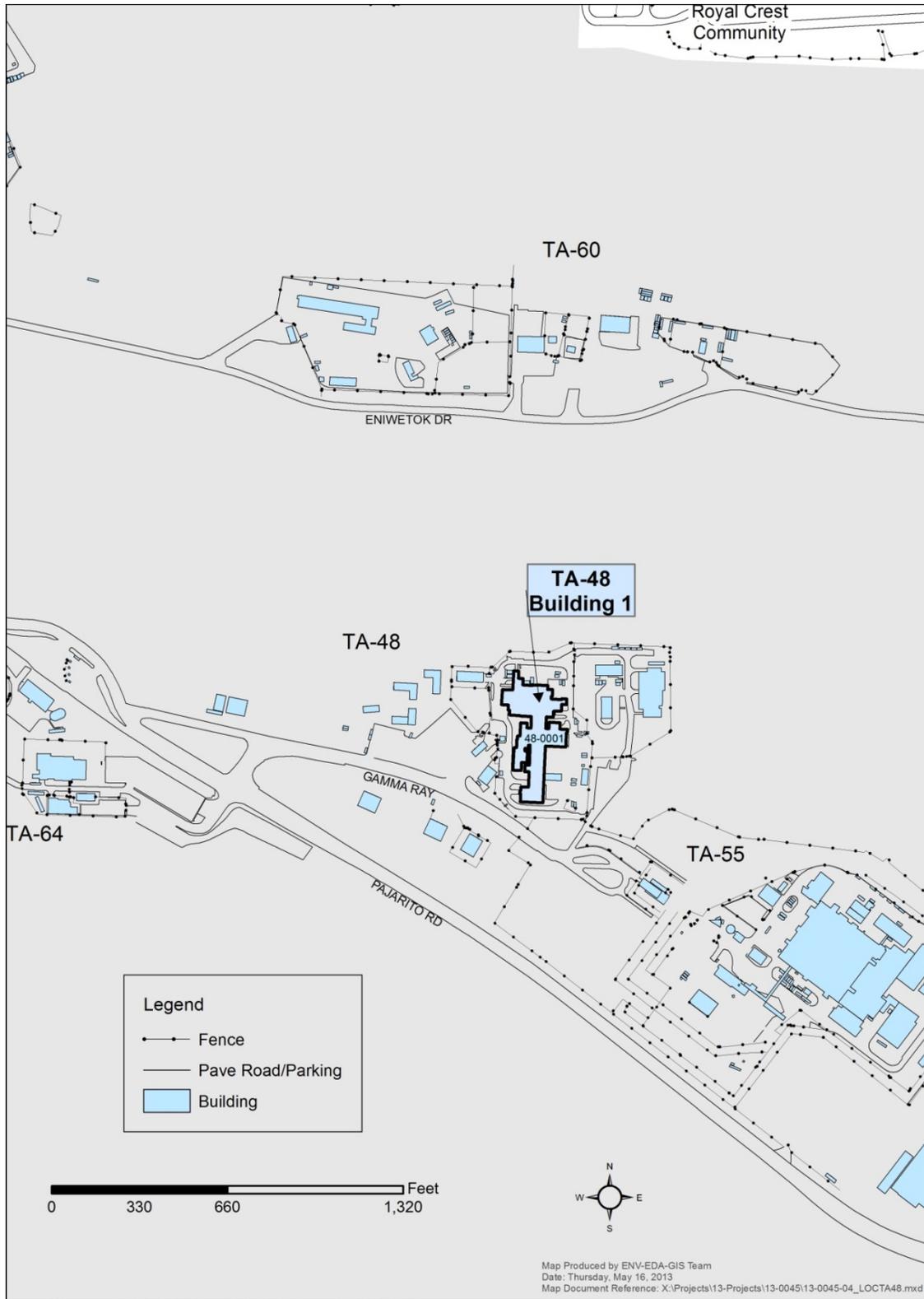


Figure 2.6-5 Plot Plan for Generators CMRR-GEN 1 through 3



Location of Emission Unit TA-48-GEN-1.

Figure 2.6-6 Location of Generator TA-48-GEN-1

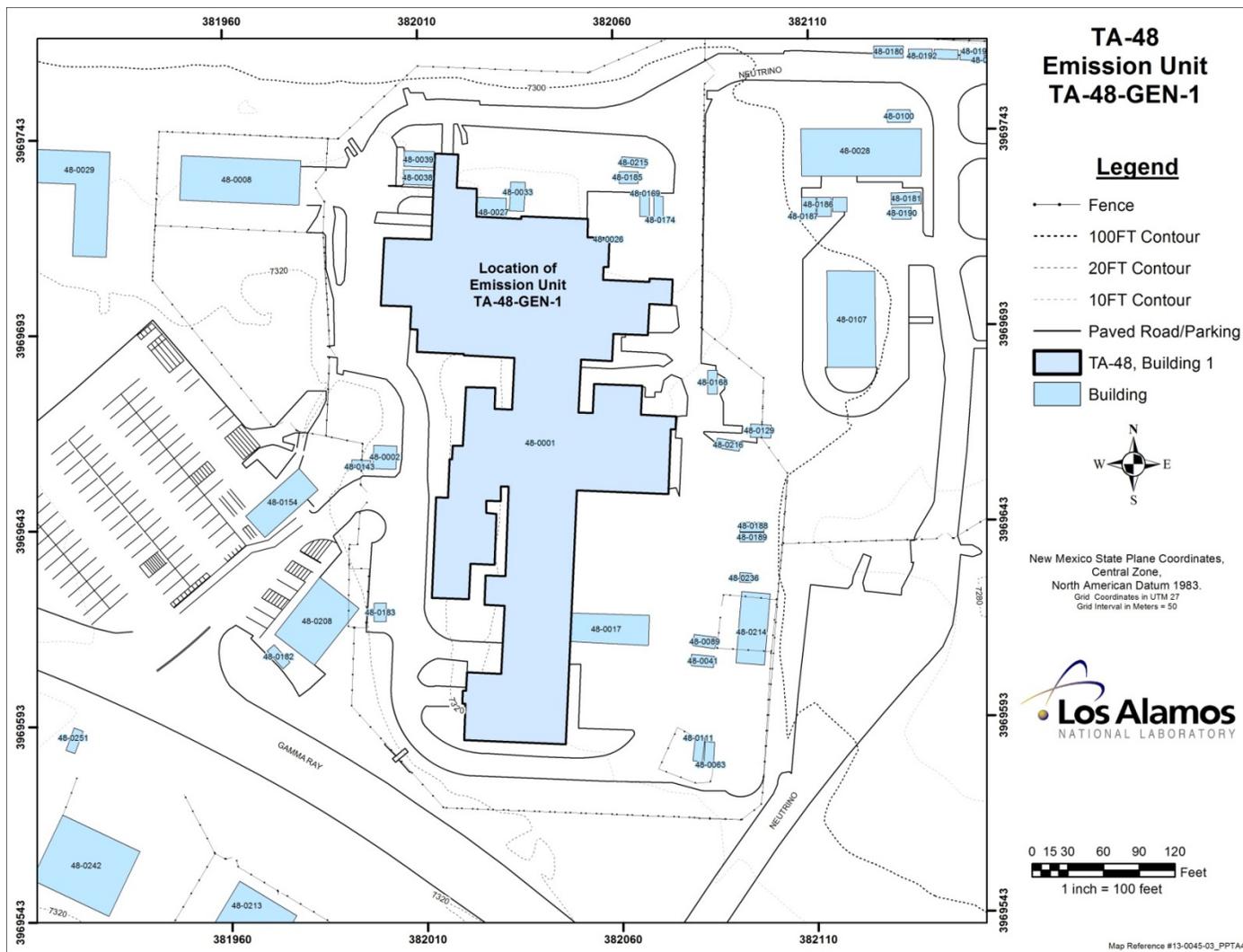


Figure 2.6-7 Plot Plan for Generator TA-48-GEN-1

2.7 Data Disintegrator

2.7.1 General Description of Source Category

The data disintegrator was installed at TA-52-11 in July of 2004. This unit was permitted for installation under NSR Air Quality Permit No. 2195-H issued by NMED on October 22, 2003. The data disintegrator is capable of data destruction of paper, microfiche, film, plastic magnetic tape, and compact discs.

Paper materials suspended in the exhaust are processed through a cyclone separator and cloth tube filters. The paper particles captured by the cyclone separator and cloth tube filters are collected in containers located outside of the facility. The containers are then sent to the county regional landfill for disposal of the material. Microfiche, film, plastic magnetic tape, and compact disc material do not enter the external exhaust system and are instead captured in a separate collection system contained inside the building. This material is sent out for metals recycling and disposal.

2.7.2 Operating Schedule

The disintegrator is permitted to run 8,760 hours per year. However, the actual operating hours are more accurately characterized by a schedule of three hours per day, and three days per week.

2.7.3 Process Flow Diagram

A process flow diagram for the data disintegrator is provided in Figure 2.7-1.

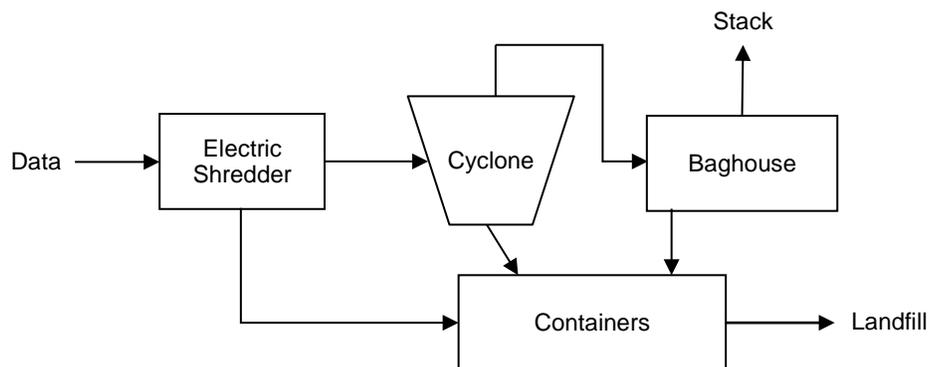


Figure 2.7-1 Process Flow Diagram for Data Disintegrator

2.7.4 Emissions

Data disintegrator operation is a source of particulate air emissions only. Emission estimates are based on manufacturer’s data regarding particle size produced by the data disintegrator and efficiencies of the pollution control devices. The cyclone provides 75% control efficiency and the cloth tube filters provide 95% efficiency for a combined total removal efficiency of 98.75%. Emission estimates assume 15% of the material processed will remain suspended in the exhaust system prior to the control system. All calculations for emission estimates are shown in the Data Disintegrator worksheet within the enclosed UA2 permit application form. Emission estimates are shown below in Table 2.7-1.

Table 2.7-1 Emissions Estimates from the Data Disintegrator

	Particulate Matter (TSP, PM ₁₀ and PM _{2.5})	
	lb/hr	tpy
Controlled ¹	2.3	9.9

¹ Allowable emission rates from Permit P100-R1-M1 and NSR Permit 2195H.

The controlled emissions, 2.3 pounds per hour (9.9 tpy), of PM are based on continuous operations (8,760 hrs/yr) and maximum capacity. Actual emissions are less than these values. PM₁₀ and PM_{2.5} estimates are assumed to be equal to TSP which results in an over-estimate for these particle size ranges.

2.7.5 Emissions Control Equipment

The data disintegrator exhaust system is equipped with both a 10-horsepower cyclone separator and cloth tube filters to control particulate emissions. The vendor estimates the cyclone to provide 75% control efficiency and the cloth tube filters to provide 95% efficiency both of which are in the normal range for this type of control equipment.

2.7.6 Operational Plan

Emissions at startup and shutdown are not expected to differ from those during normal operations. Particulate matter emissions from operations having collection systems equipped with filters could be increased by a malfunction of the collection system (e.g., a tear in the filter). If there is any indication that the control systems are not functioning properly, the operation will be discontinued and the cause of the indication investigated.

2.7.7 Applicable Requirements

All existing applicable requirements within Permit P100-R1-M3 are shown in Table 2.7-2 together with any requested changes.

The data disintegrator was assessed to determine potential applicability of the Compliance Assurance Monitoring (CAM) rule at 40 CFR Part 64. Section 64.5 (b) of the rule requires this assessment as part of an application for renewal of a Title V permit. The CAM rule is applicable if: 1) the emission source is at a Title V source; 2) a control device is used to comply with an emission standard; and 3) the pre-control potential to emit of the controlled pollutant are equal to or greater than 100 tons per year. The pre-control device emission estimate for particulate matter shows the data disintegrator has the potential to trigger applicability of the rule.

LANL is requesting a new condition that will limit the total annual number of boxes of paper material processed. Without a process limit, the calculated maximum emission of pre-control device particulate matter exceeds 100 tons per year which is the applicability threshold for the rule. As allowed under the CAM rule, this request is being made to limit potential pre-control device emissions rather than impose additional monitoring requirements on the operation.

The requested process limit is 25, 000 boxes of paper material per year. This equates to an annual pre-control device particulate matter emission rate of 84.4 tons per year which is below the CAM rule threshold. Note that the number of boxes processed in the last five years starting with 2012 were 1965, 1477, 1054, 1068, and 7382. Actual uncontrolled emissions have never approached or exceeded the CAM applicability threshold. Calculations supporting this request are shown in the Data Disintegrator worksheet within the enclosed UA2 permit application form.

2.7.8 Location and Plot Plan for Data Disintegrator

A map showing the location and a plot plan for the data disintegrator are shown in Figures 2.7-2 and 2.7-3.

Table 2.7-2 Existing Permit Conditions for the Data Disintegrator and Proposed Changes

Existing P100-R1-M3 Permit Conditions – Data Disintegrator						Proposed Changes												
<p>A1200 Regulated Sources – Data Disintegrator</p> <p>A. Table 1200.A lists all of the process equipment authorized for this source category.</p> <p>Table 1200.A: Regulated Sources List</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>Source Description</th> <th>Manufacturer</th> <th>Model No./ Serial No.</th> <th>Manufacture Date</th> <th>Capacity</th> </tr> </thead> <tbody> <tr> <td>TA-52-11</td> <td>Data Disintegrator/ Industrial Shredder</td> <td>Security Engineered Machinery</td> <td>1424/ 11892</td> <td>9/2002</td> <td>1200 lb/hr</td> </tr> </tbody> </table>						Unit No.	Source Description	Manufacturer	Model No./ Serial No.	Manufacture Date	Capacity	TA-52-11	Data Disintegrator/ Industrial Shredder	Security Engineered Machinery	1424/ 11892	9/2002	1200 lb/hr	No changes.
Unit No.	Source Description	Manufacturer	Model No./ Serial No.	Manufacture Date	Capacity													
TA-52-11	Data Disintegrator/ Industrial Shredder	Security Engineered Machinery	1424/ 11892	9/2002	1200 lb/hr													
<p>A1201 Control Equipment – Data Disintegrator</p> <p>A. Table 1201.A lists all of the pollution control equipment required for the applicable regulated equipment in this source category. Each emission point is identified by the same number that was assigned to it in the permit application.</p> <p>Table 1201.A: Control Equipment List</p> <table border="1"> <thead> <tr> <th>Control Equipment Unit No./Location¹</th> <th>Control Description</th> <th>Efficiency</th> <th>Pollutant being controlled</th> </tr> </thead> <tbody> <tr> <td>TA-52-11</td> <td>Cyclone and cloth tube filters</td> <td>98.75%</td> <td>TSP/PM10</td> </tr> </tbody> </table> <p>¹Control for unit number refers to a unit number from the Regulated Sources List</p>						Control Equipment Unit No./Location ¹	Control Description	Efficiency	Pollutant being controlled	TA-52-11	Cyclone and cloth tube filters	98.75%	TSP/PM10	No changes.				
Control Equipment Unit No./Location ¹	Control Description	Efficiency	Pollutant being controlled															
TA-52-11	Cyclone and cloth tube filters	98.75%	TSP/PM10															
<p>A1202 Emission Limits – Data Disintegrator</p> <p>A. Table 1202.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; NSR Permit 2195H).</p> <p>Table 1202.A: Allowable Emissions</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>TSP pph</th> <th>TSP tpy</th> <th>PM₁₀ pph</th> <th>PM₁₀ tpy</th> </tr> </thead> <tbody> <tr> <td>TA-52-11</td> <td>2.3</td> <td>9.9</td> <td>2.3</td> <td>9.9</td> </tr> </tbody> </table> <p>¹PM10 and TSP emissions limits are after controls.</p>						Unit No.	TSP pph	TSP tpy	PM ₁₀ pph	PM ₁₀ tpy	TA-52-11	2.3	9.9	2.3	9.9	No changes.		
Unit No.	TSP pph	TSP tpy	PM ₁₀ pph	PM ₁₀ tpy														
TA-52-11	2.3	9.9	2.3	9.9														
<p>A1203 Applicable Requirements – Data Disintegrator</p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 1203.A.</p> <p>Table 1203.A: Applicable Requirements</p> <table border="1"> <thead> <tr> <th>Applicable Requirements</th> <th>Federally Enforceable</th> <th>Unit No.</th> </tr> </thead> <tbody> <tr> <td>NSR Permit No: 2195H</td> <td>X</td> <td>TA-52-11</td> </tr> </tbody> </table>						Applicable Requirements	Federally Enforceable	Unit No.	NSR Permit No: 2195H	X	TA-52-11	No changes.						
Applicable Requirements	Federally Enforceable	Unit No.																
NSR Permit No: 2195H	X	TA-52-11																

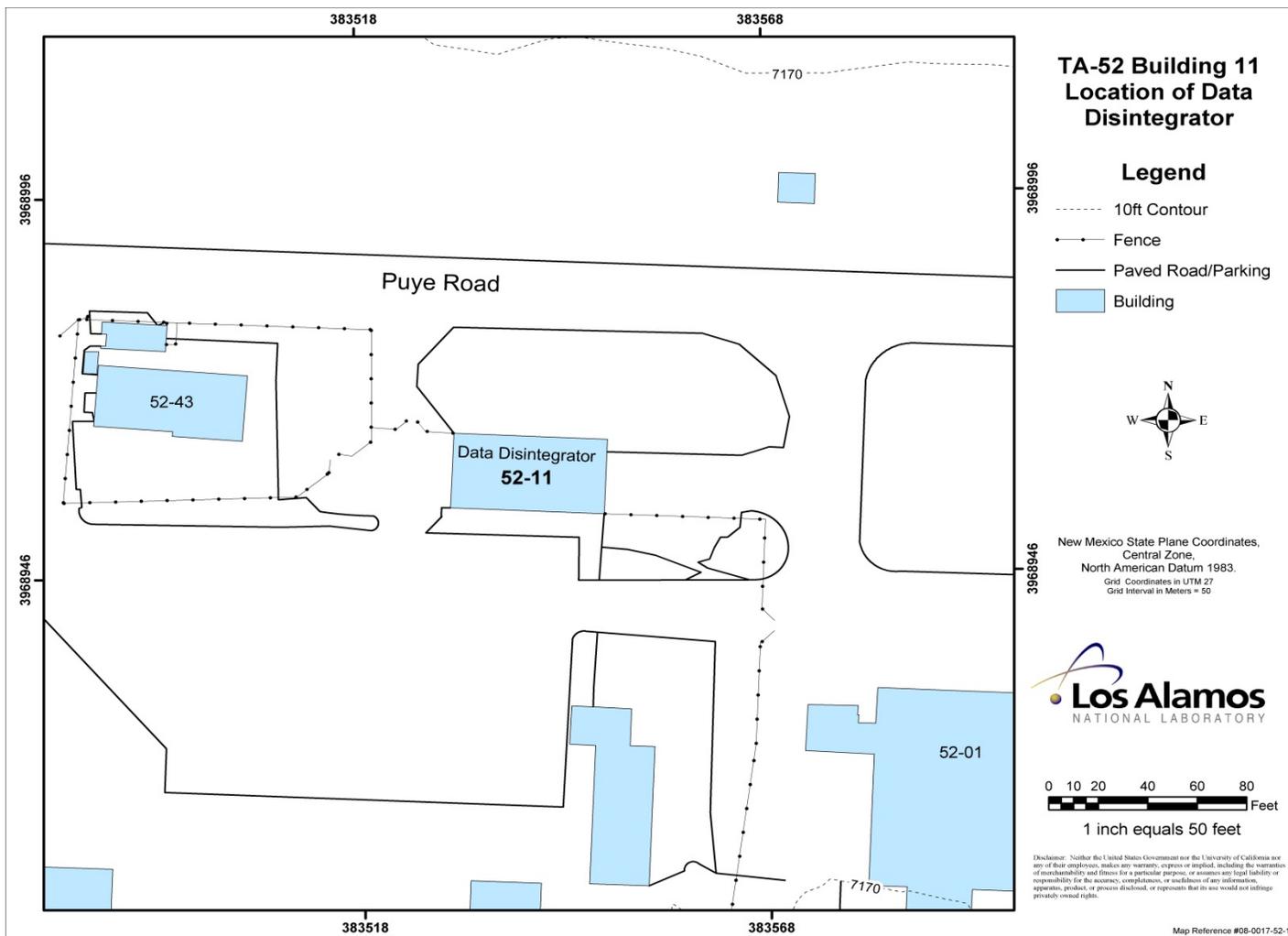
Existing P100-R1-M3 Permit Conditions – Data Disintegrator	Proposed Changes				
<p>A1204 Operational Limitations – Data Disintegrator</p> <p>A. The Data Disintegrator source category is authorized to operate at any time of the day or night on any day of the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.</p>	<p>Add new Subsection B to limit boxes of paper material processed per year to 25,000, rolling 12-month total. This request is to limit potential emissions to below the level for Part 64 CAM applicability. In Monitoring, the number of boxes processed on a monthly basis shall be recorded. In Recordkeeping, records shall be kept of the rolling 12-month total number of boxes.</p>				
<p>A1205 Fuel Sulfur Requirements – Data Disintegrator – Not Required</p>	<p>No changes</p>				
<p>A1206 20.2.61 NMAC Opacity – Data Disintegrator – Not Required</p>					
<p>A1207 Other – Data Disintegrator</p> <p>A. Emission calculations (Data Disintegrator)</p> <table border="1" data-bbox="296 979 1583 1344"> <tr> <td data-bbox="296 979 1583 1057"> <p>Requirement: The permittee shall calculate Data Disintegrator emissions based on the records of the number of boxes of media that is destroyed.</p> </td> </tr> <tr> <td data-bbox="296 1057 1583 1162"> <p>Monitoring: The permittee shall monitor the quantity of media destroyed on a monthly basis. The total weight shall be based on a previously determined average box weight. This average weight determination shall be maintained as part of the records for this facility.</p> </td> </tr> <tr> <td data-bbox="296 1162 1583 1300"> <p>Recordkeeping: The permittee shall calculate the actual emissions rate (tons per reporting period) for the emission units listed in Table 1200.A on a semi-annual basis. The emission rate in tons per year shall be calculated by summing the emissions from the previous reporting period with the current period. Records shall be maintained in accordance with Section B109.</p> </td> </tr> <tr> <td data-bbox="296 1300 1583 1344"> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </td> </tr> </table>	<p>Requirement: The permittee shall calculate Data Disintegrator emissions based on the records of the number of boxes of media that is destroyed.</p>	<p>Monitoring: The permittee shall monitor the quantity of media destroyed on a monthly basis. The total weight shall be based on a previously determined average box weight. This average weight determination shall be maintained as part of the records for this facility.</p>	<p>Recordkeeping: The permittee shall calculate the actual emissions rate (tons per reporting period) for the emission units listed in Table 1200.A on a semi-annual basis. The emission rate in tons per year shall be calculated by summing the emissions from the previous reporting period with the current period. Records shall be maintained in accordance with Section B109.</p>	<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>No changes.</p>
<p>Requirement: The permittee shall calculate Data Disintegrator emissions based on the records of the number of boxes of media that is destroyed.</p>					
<p>Monitoring: The permittee shall monitor the quantity of media destroyed on a monthly basis. The total weight shall be based on a previously determined average box weight. This average weight determination shall be maintained as part of the records for this facility.</p>					
<p>Recordkeeping: The permittee shall calculate the actual emissions rate (tons per reporting period) for the emission units listed in Table 1200.A on a semi-annual basis. The emission rate in tons per year shall be calculated by summing the emissions from the previous reporting period with the current period. Records shall be maintained in accordance with Section B109.</p>					
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>					

Existing P100-R1-M3 Permit Conditions – Data Disintegrator	Proposed Changes				
<p>B. Cyclone/Cloth Tube Filters (Data Disintegrator)</p> <table border="1" data-bbox="296 277 1583 545"> <tr> <td data-bbox="296 277 1583 354">Requirement: The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer’s recommendations. (NSR Permit 2195H, Specific Condition 1.d.)</td> </tr> <tr> <td data-bbox="296 354 1583 396">Monitoring: N/A</td> </tr> <tr> <td data-bbox="296 396 1583 505">Recordkeeping: The permittee shall maintain adequate records on site to demonstrate compliance with manufacturer’s recommended repair and maintenance schedules for the cyclone and the cloth tube filter(s). (NSR Permit 2195H, Specific Condition 4.a.) Records shall be maintained in accordance with Section B109.</td> </tr> <tr> <td data-bbox="296 505 1583 545">Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer’s recommendations. (NSR Permit 2195H, Specific Condition 1.d.)	Monitoring: N/A	Recordkeeping: The permittee shall maintain adequate records on site to demonstrate compliance with manufacturer’s recommended repair and maintenance schedules for the cyclone and the cloth tube filter(s). (NSR Permit 2195H, Specific Condition 4.a.) Records shall be maintained in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
Requirement: The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer’s recommendations. (NSR Permit 2195H, Specific Condition 1.d.)					
Monitoring: N/A					
Recordkeeping: The permittee shall maintain adequate records on site to demonstrate compliance with manufacturer’s recommended repair and maintenance schedules for the cyclone and the cloth tube filter(s). (NSR Permit 2195H, Specific Condition 4.a.) Records shall be maintained in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>C. Compliance Testing (Data Disintegrator)</p> <table border="1" data-bbox="296 628 1583 896"> <tr> <td data-bbox="296 628 1583 769">Requirement: If any compliance testing is required, it shall be conducted in accordance with EPA Reference Methods 1 through 4, Method 5 for TSP, and conducted in accordance with 450 CFR 60, Appendix A. For combined TSP and PM10, testing shall be in accordance with 40 CFR 51, Appendix M, Method 201. Alternative test method(s) may be used if the Department approves the change. (NSR Permit 2195H, Specific Condition 6.b., revised)</td> </tr> <tr> <td data-bbox="296 769 1583 812">Monitoring: N/A</td> </tr> <tr> <td data-bbox="296 812 1583 854">Recordkeeping: The permittee shall maintain records in accordance with Section B109.</td> </tr> <tr> <td data-bbox="296 854 1583 896">Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: If any compliance testing is required, it shall be conducted in accordance with EPA Reference Methods 1 through 4, Method 5 for TSP, and conducted in accordance with 450 CFR 60, Appendix A. For combined TSP and PM10, testing shall be in accordance with 40 CFR 51, Appendix M, Method 201. Alternative test method(s) may be used if the Department approves the change. (NSR Permit 2195H, Specific Condition 6.b., revised)	Monitoring: N/A	Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
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Location of Data Disintegrator at TA-52.

Figure 2.7-2 Location of Data Disintegrator at TA-52



Emission Unit: TA-52-11, Data Disintegrator.

Figure 2.7-3 Plot Plan for Emission Unit TA-52-11, Data Disintegrator

2.8 Power Plant at TA-3 (TA-3-22)

2.8.1 General Description of Source Category

The TA-3 Power Plant provides space heating to most of the buildings at TA-3. Steam produced is also used for process needs and to produce electricity in one 17-MW and two 5-MW steam turbine generators. The plant consists of three dual-fuel boilers with natural gas being the primary fuel and No. 2 fuel oil available for use as a standby fuel. Each boiler has a nameplate maximum heat input capacity of 210 MMBtu/hr. Because LANL is located at a high elevation, the boilers do not operate at nameplate capacity. The maximum heat input capacity, derated for altitude, is calculated to be 178.5 MMBtu/hr. This reflects a 15% decrease in input rating. Two of the boilers were manufactured by Edgemoor Iron Works and installed in 1950. The third boiler was manufactured by Union Iron Works and installed in 1951.

In July 2004, an NSR permit for a 32-MW simple-cycle natural gas combustion turbine was issued by the NMED. The turbine, which runs solely on natural gas, has a design capacity of 27 MW at the average temperature and altitude for LANL. The turbine was manufactured by Rolls-Royce and started operation in September 2007.

2.8.2 Operating Schedule

The plant operates 24 hours per day and 7 days per week. Normally, only two boilers are operated simultaneously, one of which is on hot standby and the other is running at partial capacity. Under maximum operating conditions, such as during peak generation of electricity, the third boiler can be brought on-line. The simple-cycle combustion turbine is also used to ensure that electric power is available to LANL during periods of peak demand. When in operation, the turbine operates at 80 to 100% load except for minimal time during startup and shutdown.

2.8.3 Process Flow Diagram

A process flow diagram for the TA-3 Power Plant is presented in Figure 2.8-1.

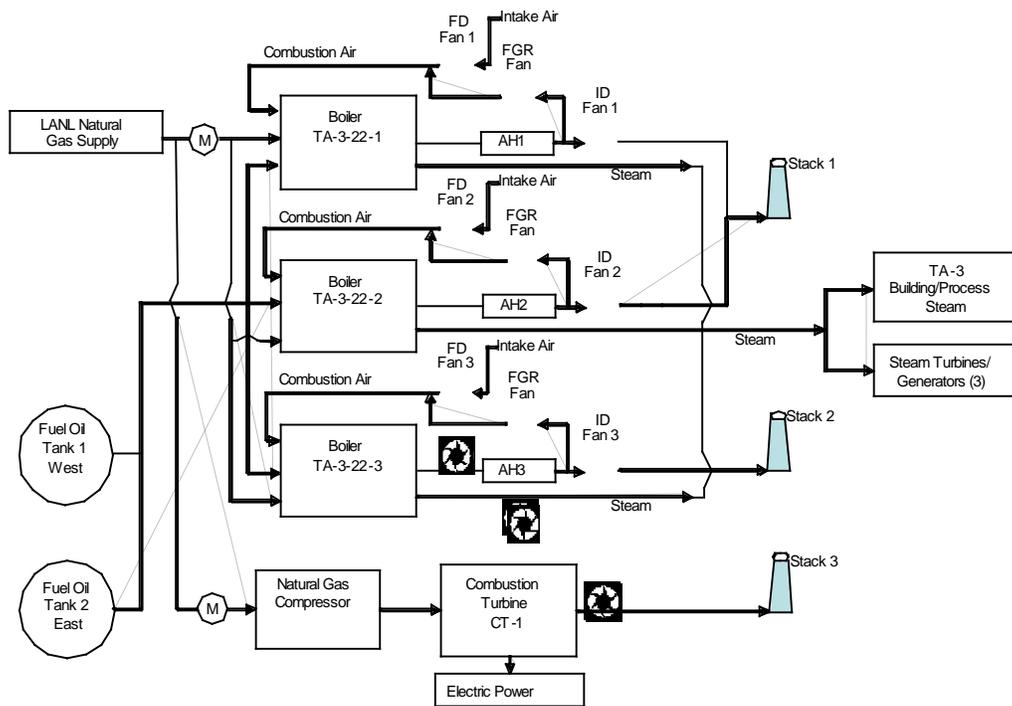


Figure 2.8-1 Process flow diagram for TA-3 Power Plant

2.8.4 Emissions

Combustion of natural gas and fuel oil at the plant results in emissions of criteria pollutants (NO_x, CO, SO_x, PM, VOCs) and small quantities of HAPs. The three boilers as a group and the combustion turbine have annual fuel restrictions in Permit P100-R1-M1 which limit emissions. Annual emission estimates for criteria pollutants are shown below in Table 2.8-. All calculations are shown within the included UA2 permit form within the Power Plant worksheet.

Table 2.8-1 Criteria Pollutant Emission Estimates for the TA-3 Power Plant¹

Unit	PM (tpy)	PM ₁₀ (tpy)	PM _{2.5} (tpy)	NO _x (tpy)	CO (tpy)	VOC (tpy)	SO _x (tpy)
Combined Boilers	4.7	4.4	4.2	31.5	21.5	2.8	4.9
Combustion Turbine TA-3-22 CT-1	4.8	4.8	4.8	59.4	72.3	1.5	4.2

¹ Emission estimates assume 100% of allowable natural gas and fuel are combusted.

HAP emission estimates are shown in Table 2.8-2. Estimated emissions were calculated based on the maximum fuel usage allowed under Permit P100-R1-M3.

Table 2.8-2 HAP Emission Estimates for the TA-3 Power Plant

Fuel Type	Total HAP (tpy)
Boilers - Natural Gas	0.9
Boilers - Fuel Oil	0.015
Combustion Turbine – Natural Gas	0.7
Total	1.7

2.8.5 Emissions Control Equipment

The primary air pollutant emitted from the TA-3 Power Plant is NO_x. The FGR system¹ was installed in 2002 to reduce the amount of NO_x emitted from the boilers. Approximately 64% of NO_x emissions are reduced by the FGR control system. In the FGR system, a portion of exhaust flue gas is recycled and mixed with combustion air before being fed to a burner. Combustion products in the recycled flue gas act as inerts or diluents during combustion of the fuel/air mixture and suppress NO_x formation primarily by reducing combustion temperatures.

NO_x emissions from the combustion turbine are controlled by a pre-mix, lean-burn series staged combustion system. This dry low-NO_x control technology, called Dry Low Emission (DLE), will lower the combustion turbine NO_x emissions by approximately 70%. Lean combustion involves increasing the air-to-fuel ratio of the mixture so that the peak and average temperatures within the combustor will be less than that of the stoichiometric mixture, thus suppressing thermal NO_x formation.

2.8.6 Operational Plan

The power plant boilers are controlled by both manual and automated systems. All systems are continually monitored, 24 hours a day, in the plant control center. Because the plant is continually monitored, routine startup and shutdown emissions are not expected to differ substantially from regular

operating emissions. The units have a “dual fuel” capability, using both natural gas and No. 2 fuel oil. The primary fuel is natural gas and fuel oil is used as a back-up fuel in the case where the natural gas supply is unavailable. The boilers are periodically tested using fuel oil to demonstrate their operational readiness and to train operators on the fuel oil use procedure. When fuel oil is used during a calendar quarter, opacity is measured during steady state operation over a 10-minute period by an EPA Method 9 certified opacity reader. If visible emissions do not decline over a short period of time, the boiler operation will be aborted and contributing factor identified. Routine and preventive maintenance are regularly performed on the boilers.

Emissions from the startup and shutdown of the combustion turbine generator are expected to be less than or equal to those during normal operations. The turbine uses natural gas as a fuel and has a system incorporated into its design to reduce emissions. The system is called Dry Low Emission (DLE) technology. Because this technology is an integral part of the system, there is no expectation of malfunction or increased emissions. If a malfunction of the turbine is identified, the plant operator will take whatever actions are required to remedy the issue. The cause, along with all actions taken to resolve it, will be recorded and reported as required. Routine and preventive maintenance are performed as recommended by the equipment manufacturer.

2.8.7 Applicable Requirements

The existing applicable requirements within Permit P100-R1-M3 that apply to the TA-3 Power Plant, together with recommended changes, are listed in Table 2.8-3.

2.8.8 Location and Plot Plan for the Power Plant at TA-3.

The location and plot plan for the Power Plant at TA-3 can be found in Figures 2.8-2 and 2.8-3.

Table 2.8-3 Existing Permit Conditions for the TA-3 Power Plant and Proposed Changes

Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant						Proposed Changes																														
<p>A1300 Regulated Sources – TA-3 Power Plant</p> <p>A. Table 1300.A lists all of the process equipment authorized for this source category.</p> <p>Table 1300.A: Regulated Sources List</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>Source Description</th> <th>Manufacturer</th> <th>Model No./ Serial No.</th> <th>Year of Manufacture</th> <th>Capacity</th> </tr> </thead> <tbody> <tr> <td>TA-3-22-1</td> <td>Boiler</td> <td>Edgemoor Iron Works</td> <td>4008</td> <td>1950</td> <td>178.5 MMBtu/hr</td> </tr> <tr> <td>TA-3-22-2</td> <td>Boiler</td> <td>Edgemoor Iron Works</td> <td>4009</td> <td>1950</td> <td>178.5 MMBtu/hr</td> </tr> <tr> <td>TA-3-22-3</td> <td>Boiler</td> <td>Union Iron Works</td> <td>11804</td> <td>1952</td> <td>178.5 MMBtu/hr</td> </tr> <tr> <td>TA-3-22-CT-1</td> <td>Combustion Turbine</td> <td>Rolls Royce</td> <td>RB211-6761DLE/ 2011</td> <td>2003</td> <td>27 MW</td> </tr> </tbody> </table>						Unit No.	Source Description	Manufacturer	Model No./ Serial No.	Year of Manufacture	Capacity	TA-3-22-1	Boiler	Edgemoor Iron Works	4008	1950	178.5 MMBtu/hr	TA-3-22-2	Boiler	Edgemoor Iron Works	4009	1950	178.5 MMBtu/hr	TA-3-22-3	Boiler	Union Iron Works	11804	1952	178.5 MMBtu/hr	TA-3-22-CT-1	Combustion Turbine	Rolls Royce	RB211-6761DLE/ 2011	2003	27 MW	No changes.
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<p>Control Equipment – TA-3 Power Plant</p> <p>A. Table 1301.A lists all the pollution control equipment required for this source category. Each emission point is identified by the same number that was assigned to it in the permit application.</p> <p>Table 1301.A: Control Equipment List:</p> <table border="1"> <thead> <tr> <th>Control Equipment Unit No.</th> <th>Control Description</th> <th>Manufacturer</th> <th>Year of Manufacture</th> <th>Pollutant being controlled</th> <th>Control for Unit No.1</th> </tr> </thead> <tbody> <tr> <td>F-1</td> <td>Flue Gas Recirculation Fan, 1800 rpm</td> <td>Robinson Industries</td> <td>2001</td> <td>NO_x</td> <td>TA-3-22-1</td> </tr> <tr> <td>F-2</td> <td>Flue Gas Recirculation Fan, 1800 rpm</td> <td>Robinson Industries</td> <td>2001</td> <td>NO_x</td> <td>TA-3-22-2</td> </tr> <tr> <td>F-3</td> <td>Flue Gas Recirculation Fan, 1800 rpm</td> <td>Robinson Industries</td> <td>2001</td> <td>NO_x</td> <td>TA-3-22-3</td> </tr> <tr> <td>TA-3-22-CT-1</td> <td>Rolls-Royce DLE System</td> <td>Rolls-Royce</td> <td>2003</td> <td>NO_x</td> <td>TA-3-22-CT-1</td> </tr> </tbody> </table>						Control Equipment Unit No.	Control Description	Manufacturer	Year of Manufacture	Pollutant being controlled	Control for Unit No.1	F-1	Flue Gas Recirculation Fan, 1800 rpm	Robinson Industries	2001	NO _x	TA-3-22-1	F-2	Flue Gas Recirculation Fan, 1800 rpm	Robinson Industries	2001	NO _x	TA-3-22-2	F-3	Flue Gas Recirculation Fan, 1800 rpm	Robinson Industries	2001	NO _x	TA-3-22-3	TA-3-22-CT-1	Rolls-Royce DLE System	Rolls-Royce	2003	NO _x	TA-3-22-CT-1	No changes.
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¹ Control for unit number refers to a unit number from the Regulated Equipment List

Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant														Proposed Changes																																																																																																																																							
<p>Emission Limits – TA-3 Power Plant</p> <p>A. Table 1302.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 40 CFR 60, Subparts A and GG; NSR Permit 2195B-M2).</p> <p>Table 1302.A: Allowable Emissions</p> <table border="1"> <thead> <tr> <th rowspan="2">Unit No.</th> <th colspan="2">NOx¹</th> <th colspan="2">CO</th> <th colspan="2">VOC</th> <th colspan="2">SOx</th> <th colspan="2">TSP</th> <th colspan="2">PM10</th> <th colspan="2">PM2.5</th> </tr> <tr> <th>Gas</th> <th>Oil</th> </tr> </thead> <tbody> <tr> <td>TA-3-22-1 (lb/hr)</td> <td>10.2</td> <td>11.3</td> <td>7.0</td> <td>6.5</td> <td>1.0</td> <td>0.3</td> <td>1.1</td> <td>9.6</td> <td>1.3</td> <td>4.3</td> <td>1.3</td> <td>3.0</td> <td>1.3</td> <td>2.0</td> </tr> <tr> <td>TA-3-22-2 (lb/hr)</td> <td>10.2</td> <td>11.3</td> <td>7.0</td> <td>6.5</td> <td>1.0</td> <td>0.3</td> <td>1.1</td> <td>9.6</td> <td>1.3</td> <td>4.3</td> <td>1.3</td> <td>3.0</td> <td>1.3</td> <td>2.0</td> </tr> <tr> <td>TA-3-22-3 (lb/hr)</td> <td>10.2</td> <td>11.3</td> <td>7.0</td> <td>6.5</td> <td>1.0</td> <td>0.3</td> <td>1.1</td> <td>9.6</td> <td>1.3</td> <td>4.3</td> <td>1.3</td> <td>3.0</td> <td>1.3</td> <td>2.0</td> </tr> <tr> <td>Boilers Combined (tpy)</td> <td colspan="2">31.5</td> <td colspan="2">21.5</td> <td colspan="2">2.8</td> <td colspan="2">4.9</td> <td colspan="2">4.7</td> <td colspan="2">4.4</td> <td colspan="2">4.2</td> </tr> <tr> <td>TA-3-22-CT-1 (lb/hr)</td> <td colspan="2">23.8</td> <td colspan="2">29.0</td> <td colspan="2">0.6</td> <td colspan="2">1.7</td> <td colspan="2">1.9</td> <td colspan="2">1.9</td> <td colspan="2">1.9</td> </tr> <tr> <td>TA-3-22-CT-1 (tpy)</td> <td colspan="2">59.4</td> <td colspan="2">72.3</td> <td colspan="2">1.5</td> <td colspan="2">4.2</td> <td colspan="2">4.8</td> <td colspan="2">4.8</td> <td colspan="2">4.8</td> </tr> <tr> <td>TA-3-22-CT-1 (ppm)</td> <td colspan="2">25 ppmvd @ 15% O₂</td> <td colspan="2">N/A</td> <td colspan="2">N/A</td> <td colspan="2">N/A</td> <td colspan="2">N/A</td> <td colspan="2">N/A</td> <td colspan="2">N/A</td> </tr> </tbody> </table>														Unit No.	NOx ¹		CO		VOC		SOx		TSP		PM10		PM2.5		Gas	Oil	TA-3-22-1 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0	TA-3-22-2 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0	TA-3-22-3 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0	Boilers Combined (tpy)	31.5		21.5		2.8		4.9		4.7		4.4		4.2		TA-3-22-CT-1 (lb/hr)	23.8		29.0		0.6		1.7		1.9		1.9		1.9		TA-3-22-CT-1 (tpy)	59.4		72.3		1.5		4.2		4.8		4.8		4.8		TA-3-22-CT-1 (ppm)	25 ppmvd @ 15% O ₂		N/A		No changes.																							
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TA-3-22-1 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0																																																																																																																																							
TA-3-22-2 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0																																																																																																																																							
TA-3-22-3 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0																																																																																																																																							
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<p>B. NOx emissions (all oxides of nitrogen expressed as NO2) from the boilers (Units TA-3-22-1 through -3) shall not exceed 0.3 lb/MMBtu of heat input when burning natural gas or oil as required by 20.2.33 and 20.2.34 NMAC. (NSR Permit 2195B-M2, Specific Condition A106.B)</p>																																																																																																																																																					
<p>C. For the Combustion Turbine (Unit TA-3-22-CT-1), the permittee shall comply with the NSPS Subpart GG NOx emissions limitation of 110.4 ppmv at 15% O₂, dry basis (40 CFR 63.332(a)(1) and NSR Permit 2195B-M2, Specific Condition A106.C)</p>																																																																																																																																																					
<p>D. For the Combustion Turbine (Unit TA-3-22-CT-1), the permittee shall comply with the NSPS Subpart GG SO₂ emissions limitation of 0.015% by volume at 15% O₂ dry basis or through use of any fuel not exceeding 8000 ppmw total sulfur.</p>																																																																																																																																																					

Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant	Proposed Changes																					
<p>Applicable Requirements – TA-3 Power Plant</p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 1303.A.</p> <p>Table 1303.A: Applicable Requirements</p> <table border="1" data-bbox="296 354 1583 667"> <thead> <tr> <th>Applicable Requirements</th> <th>Federally Enforceable</th> <th>Unit No.</th> </tr> </thead> <tbody> <tr> <td>20.2.33 NMAC Gas Burning Equipment – Nitrogen Dioxide</td> <td>X</td> <td>TA-3-22-1 through -3</td> </tr> <tr> <td>20.2.34 NMAC Oil Burning Equipment – Nitrogen Dioxide</td> <td>X</td> <td>TA-3-22-1 through -3</td> </tr> <tr> <td>20.2.61 Smoke and Visible Emissions</td> <td>X</td> <td>All combustion sources</td> </tr> <tr> <td>40 CFR 60, Subpart A</td> <td>X</td> <td>TA-3-22-CT-1</td> </tr> <tr> <td>40 CFR 60, Subpart GG</td> <td>X</td> <td>TA-3-22-CT-1</td> </tr> <tr> <td>NSR Permit No: 2195B-M2</td> <td>X</td> <td>All Power Plant sources</td> </tr> </tbody> </table>	Applicable Requirements	Federally Enforceable	Unit No.	20.2.33 NMAC Gas Burning Equipment – Nitrogen Dioxide	X	TA-3-22-1 through -3	20.2.34 NMAC Oil Burning Equipment – Nitrogen Dioxide	X	TA-3-22-1 through -3	20.2.61 Smoke and Visible Emissions	X	All combustion sources	40 CFR 60, Subpart A	X	TA-3-22-CT-1	40 CFR 60, Subpart GG	X	TA-3-22-CT-1	NSR Permit No: 2195B-M2	X	All Power Plant sources	<p>No changes.</p>
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NSR Permit No: 2195B-M2	X	All Power Plant sources																				
<p>Operational Limitations – TA-3 Power Plant</p> <p>A. This source category is authorized to operate at any time of the day or night on any day of the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.</p>	<p>No changes.</p>																					
<p>Fuel Sulfur Requirements – TA-3 Power Plant</p> <p>A. Boilers (Units TA-3-22-1 through -3)</p> <table border="1" data-bbox="296 906 1583 1304"> <tbody> <tr> <td>Requirement: External combustion sources at the TA-3 Power Plant shall combust only natural gas containing no more than 2 gr/100 scf total sulfur or No. 2 fuel oil containing no more than 0.05 wt% total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.A)</td> </tr> <tr> <td>Monitoring: N/A</td> </tr> <tr> <td>Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </tbody> </table>	Requirement: External combustion sources at the TA-3 Power Plant shall combust only natural gas containing no more than 2 gr/100 scf total sulfur or No. 2 fuel oil containing no more than 0.05 wt% total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.A)	Monitoring: N/A	Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>No changes.</p>																	
Requirement: External combustion sources at the TA-3 Power Plant shall combust only natural gas containing no more than 2 gr/100 scf total sulfur or No. 2 fuel oil containing no more than 0.05 wt% total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.A)																						
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Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.																						

Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant	Proposed Changes				
<p>B. Combustion Turbine (Unit TA-3-22-CT-1)</p> <table border="1" data-bbox="296 277 1583 578"> <tr> <td>Requirement: The combustion turbine at the TA-3 Power Plant shall combust only natural gas containing no greater than 2 gr/100 scf total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.B)</td> </tr> <tr> <td>Monitoring: N/A</td> </tr> <tr> <td>Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. (NSR Permit 2195B-M2, Specific Condition A110.B and 40 CFR 60.334(h))</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: The combustion turbine at the TA-3 Power Plant shall combust only natural gas containing no greater than 2 gr/100 scf total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.B)	Monitoring: N/A	Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. (NSR Permit 2195B-M2, Specific Condition A110.B and 40 CFR 60.334(h))	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
Requirement: The combustion turbine at the TA-3 Power Plant shall combust only natural gas containing no greater than 2 gr/100 scf total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.B)					
Monitoring: N/A					
Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. (NSR Permit 2195B-M2, Specific Condition A110.B and 40 CFR 60.334(h))					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>20.2.61 NMAC Opacity – TA-3 Power Plant</p> <p>A. Sources Combusting Natural Gas</p> <table border="1" data-bbox="285 699 1570 1027"> <tr> <td>Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.A)</td> </tr> <tr> <td>Monitoring: Use of natural gas fuel meeting the requirement at Condition A1305.A or B constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.</td> </tr> <tr> <td>Recordkeeping: The permittee shall record dates of any opacity measures and the corresponding opacity readings.</td> </tr> <tr> <td>Reporting: The permittee shall report dates of any opacity measures and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.A)	Monitoring: Use of natural gas fuel meeting the requirement at Condition A1305.A or B constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.	Recordkeeping: The permittee shall record dates of any opacity measures and the corresponding opacity readings.	Reporting: The permittee shall report dates of any opacity measures and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>No changes.</p>
Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.A)					
Monitoring: Use of natural gas fuel meeting the requirement at Condition A1305.A or B constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.					
Recordkeeping: The permittee shall record dates of any opacity measures and the corresponding opacity readings.					
Reporting: The permittee shall report dates of any opacity measures and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.					

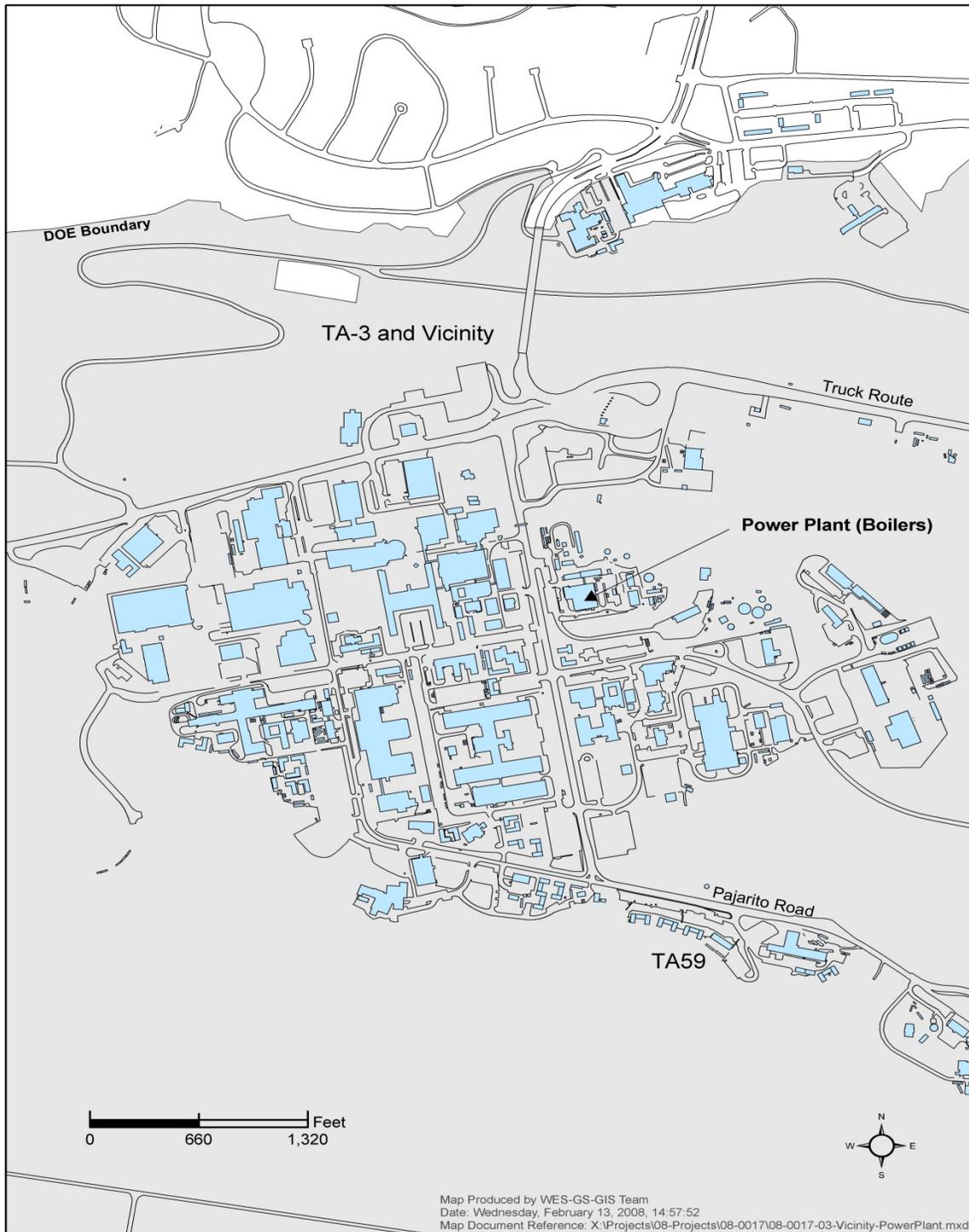
Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant	Proposed Changes				
<p>B. Boilers Combusting No. 2 Fuel Oil</p> <table border="1" data-bbox="296 277 1583 621"> <tr> <td>Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.B)</td> </tr> <tr> <td>Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year whenever the boiler(s) are operational during the monitoring period. This requirement is subject to the monitoring provisions of Condition B108.D.</td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.B)	Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year whenever the boiler(s) are operational during the monitoring period. This requirement is subject to the monitoring provisions of Condition B108.D.	Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.	Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	
Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.B)					
Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year whenever the boiler(s) are operational during the monitoring period. This requirement is subject to the monitoring provisions of Condition B108.D.					
Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.					
Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.					
<p>Other – TA-3 Power Plant</p> <p>A. mission calculations (TA-3 Power Plant)</p> <table border="1" data-bbox="296 743 1583 1187"> <tr> <td>Requirement: The permittee shall comply with the hourly and annual emission limits at Table 106.A. and Conditions A106.B, C, and D for the combustion turbine and boilers. The boiler annual emission limit shall be expressed as the combined emissions from all 3 boilers. (NSR Permit 2195B-M2, Specific Condition A801.A)</td> </tr> <tr> <td>Monitoring: The permittee shall perform the following calculations on a monthly basis: <ol style="list-style-type: none"> 1) Calculate the average hourly emissions rates (pph) for each emissions unit based on the monthly total fuel consumption and monthly actual hours of operation. 2) Calculate the actual annual emissions rates (tpy) for all emissions units based on the monthly rolling 12-month total fuel consumption and the monthly rolling 12-month total hours of operation. 3) All NOx emission rates for the boilers shall also be calculated in terms of lb/MMBtu heat input. 4) (NSR Permit 2195B-M2, Specific Condition A801.A) </td> </tr> <tr> <td>Recordkeeping: The permittee shall maintain records in accordance with Section B109.</td> </tr> <tr> <td>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</td> </tr> </table>	Requirement: The permittee shall comply with the hourly and annual emission limits at Table 106.A. and Conditions A106.B, C, and D for the combustion turbine and boilers. The boiler annual emission limit shall be expressed as the combined emissions from all 3 boilers. (NSR Permit 2195B-M2, Specific Condition A801.A)	Monitoring: The permittee shall perform the following calculations on a monthly basis: <ol style="list-style-type: none"> 1) Calculate the average hourly emissions rates (pph) for each emissions unit based on the monthly total fuel consumption and monthly actual hours of operation. 2) Calculate the actual annual emissions rates (tpy) for all emissions units based on the monthly rolling 12-month total fuel consumption and the monthly rolling 12-month total hours of operation. 3) All NOx emission rates for the boilers shall also be calculated in terms of lb/MMBtu heat input. 4) (NSR Permit 2195B-M2, Specific Condition A801.A) 	Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	<p>No changes.</p>
Requirement: The permittee shall comply with the hourly and annual emission limits at Table 106.A. and Conditions A106.B, C, and D for the combustion turbine and boilers. The boiler annual emission limit shall be expressed as the combined emissions from all 3 boilers. (NSR Permit 2195B-M2, Specific Condition A801.A)					
Monitoring: The permittee shall perform the following calculations on a monthly basis: <ol style="list-style-type: none"> 1) Calculate the average hourly emissions rates (pph) for each emissions unit based on the monthly total fuel consumption and monthly actual hours of operation. 2) Calculate the actual annual emissions rates (tpy) for all emissions units based on the monthly rolling 12-month total fuel consumption and the monthly rolling 12-month total hours of operation. 3) All NOx emission rates for the boilers shall also be calculated in terms of lb/MMBtu heat input. 4) (NSR Permit 2195B-M2, Specific Condition A801.A) 					
Recordkeeping: The permittee shall maintain records in accordance with Section B109.					
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.					

Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant	Proposed Changes
<p>B. Fuel Usage (Boilers, Units TA-3-22-1 through -3)</p> <p>Requirement: Combined boiler operation shall not consume more than 1000 MMscf of natural gas and no more than 500,000 gallons of No. 2 fuel oil in any 12-month period. Volumetric flow shall be measured using liquid or gas fuel flowmeters installed on the natural gas fuel inlet to each respective unit (3 separate gas flowmeters) and on the combined fuel oil inlet to the boilers (one fuel oil flowmeter). (NSR Permit 2195B-M2, Specific Conditions A803.A)</p> <p>Monitoring: The liquid fuel flow rate shall be continuously monitored whenever liquid fuel is combusted. The natural gas fuel flow rate for each boiler shall be continuously monitored whenever natural gas is combusted. The hours of operation, including startup and shutdown times of each boiler shall be continuously monitored. (NSR Permit 2195B-M2, Specific Condition A803.A)</p> <p>Recordkeeping: The permittee shall record the daily total of liquid fuel (gallons) for all boilers combined, or gaseous fuel (scf) for each boiler on a monthly basis, to include a monthly total. Annual fuel usage shall be calculated and recorded on a monthly rolling 12-month total basis. The permittee shall record the daily hours of operation of each boiler on a monthly basis, to include a monthly total. The record shall include the monthly rolling 12-month total hours of operation for all 3 boilers combined. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A803.A)</p> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
<p>C. Fuel Usage (Combustion Turbine, Unit TA-2-22-CT-1)</p> <p>Requirement: The combustion turbine shall not consume more than 1400 MMscf of natural gas in any 12-month period. Volumetric flow shall be measured using a gas fuel flowmeter installed on the fuel inlet of the combustion turbine. (NSR Permit 2195B-M2, Specific Condition A802.A)</p> <p>Monitoring: The natural gas fuel flow rate for the combustion turbine shall be continuously monitored whenever natural gas is combusted. (NSR Permit 2195B-M2, Specific Condition A802.A)</p> <p>Recordkeeping: The permittee shall record the daily total of gaseous fuel (scf) for the turbine on a monthly basis, to include a monthly total. Annual fuel usage shall be calculated and recorded on a monthly rolling 12-month total basis. The permittee shall record the daily hours of operation of the combustion turbine on a monthly basis, to include a monthly total. The record shall include the monthly total hours and monthly rolling 12-month total hours of operation. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.A)</p> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	

Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant	Proposed Changes
<p>D. Load Requirement (Combustion Turbine, Unit TA-3-22-CT-1)</p> <p>Requirement: The combustion turbine shall be operated at no less than 80% and no greater than 100% load as determined by the manufacturer’s supplied algorithm, except for minimal periods during startup and shutdown conditions. The permittee shall follow the manufacturer’s recommended startup/shutdown procedures in order to minimize the duration of these events. (NSR Permit 2195B-M2, Specific Condition A802.B)</p> <p>Monitoring: The operating load of the combustion turbine shall be monitored once daily during normal operations of that unit. (NSR Permit 2195B-M2, Specific Condition A802.B)</p> <p>Recordkeeping: The permittee shall record the daily monitored operating load for the combustion turbine. The permittee shall maintain a record of the manufacturer’s recommended startup/shutdown procedure and the manufacturer’s criteria for the determination of turbine load. The permittee shall maintain a record for each startup/shutdown or malfunction event for the combustion turbine. The record shall include the date, the start/end time and duration for each event, which is defined as the length of time the combustion turbine is operating at less than 80% or greater than 100% load. For any malfunction event, the record shall also include the nature of the malfunction and any corrective action taken. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.B)</p> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
<p>E. Control Device Operation (Boilers, Units TA-3-22-1 through -3)</p> <p>Requirement: Each boiler (Units TA-3-22-1 through -3) shall only be operated with a properly operating flue gas recirculation fan (Units F-1 through -3, respectively). Any malfunction of the flue gas recirculation system during boiler operation may be subject to the excess emissions requirements of 20.2.7 NMAC. (NSR Permit 2195B-M2, Specific Condition A803.B)</p> <p>Monitoring: The flue gas recirculating fans shall be inspected for proper operation and maintenance once during each calendar month that the unit was operating. (NSR Permit 2195B-M2, Specific Condition A803.B)</p> <p>Recordkeeping: The permittee shall record all inspections of the flue gas recirculating fans and any event during which a fan malfunctions. The record shall include the date, time, name of operator conducting the inspection, and any discrepancies noted. For malfunction events, the record shall also include the nature and duration of the malfunction, and any corrective action taken. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A803.B)</p> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	

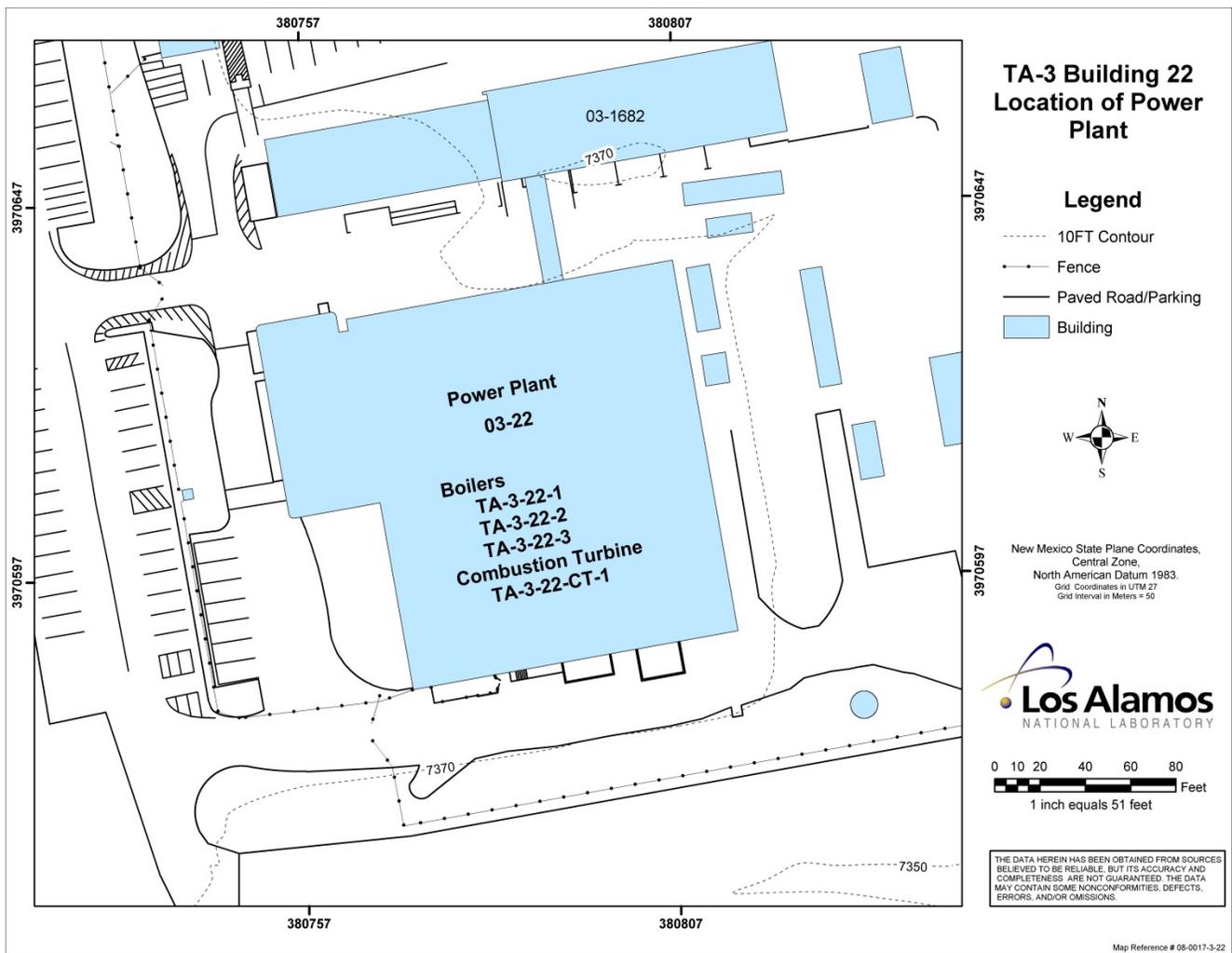
Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant	Proposed Changes				
<p>F. Control Device Operation (Combustion Turbine, Unit TA-3-22-CT-1)</p> <table border="1" data-bbox="296 277 1583 589"> <tr> <td data-bbox="296 277 1583 391"> <p>Requirement: The combustion turbine shall be equipped with Rolls-Royce Dry Low Emissions (DLE) control technology (pre-mix, lean-burn series staged combustion system) to control NOx emissions. (NSR Permit 2195B-M2, Specific Condition A802.C)</p> </td> </tr> <tr> <td data-bbox="296 391 1583 435"> <p>Monitoring: N/A</p> </td> </tr> <tr> <td data-bbox="296 435 1583 548"> <p>Recordkeeping: The permittee shall maintain a record of the DLE system associated with the combustion turbine. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.C)</p> </td> </tr> <tr> <td data-bbox="296 548 1583 589"> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> </td> </tr> </table>	<p>Requirement: The combustion turbine shall be equipped with Rolls-Royce Dry Low Emissions (DLE) control technology (pre-mix, lean-burn series staged combustion system) to control NOx emissions. (NSR Permit 2195B-M2, Specific Condition A802.C)</p>	<p>Monitoring: N/A</p>	<p>Recordkeeping: The permittee shall maintain a record of the DLE system associated with the combustion turbine. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.C)</p>	<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	
<p>Requirement: The combustion turbine shall be equipped with Rolls-Royce Dry Low Emissions (DLE) control technology (pre-mix, lean-burn series staged combustion system) to control NOx emissions. (NSR Permit 2195B-M2, Specific Condition A802.C)</p>					
<p>Monitoring: N/A</p>					
<p>Recordkeeping: The permittee shall maintain a record of the DLE system associated with the combustion turbine. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.C)</p>					
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>					
<p>G. 40 CFR 60, Subparts A and GG (Combustion Turbine, Unit TA-3-22-CT-1)</p> <table border="1" data-bbox="296 672 1583 984"> <tr> <td data-bbox="296 672 1583 756"> <p>Requirement: The combustion turbine is subject to 40 CFR 60, Subpart GG and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart GG. (NSR Permit 2195B-M2, Specific Condition A802.D)</p> </td> </tr> <tr> <td data-bbox="296 756 1583 829"> <p>Monitoring: The permittee shall comply with the monitoring and testing requirements of 40 CFR 60.334 and 60.335. (NSR Permit 2195B-M2, Specific Condition A802.D)</p> </td> </tr> <tr> <td data-bbox="296 829 1583 902"> <p>Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.334 and 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)</p> </td> </tr> <tr> <td data-bbox="296 902 1583 984"> <p>Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)</p> </td> </tr> </table>	<p>Requirement: The combustion turbine is subject to 40 CFR 60, Subpart GG and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart GG. (NSR Permit 2195B-M2, Specific Condition A802.D)</p>	<p>Monitoring: The permittee shall comply with the monitoring and testing requirements of 40 CFR 60.334 and 60.335. (NSR Permit 2195B-M2, Specific Condition A802.D)</p>	<p>Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.334 and 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)</p>	<p>Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)</p>	
<p>Requirement: The combustion turbine is subject to 40 CFR 60, Subpart GG and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart GG. (NSR Permit 2195B-M2, Specific Condition A802.D)</p>					
<p>Monitoring: The permittee shall comply with the monitoring and testing requirements of 40 CFR 60.334 and 60.335. (NSR Permit 2195B-M2, Specific Condition A802.D)</p>					
<p>Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.334 and 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)</p>					
<p>Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)</p>					

Existing Permit P100-R1-M3 Conditions – TA 3 Power Plant	Proposed Changes
<p>H. Portable Analyzer Testing (Combustion Turbine, Unit TA-3-22-CT-1)</p> <p>Requirement: The permittee shall comply with the allowable emission limits at Table 106.A, including the NOx ppmv limitation. (NSR Permit 2195B-M2, Specific Condition A802.E)</p> <p>Monitoring: The permittee shall test using a portable analyzer subject to the requirements and limitations of Section B108, General Monitoring Requirements. Periodic testing for NOx and CO shall be carried out as described below. Test results that demonstrate compliance with the NOx and CO emission limits shall also be considered to demonstrate compliance with the VOC, SO₂, TSP, PM10, and PM2.5 emission limits. The test period shall be annually. All subsequent monitoring shall occur in each succeeding monitoring period. No two monitoring events shall occur closer together in time than 25% of a monitoring period. Monitoring shall be conducted during each monitoring period notwithstanding the Condition B108.D requirements for periods of operation less than 25%. Follow the General Testing Procedures of Section B111. (NSR Permit 2195B-M2, Specific Condition A802.E)</p> <p>Recordkeeping: The permittee shall maintain records in accordance with Section B109. The permittee shall also record the results of the periodic emissions tests, including the turbine's fuel flow rate and load at the time of the test, and the type of fuel fired (natural gas with the heating value and sulfur content specified). If a combustion analyzer is used to measure NOx, CO, and/or excess air in the exhaust gas, records shall be kept of the make and model of the instrument and instrument calibration data. If an ORSAT apparatus or other gas absorption analyzer is used, the permittee shall record all calibration results. The permittee shall also keep records of all raw data used to determine exhaust gas flow and of all calculations used to determine flow rates and mass emissions rates. (NSR Permit 2195B-M2, Specific Condition A802.E)</p> <p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	



Location of Power Plant at TA-3.

Figure 2.8-2 Location of Power Plant at TA-3



Emission Units: TA-3-22-1, 2, 3, Boilers and TA-3-22-CT-1, Combustion Turbine.

Figure 2.8-3 Plot Plan for Emission Units TA-3-22-1 through 3 and TA-3-22-CT-1

2.9 Open Burning

2.9.1 General Description of Source Category

This emission source category includes any open burning which could be conducted under NMED open burning or smoke management regulations. NMED no longer issues permits for open burning rather this activity is controlled under the applicable regulations 20.2.60 NMAC Open Burning and 20.2.65 NMAC Smoke Management. In general, the open burning regulation regulates smaller burns of vegetative material and has limited exclusions for other materials. The smoke management regulation regulates the burning of vegetative material in larger prescribed burns land managers initiate primarily to aid fire protection efforts.

Since issuance of the first Title V renewal permit in August 2009, LANL has not conducted any burning of vegetative material that is regulated under NMED burn regulations or the open burning conditions of Permit P100-R1-M1. Any future open burning of vegetative material conducted would fall under the requirements for this category.

2.9.2 Operating Schedule

The hours during which any open burning would occur would be determined for each specific burn and would vary accordingly.

2.9.3 Process Flow Diagram

Open burning of vegetative material cannot be described in a process flow diagram.

2.9.4 Emissions

Open burning of vegetative material will emit primarily particulate matter, carbon monoxide, and volatile organic hydrocarbons. Small quantities of nitrogen oxides and sulfur oxides can also be emitted. Many of the organic compounds emitted are designated hazardous air pollutants. There are many variables which determine the quantity of air emissions from a given burn. These include the type of fuel, the quantity of fuel, the moisture content of the material, and weather conditions. Particulate matter size ranges can vary widely depending on the rate of energy release from a given fire.

Air emissions will be estimated for any planned open burn regulated under Permit P100-R1-M3. Estimated hazardous air pollutant emissions from open burning must be reported and counted towards

the LANL facility-wide emission limits in the Title V permit. Any air emission from open burning is considered a fugitive emission; i.e. is not emitted from a stack or vent. Only fugitive hazardous air pollutant emissions count towards facility-wide emissions contained within the LANL Title V permit.

2.9.5 Emissions Control Equipment

Due to the nature of this activity, emissions control equipment is not present.

2.9.6 Operational Plan

An operational plan to limit air emissions during startups, shutdowns or malfunctions is not applicable to open burning as opposed to process equipment which has these types of operational time periods

2.9.7 Applicable Requirements

Table 2.9-1 shows the existing permit conditions for this source type in Permit P100-R1-M1 together with any proposed changes.

2.9.8 Location of Open Burning

There are currently no planned locations for future open burning activities.

Table 2.9.1 Existing Permit Conditions for Open Burning and Proposed Changes

Existing Permit P100-R1-M3 Conditions – Open Burning	Proposed Changes									
<p>Regulated Sources – Open Burning</p> <p>A. Table 1400.A lists all of the process equipment authorized for this source category.</p> <p>Table 1400.A: Regulated Sources List</p> <table border="1"> <thead> <tr> <th>Unit No./Location</th> <th>Source Description</th> </tr> </thead> <tbody> <tr> <td>Facility-Wide Open Burning</td> <td>All open lands within LANL property boundary</td> </tr> </tbody> </table>	Unit No./Location	Source Description	Facility-Wide Open Burning	All open lands within LANL property boundary	No changes.					
Unit No./Location	Source Description									
Facility-Wide Open Burning	All open lands within LANL property boundary									
<p>A1402 Emission Limits – Open Burning</p> <p>A. Table 1402.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 20.2.60 NMAC; 20.2.65 NMAC).</p> <p>Table 1402.A: Allowable Emissions</p> <table border="1"> <thead> <tr> <th>Unit No.</th> <th>Individual HAP¹ (tpy)</th> <th>Total HAPs¹ (tpy)</th> </tr> </thead> <tbody> <tr> <td>Facility-Wide Open Burning</td> <td>8.0</td> <td>24.0</td> </tr> </tbody> </table> <p>¹Individual and Total HAPs emitted by Open Burning are included in the facility-wide HAP emission limits at Table 106.B.</p>	Unit No.	Individual HAP ¹ (tpy)	Total HAPs ¹ (tpy)	Facility-Wide Open Burning	8.0	24.0	No changes.			
Unit No.	Individual HAP ¹ (tpy)	Total HAPs ¹ (tpy)								
Facility-Wide Open Burning	8.0	24.0								
<p>A1403 Applicable Requirements – Open Burning</p> <p>The permittee shall comply with all applicable sections of the requirements listed in Table 1403.A.</p> <p>Table 1503.A: Applicable Requirements</p> <table border="1"> <thead> <tr> <th>Applicable Requirements</th> <th>Federally Enforceable</th> <th>Unit No.</th> </tr> </thead> <tbody> <tr> <td>20.2.60 NMAC Open Burning</td> <td>X</td> <td>Facility-Wide Open Burning</td> </tr> <tr> <td>20.2.65 NMAC Smoke Management</td> <td>X</td> <td>Facility-Wide Open Burning</td> </tr> </tbody> </table>	Applicable Requirements	Federally Enforceable	Unit No.	20.2.60 NMAC Open Burning	X	Facility-Wide Open Burning	20.2.65 NMAC Smoke Management	X	Facility-Wide Open Burning	Change numbering of Table 1503.A to Table 1403.A.
Applicable Requirements	Federally Enforceable	Unit No.								
20.2.60 NMAC Open Burning	X	Facility-Wide Open Burning								
20.2.65 NMAC Smoke Management	X	Facility-Wide Open Burning								
<p>A1404 Operational Limitations – Open Burning</p> <p>A. This source category is authorized to operate at any time of the day or night on any day of the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.</p>	No changes.									

Existing Permit P100-R1-M3 Conditions – Open Burning	Proposed Changes
<p>A1407 Other – Open Burning</p> <p>A. Operational</p> <div style="border: 1px solid black; padding: 5px;"> <p>Requirement: The permittee shall comply with the applicable requirements of 20.2.60 NMAC and 20.2.65 NMAC, including, but not limited to:</p> <ol style="list-style-type: none"> 1) Prior to initiating a burn consisting of vegetative material, the permittee shall submit to the Department a sampling and analysis plan and upon approval conduct representative sampling of the intended burn material and analyze samples for radionuclides, target analyte list (TAL) inorganic elements, polychlorinated biphenyls (PCBs), and high explosives (HE); and 2) The permittee shall submit to the Department a background concentration report for the contaminants listed in Condition A1407.A, Requirement (1). The report shall indicate locations where background concentrations were taken and compare sample results with background concentrations of the constituents; and 3) The permittee shall not burn vegetative material which includes any contaminant above the relevant background concentration; and 4) Upon receiving Department approval, the permittee shall conduct public notification in a display ad in at least four newspapers: Los Alamos Monitor, Rio Grande Sun, Santa Fe New Mexican, and the Albuquerque Journal, no less than 21 days in advance of a planned burn. </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Monitoring: The permittee shall monitor all open burning as required by Department regulation or burn approval.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Recordkeeping: The permittee shall maintain records of all sampling and analysis plans and any representative sampling conducted. Records shall be kept in accordance with Section B109.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> <p>Reporting: The permittee shall submit reports as outlined in the Condition 1407.A Requirements, as described in Section A109, and in accordance with Section B110.</p> </div>	<p>No changes.</p>

Appendix A

Application Forms

<p>Mail Application To:</p> <p>New Mexico Environment Department Air Quality Bureau Permitting Section 1301 Siler Road, Building B Santa Fe, NM 87507-3113</p> <p>Phone: (505) 476-4300 Fax: (505) 476-4375 www.nmenv.state.nm.us/aqb</p>		<p>For Department use only:</p> <p>AIRS No.:</p>
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Universal Air Quality Permit Application

Use this application for NOI, NSR, or Title V sources.

Use this application for: the initial application, modifications, technical revisions, and renewals. For technical revisions, complete Sections, 1-A, 1-B, 2-E, 3, 9 and any other sections that are relevant to the requested action; coordination with the Air Quality Bureau permit staff prior to submittal is encouraged to clarify submittal requirements and to determine if more or less than these sections of the application are needed. For NOI applications, submit the entire UA1, UA2, and UA3 applications on a single CD (no copies are needed). For NOIs, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required. Use this application for streamline permits as well.

This application is being submitted as (check all that apply): Request for a No Permit Required Determination (no fee)
 Updating an application currently under NMED review. Include this page and all pages that are being updated (no fee required).
 Construction Status: Not Constructed Existing Permitted (or NOI) Facility Existing Non-permitted (or NOI) Facility
 Minor Source: a NOI 20.2.73 NMAC 20.2.72 NMAC application/revision 20.2.72.300 NMAC Streamline application
 Title V Source: Title V (new) Title V renewal TV minor mod. TV significant mod. TV Acid Rain: New Renewal
 PSD Major Source: PSD major source (new) minor modification to a PSD source a PSD major modification

Acknowledgements: I acknowledge that a pre-application meeting is available to me upon request NPR (no fee)
 \$500 NSR Permit Filing Fee enclosed **OR** The full permit fee associated with 10 fee points (required w/ streamline applications).
 Check No.: _____ in the amount of _____ (Fee not required for Title V) This facility meets the applicable requirements to register as a Small Business and a check for 50% of the normal fee is enclosed (only applicable **provided** that NMED has a Small Business Certification Form from your company on file found at: http://www.nmenv.state.nm.us/aqb/permit/app_form.html).

Citation: Please provide the **low level citation** under which this application is being submitted: **20.2.70.300.B.2 NMAC** (i.e. an example of an application for a new minor source would be 20.2.72.200.A NMAC, one example of a low level cite for a Technical Revision could be: 20.2.72.219.B.1.b NMAC, or a Title V acid rain cite would be: 20.2.70.200.C NMAC)

Synthetic Minor Source Information: A source is synthetic minor if its uncontrolled emissions are above major source applicability thresholds, but the facility is minor because it has federally enforceable requirements (federal requirements or permit conditions) that limit controlled emissions below major source thresholds. Facilities can be synthetic minor for either Title V (20.2.70 NMAC) or PSD (20.2.74 NMAC) or both. The Department tracks synthetic minor sources that are within 20% of either TV or PSD major source thresholds, referring to these as Synthetic Minor 80 Sources (abbreviated SM80). Please check all that apply:
 Prior to this permitting action this source is a TV major source, a TV synthetic minor source, a TV SM80 source.
 Prior to this permitting action this source is a PSD major source, a PSD synthetic minor source, a PSD SM80 source.
 This permitting action results in a TV synthetic minor source and/or PSD synthetic minor source.

Section 1 – Facility Information

Section 1-A: Company Information		AI # (if known): 35-028-0001	Updating permit #: P100-R1-M3
1	Facility Name: Los Alamos National Laboratory	Plant primary SIC Code (4 digits): 8733	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): The Laboratory is bounded by the towns of Los Alamos and White Rock, NM		
2	Plant Operator Company Name: Los Alamos National Security, LLC	Phone/Fax: 505-665-8855/505-665-8858	
a	Plant Operator Address: P.O. Box 1663, MS J978, Los Alamos, NM 87545		
b	Plant Operator's New Mexico Corporate ID or Tax ID: 03059304002		
3	Plant Owner(s) name(s): DOE, National Nuclear Security Administration	Phone/Fax: (505) 667-6691	

a	Plant Owner(s) Mailing Address(s): 3747 West Jemez Road, Los Alamos, NM 87544	
4	Bill To (Company): N/A	Phone/Fax: N/A
a	Mailing Address: N/A	E-mail: N/A
5	√ Preparer: □ Consultant: Bill Blankenship	Phone/Fax: 505-665-0823/505-665-8858
a	Mailing Address: P.O. Box 1663, MS J978, Los Alamos, NM 87545	E-mail: bblankenship@lanl.gov
6	Plant Operator Contact: Tony Grieggs	Phone/Fax: 505-665-0451
a	Address: P.O. Box 1663, MS K490, Los Alamos, NM 87545	E-mail: grieggst@lanl.gov
7	Air Permit Contact: Tony Grieggs	Title: Group Leader
a	E-mail: grieggst@lanl.gov	Phone/Fax: 505-665-0451
b	Mailing Address: P.O. Box 1663, MS K490, Los Alamos, NM 87545	

Section 1-B: Current Facility Status

1	Has this facility already been constructed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it currently operating in New Mexico? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2	Is the plant currently shut down? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, give month and year of shut down (MM/YY):
3	Was this facility constructed before 8/31/1972 and continuously operated since 1972? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4	If Yes, has this facility been modified (see 20.2.72.7.P NMAC) or the capacity increased since 8/31/1972? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
5	Does this facility have a Title V operating permit (20.2.70 NMAC)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, the permit No. is: P-100-R1-M3
6	Has this facility been issued a No Permit Required (NPR)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, the NPR No. is: 2195A,2195Q,2195S,2195U
7	Has this facility been issued a Notice of Intent (NOI)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, the NOI No. is:
8	Does this facility have a construction permit (20.2.72 NMAC)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, the permit No. is: 632,634,1081,2195,2195B,2195F,2195H,2195N,2195P
9	Is this facility registered under a General permit (GCP-1, GCP-2, etc.)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, the register No. is: GCP-3-2195G

Section 1-C: Facility Input Capacity & Production Rate

1	What is the facility's maximum input capacity, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: N/A	Daily: N/A	Annually: N/A
b	Proposed	Hourly: N/A	Daily: N/A	Annually: N/A
2	What is the facility's maximum production rate, specify units (reference here and list capacities in Section 20, if more room is required)			
a	Current	Hourly: N/A	Daily: N/A	Annually: N/A
b	Proposed	Hourly: N/A	Daily: N/A	Annually: N/A

Section 1-D: Facility Location Information

1	Section: 22	Range: 6E	Township: 19N	County: Los Alamos	Elevation (ft): 7220
2	UTM Zone: <input type="checkbox"/> 12 or <input checked="" type="checkbox"/> 13			Datum: <input type="checkbox"/> NAD 27 <input checked="" type="checkbox"/> NAD 83 <input type="checkbox"/> WGS 84	
a	UTM E (in meters, to nearest 10 meters): 383.0			UTM N (in meters, to nearest 10 meters): 3969.0	

b	AND Latitude (deg., min., sec.): 35 51 29.6 N	Longitude (deg., min., sec.): 106 17 44.9 W
3	Name and zip code of nearest New Mexico town: Los Alamos 87545	
4	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): Directly adjacent to Los Alamos, NM	
5	The facility is 0 (distance) miles south (direction) of Los Alamos (nearest town).	
6	Status of land at facility (check one): <input type="checkbox"/> Private <input type="checkbox"/> Indian/Pueblo <input type="checkbox"/> Federal BLM <input type="checkbox"/> Federal Forest Service <input checked="" type="checkbox"/> Other (specify) Federal Department of Energy	
7	List all municipalities, Indian tribes, and counties within a ten (10) mile radius (20.2.72.203.B.2 NMAC) of the property on which the facility is proposed to be constructed or operated: Los Alamos County, Sandoval County, Santa Fe County, Rio Arriba County, City of Espanola, San Ildefonso Pueblo, Santa Clara Pueblo, Jemez Pueblo, Pojoaque Pueblo, Cochiti Pueblo	
8	20.2.72 NMAC applications only: Will the property on which the facility is proposed to be constructed or operated be closer than 50 km (31 miles) to other states, Bernalillo County, or a Class I area (see www.nmenv.state.nm.us/aqb/modeling/classIareas.html)? <input type="checkbox"/> Yes <input type="checkbox"/> No (20.2.72.206.A.7 NMAC) If yes, list all with corresponding distances in kilometers:	
9	Name nearest Class I area: Bandelier Wilderness Area (the wilderness portion of Bandelier National Monument)	
10	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 0	
11	Distance (meters) from the perimeter of the Area of Operations (AO is defined as the plant site inclusive of all disturbed lands, including mining overburden removal areas) to nearest residence, school or occupied structure: N/A	
12	Method(s) used to delineate the Restricted Area: N/A "Restricted Area" is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with steep grade that would require special equipment to traverse. If a large property is completely enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.	
13	Is this a stationary portable source as defined in 20.2.72.7.X NMAC? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
14	Will this facility operate in conjunction with other air regulated parties on the same property? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, what is the name and permit number (if known) of the other facility?	

Section 1-E: Proposed Operating Schedule (The 1-E.1 & 1-E.2 operating schedules may become conditions in the permit.)

1	Facility maximum operating ($\frac{\text{hours}}{\text{day}}$): 24	($\frac{\text{days}}{\text{week}}$): 7	($\frac{\text{weeks}}{\text{year}}$): 52	($\frac{\text{hours}}{\text{year}}$): 8760
2	Facility's maximum daily operating schedule (if less than 24 $\frac{\text{hours}}{\text{day}}$)? Start:	<input type="checkbox"/> AM <input type="checkbox"/> PM	End:	<input type="checkbox"/> AM <input type="checkbox"/> PM
3	Month and year of anticipated start of construction: N/A			
4	Month and year of anticipated construction completion: N/A			
5	Month and year of anticipated startup of new or modified facility: N/A			
6	Will this facility operate at this site for more than one year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Section 1-F: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, specify:		
a	If yes, NOV date or description of issue:	NOV Tracking No:	
b	Is this application in response to any issue listed in 1-F, 1 or 1a above? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, provide the 1c & 1d info below:		
c	Document Title:	Date:	Requirement # (or page # and paragraph #):
d	Provide the required text to be inserted in this permit:		
2	Is air quality dispersion modeling being submitted with this application? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

3	Does this facility require an "Air Toxics" permit under 20.2.72.400 NMAC & 20.2.72.502, Tables A and/or B? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4	Will this facility be a source of federal Hazardous Air Pollutants (HAP)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
a	If Yes, what type of source? <input type="checkbox"/> Major (<input type="checkbox"/> ≥ 10 tpy of any single HAP OR <input type="checkbox"/> ≥ 25 tpy of any combination of HAPS) OR <input checked="" type="checkbox"/> Minor (<input type="checkbox"/> < 10 tpy of any single HAP AND <input checked="" type="checkbox"/> < 25 tpy of any combination of HAPS)
b	If 4.a is Yes, identify the subparts in 40 CFR 61 & 40 CFR 63 that apply to this facility (If no subparts apply, enter "N/A."): Part 61 Subparts C,H,M,Q; Part 63: Subparts T, ZZZZ

Section 1-G: Streamline Application

(This section applies to 20.2.72.300 NMAC Streamline applications only)

1	<input type="checkbox"/> I have filled out Section 18, "Addendum for Streamline Applications." <input type="checkbox"/> N/A (This is not a Streamline application.)
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Section 1-H: Title V Specific Information

(Fill this section out only if this is a Title V application.)

1	Responsible Official (20.2.70.300.D.2 NMAC): Michael T. Brandt	Phone: 505-667-4218
a	R.O. Title: Associate Director, ADESH	R.O. e-mail: mtbrandt@lanl.gov
b	R. O. Address: P.O. Box 1663, MS K491, Los Alamos, NM 87545	
2	Alternate Responsible Official Raeanna Sharp-Geiger (20.2.70.300.D.2 NMAC):	Phone: 505-665-0136
a	A. R.O. Title: Deputy Associate Director, ADESH	A. R.O. e-mail: raeanna@lanl.gov
b	A. R. O. Address: P.O. Box 1663, MS K491, Los Alamos, NM 87545	
3	Company's Corporate or Partnership Relationship to any other Air Quality Permittee (List the names of any companies that have operating (20.2.70 NMAC) permits and with whom the applicant for this permit has a corporate or partnership relationship): N/A	
4	Name of Parent Company ("Parent Company" means the primary name of the organization that owns the company to be permitted wholly or in part.): N/A	
a	Address of Parent Company: N/A	
5	Names of Subsidiary Companies ("Subsidiary Companies" means organizations, branches, divisions or subsidiaries, which are owned, wholly or in part, by the company to be permitted.): N/A	
6	Telephone numbers & names of the owners' agents and site contacts familiar with plant operations: N/A	
7	Affected Programs to include Other States, local air pollution control programs (i.e. Bernalillo) and Indian tribes: Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B)? If yes, state which ones and provide the distances in kilometers: Taos Pueblo (69), Picuris Pueblo (56), Jicarilla Apache (67), Ohkay Owingeh Pueblo (19), Santa Clara Pueblo (10), San Ildefonso Pueblo (5), Pojoaque Pueblo (13), Nambe Pueblo (24), Tesuque Pueblo (19), Cochiti Pueblo (13), Santa Domingo Pueblo (27), Zia Pueblo (30), San Felipe Pueblo (38), Santa Ana Pueblo (40), Jemez Pueblo (19), Sandia Pueblo (61), Laguna Pueblo (77), Bernalillo County (56).	

Section 1-I – Submittal Requirements

Each 20.2.73 NMAC (NOI), a 20.2.70 NMAC (Title V), a 20.2.72 NMAC (NSR minor source), or 20.2.74 NMAC (PSD) application package shall consist of the following:

Hard Copy Submittal Requirements:

- One hard copy **original signed and notarized application package printed double sided 'head-to-toe' 2-hole punched** as we bind the document on top, not on the side; except Section 2 (landscape tables), which should be **head-to-head**. If 'head-to-toe printing' is not possible, print single sided. Please use **numbered tab separators** in the hard copy submittal(s) as this facilitates the review process. For NOI submittals only, hard copies of UA1, Tables 2A, 2D & 2F, Section 3 and the signed Certification Page are required.
- If the application is for a NSR or Title V permitting action, include one working hard **copy** for Department use. This **copy** does not need to be 2-hole punched. Technical revisions only need to fill out Section 1-A, 1-B, 3, and should fill out those portions of other Section(s) relevant to the technical revision. TV Minor Modifications need only fill out Section 1-A, 1-B, 1-H, 3, and those portions of other Section(s) relevant to the minor modification. NMED may require additional portions of the application to be submitted, as needed.

- 3) The entire NOI or Permit application package, including the full modeling study, should be submitted electronically on compact disk(s) (CD). For permit application submittals, **two CD** copies are required (in sleeves, not crystal cases, please), with additional CD copies as specified below. NOI applications require only a **single CD** submittal.
- 4) If **air dispersion modeling** is required by the application type, include the **NMED Modeling Waiver OR** one additional electronic copy of the air dispersion modeling including the input and output files. The dispersion modeling **summary report only** should be submitted as hard copy(ies) unless otherwise indicated by the Bureau. The complete dispersion modeling study, including all input/output files, should be submitted electronically as part of the electronic submittal.
- 5) If subject to PSD review under 20.2.74 NMAC (PSD) include,
 - a. one additional hard copy and one additional CD copy for US EPA,
 - b. one additional hard copy and one additional CD copy for each federal land manager affected (NPS, USFS, FWS, USDI) and,
 - c. one additional hard copy and one additional CD copy for each affected regulatory agency other than the Air Quality Bureau.

Electronic Submittal Requirements [in addition to the required hard copy(ies)]:

- 1) All required electronic documents shall be submitted in duplicate (2 separate CDs). A single PDF document of the entire application as submitted and the individual documents comprising the application.
- 2) The documents should also be submitted in Microsoft Office compatible file format (Word, Excel, etc.) allowing us to access the text in the documents (copy & paste). Any documents that cannot be submitted in a Microsoft Office compatible format shall be saved as a PDF file from within the electronic document that created the file. If you are unable to provide Microsoft office compatible electronic files or internally generated PDF files of files (items that were not created electronically: i.e. brochures, maps, graphics, etc.), submit these items in hard copy format with the number of additional hard copies corresponding to the number of CD copies required. We must be able to review the formulas and inputs that calculated the emissions.
- 3) It is preferred that this application form be submitted as 3 electronic files (**2 MSWord docs**: Universal Application section 1 and Universal Application section 3-19) and **1 Excel file** of the tables (Universal Application section 2) on the CD(s). Please include as many of the 3-19 Sections as practical in a single MS Word electronic document. Create separate electronic file(s) if a single file becomes too large or if portions must be saved in a file format other than MS Word.
- 4) The **electronic file names** shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Universal Application shall be in the format: "A-3423-FacilityName". The "A" distinguishes the file as an application submittal, as opposed to other documents the Department itself puts into the database. Thus, all electronic application submittals should begin with "A-". Modifications to existing facilities should use the **core permit number** (i.e. '3423') the Department assigned to the facility as the next 4 digits. Use 'XXXX' for new facility applications. The format of any separate electronic submittals (additional submittals such as non-Word attachments, re-submittals, application updates) and Section document shall be in the format: "A-3423-9-description", where "9" stands for the **section #** (in this case Section 9-Public Notice). Please refrain, as much as possible, from submitting any scanned documents as this file format is extremely large, which uses up too much storage capacity in our database. Please take the time to fill out the **header information** throughout all submittals as this will identify any loose pages, including the Application Date (date submitted) & Revision # (0 for original, 1, 2, etc.; which will help keep track of subsequent partial update(s) to the original submittal. The footer information should not be modified by the applicant.

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Table 2-A: Regulated Emission Sources

Unit and stack numbering must correspond throughout the application package. If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72.202 NMAC do not apply.

Unit Number ¹	Source Description	Manufacturer	Model #	Serial #	Maximum or Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture or Reconstruction ²	Controlled by Unit #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	Applicable State & Federal Regulation(s) (i.e. 20.2.X, JJJJ, ...)	
							Date of Installation /Construction ²	Emissions vented to Stack #				
TA-60-BDM	Hot Mix Asphalt Plant	BDM Engineering	TM2000	unknown	60 tph	60 tph	2002	TA-60-BDM		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.11 NMAC NSPS Subpart I
							2002	TA60_BDM				
TA-16-1484-BS-1	Boiler	Sellers	183 H.P.-SH-LN390	100848-B	7.47	7.47	1995	see 2-C		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC
							1995	N/A				
TA-16-1484-BS-2	Boiler	Sellers	183 H.P.-SH-LN390	100848-A	7.47	7.47	1995	see 2-C		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC
							1995	N/A				
TA-53-365-BHW-1	Boiler	Sellers	Seniors-2-200-w-15	99031-1	8.37	8.37	1988	none		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC
							1988	N/A				
TA-53-365-BHW-2	Boiler	Sellers	Seniors-2-200-w-15	99031-2	8.37	8.37	1988	none		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC
							1988	N/A				
TA-55-6-BHW-1	Boiler	Sellers	350 H.P.W-LN490	101319-B	14.6	14.6	2001	see 2-C		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart C
							2001	N/A				
TA-55-6-BHW-2	Boiler	Sellers	350 H.P.W-LN490	101319-A	14.6	14.6	1998	see 2-C		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart C
							1998	N/A				
CMRR-BHW-1	Boiler	Unilux	ZF1100 W	A1874	11.0	11.0	2009	see 2-C		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart C
							2009	CMRR_BH W				
CMRR-BHW-2	Boiler	Unilux	ZF1100 W	A1875	11.0	11.0	2009	see 2-C		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart C
							2009	CMRR_BH W				
CMRR-BHW-3	Boiler	Unilux	ZF1100 W	A1876	11.0	11.0	2009	see 2-C		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart C
							2009	CMRR_BH W				
CMRR-BHW-4	Boiler	TBD	TBD	TBD	11.0	11.0	TBD	TBD		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart C
							TBD	CMRR_BH W				
LANL-FW-CHEM	Chemical Usage	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	none
							N/A	N/A				
CMRR-CHEM	Chemical Usage	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	none
							N/A	N/A				
TA-55-DG-1	Degreaser	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	NESHAP Subpart T
							N/A	N/A				
TA-33-G-1	Diesel Generator	Kohler	1600 ROZD71	375801	2340 hp (engine)	1600 kW (gen output)	1996	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NESHAP Subpart ZZZZ
							2002	TA33_G1				

Unit Number ¹	Source Description	Manufacturer	Model #	Serial #	Maximum or Rated Capacity ³ (Specify Units)	Requested Permitted Capacity ³ (Specify Units)	Date of Manufacture or Reconstruction ²		Controlled by Unit # Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	Applicable State & Federal Regulation(s) (i.e. 20.2.X, JJJJ, ...)
							Date of Installation /Construction ²					
TA-33-G-2	Diesel Generator	Kohler	20EORZ	2025460	36 hp (engine)	20 kW (gen output)	2005	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC
							2007	TA33_G2				
TA-33-G-3	Diesel Generator	Kohler	20EORZ	2025460	36 hp (engine)	20 kW (gen output)	2005	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC
							2007	TA33_G3				
TA-33-G-4	Diesel Generator	Caterpillar	3306	6PK01065	316 hp (engine)	225 kW (gen output)	1999	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC
							2007	TA33_G4				
CMRR-GEN-1	Diesel Generator	Cummins	DFLE-5754172	106970810	2220 hp (engine)	1500 kW (gen output)	2006	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart IIII
							2009	N/A				
CMRR-GEN-2	Diesel Generator	Cummins	DFLE-5754172	106970811	2220 hp (engine)	1500 kW (gen output)	2006	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart IIII
							2009	N/A				
CMRR-GEN-3	Diesel Generator	Cummins	DFLE-5754172	106970812	2220 hp (engine)	1500 kW (gen output)	2006	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart IIII
							2009	N/A				
TA-48-GEN-1	Diesel Generator	Cummins	150DSGAC	L100178636	250 hp (engine)	150 kW (gen output)	2010	N/A		Existing (unchanged) x New/Additional	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC NSPS Subpart IIII
							2013	N/A				
Standby Generators	Generators	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.61 NMAC
							N/A	N/A				
TA-52-11	Data Disintegrator	SEM	1424	11892	1200 lb/hr	1200 lb/hr	2002	TA-52-11		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	N/A
							2004	TA52_11				
TA-3-22-1	Boiler	Edgemoor Iron Works	N/A	4008	210 MMBtu/hr	178.5 MMBtu/hr	1950	F-1		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.33 NMAC 20.2.34 NMAC 20.2.61 NMAC
							1950	TA3_S1				
TA-3-22-2	Boiler	Edgemoor Iron Works	N/A	4009	210 MMBtu/hr	178.5 MMBtu/hr	1950	F-2		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.33 NMAC 20.2.34 NMAC 20.2.61 NMAC
							1950	TA3_S1				
TA-3-22-3	Boiler	Union Iron Works	N/A	11804	210 MMBtu/hr	178.5 MMBtu/hr	1952	F-3		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	20.2.33 NMAC 20.2.34 NMAC 20.2.61 NMAC
							1952	TA3_S2				
TA-3-22-CT-1	Combustion Turbine	Rolls-Royce	RB211-6761 DLE	2011	32 MW	27 MW	2003	DLE		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	NSPS Subpart GG 20.2.61 NMAC
							2005	TA3_CT				
TA-3-66	Beryllium Activity	N/A	N/A	N/A	N/A	N/A	1950s	TA-3-66		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	NESHAP Subpart C
							1950s	N/A				
TA-3-141	Beryllium Activity	N/A	N/A	N/A	N/A	N/A	1998	TA-3-141		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	NESHAP Subpart C
							1998	N/A				
TA-35-213	Beryllium Activity	N/A	N/A	N/A	N/A	N/A	1985	TA-35-213		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	NESHAP Subpart C
							1985	N/A				
TA-55-PF-4 Machining	Beryllium Activity	N/A	N/A	N/A	N/A	N/A	1992	TA-55-PF4		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	NESHAP Subpart C
							1992	N/A				
TA-55-PF-4 Foundry	Beryllium Activity	N/A	N/A	N/A	N/A	N/A	1999	TA-55-PF4		x Existing (unchanged)	<input type="checkbox"/> To <input type="checkbox"/> From <input type="checkbox"/> To	NESHAP Subpart C
							1999	N/A				

Table 2-B: Insignificant Activities¹ (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 20.2.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.nmenv.state.nm.us/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at <http://www.nmenv.state.nm.us/aqb/forms/InsignificantListTitleV.pdf>. TV sources may elect to enter both TV Insignificant Activities and

Insignificant activities are discussed and listed in Section 1.6 of this application.

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction ²	For Each Piece of Equipment, Check One
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction ²	
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E
							<input type="checkbox"/> Ex <input type="checkbox"/> N <input type="checkbox"/> To E

¹ Insignificant activities exempted due to size or production rate are defined in 20.2.70.300.D.6, 20.2.70.7.Q NMAC, and the NMED/AQB List of Insignificant Activities, dated September 15, 2008. Emissions from these insignificant activities do not need to be reported, unless specifically requested.

² Specify date(s) required to determine regulatory applicability.

Table 2-D: Maximum Emissions (under normal operating conditions)

This Table was intentionally left blank because it would be identical to Table 2-E.

Maximum Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table 2-I. Unit & stack numbering must be consistent throughout the application package. For each unit with flashing, list tank-flashing emissions estimates as a separate line item (20.2.70.300.D.5 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.B.6, & 20.2.74.301 NMAC). Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed with a minimum of two significant figures¹. If there are any significant figures to the left of a decimal point, there shall be no more than one significant figure to the right of the decimal point.

Unit No.	NOx		CO		VOC		SOx		TSP ²		PM10 ²		PM2.5 ²		H ₂ S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TA-60- BDM	0.6	0.08	21.3	2.8	0.4	0.05	0.2	0.03	1568.0	208.0	220.5	29.3	220.5	29.3	-	-	-	-
TA16-1484-BS	0.7	3.2	0.6	2.7	0.04	0.2	0.00004	0.0002	0.06	0.2	0.1	0.2	0.1	0.2	-	-	-	-
TA16-1484-BS	0.7	3.2	0.6	2.7	0.04	0.2	0.00004	0.0002	0.06	0.2	0.1	0.2	0.1	0.2	-	-	-	-
TA53-365BHW	0.8	3.6	0.7	3.0	0.05	0.2	0.00005	0.0002	0.06	0.3	0.1	0.3	0.1	0.3	-	-	-	-
TA53-365BHW	0.8	3.6	0.7	3.0	0.05	0.2	0.00005	0.0002	0.06	0.3	0.1	0.3	0.1	0.3	-	-	-	-
TA55-6-BHW-	1.4	6.3	1.2	5.3	0.1	0.3	0.0001	0.0003	0.1	0.5	0.1	0.5	0.1	0.5	-	-	-	-
TA55-6-BHW-	1.4	6.3	1.2	5.3	0.1	0.3	0.0001	0.0003	0.1	0.5	0.1	0.5	0.1	0.5	-	-	-	-
CMRR-BHW-1	1.4	4.2	0.4	1.8	0.4	1.2	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-	-	-	-
CMRR-BHW-2	1.4	4.2	0.4	1.8	0.4	1.2	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-	-	-	-
CMRR-BHW-3	1.4	4.2	0.4	1.8	0.4	1.2	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-	-	-	-
CMRR-BHW-4	1.4	4.2	0.4	1.8	0.4	1.2	0.6	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-	-	-	-
TA-33-G-1	40.3	18.2	33.7	15.2	0.7	0.3	0.8	0.4	1.4	0.6	1.4	0.6	1.4	0.6	-	-	-	-
TA-33-G-2	0.8	0.2	0.2	0.06	0.07	0.02	0.06	0.01	0.06	0.01	0.06	0.01	0.06	0.01	-	-	-	-
TA-33-G-3	0.8	0.2	0.2	0.06	0.07	0.02	0.06	0.01	0.06	0.01	0.06	0.01	0.06	0.01	-	-	-	-
TA-33-G-4	9.4	2.3	5.7	1.4	0.8	0.3	0.6	0.2	0.7	0.2	0.7	0.2	0.7	0.2	-	-	-	-
CMRR-GEN-1	33.6	1.7	41.6	2.1	4.7	0.2	0.9	0.0	2.0	0.1	1.7	0.1	1.7	0.1	-	-	-	-
CMRR-GEN-2	33.6	1.7	41.6	2.1	4.7	0.2	0.9	0.0	2.0	0.1	1.7	0.1	1.7	0.1	-	-	-	-
CMRR-GEN-3	33.6	1.7	41.6	2.1	4.7	0.2	0.9	0.0	2.0	0.1	1.7	0.1	1.7	0.1	-	-	-	-
TA-48-GEN-1	1.6	0.1	1.4	0.1	1.6	0.1	0.6	0.0	0.1	0.004	0.6	0.03	0.6	0.03	-	-	-	-
Standy Gens	-	47.4	-	10.6	-	2.0	-	1.5	-	2.0	-	2.0	-	2.0	-	-	-	-
TA-52-11	-	-	-	-	-	-	-	-	180.0	788.4	180.0	788.4	180.0	788.4	-	-	-	-
TA-3-22-1	28.2	81.4	7.0	20.2	1.0	2.8	1.1	3.0	1.3	3.8	1.3	3.8	1.3	3.8	-	-	-	-
TA-3-22-2	28.2	81.4	7.0	20.2	1.0	2.8	1.1	3.0	1.3	3.8	1.3	3.8	1.3	3.8	-	-	-	-
TA-3-22-3	28.2	81.4	7.0	20.2	1.0	2.8	1.1	3.0	1.3	3.8	1.3	3.8	1.3	3.8	-	-	-	-
TA-3-22-CT-1	79.5	197.9	29.0	72.3	0.6	1.5	1.7	4.2	1.9	4.8	1.9	4.8	1.9	4.8	-	-	-	-
Totals	330.0	558.6	244.2	198.4	23.4	19.7	12.1	16.6	1763.2	1018.8	415.3	840.0	415.3	840.0	-	-	-	-

¹ Significant Figures Examples: One significant figure – 0.03, 3, 0.3. Two significant figures – 0.34, 34, 3400, 3.4

² Condensables: Include condensable particulate matter emissions in particulate matter calculations.

Table 2-E: Requested Allowable Emissions

Unit & stack numbering must be consistent throughout the application package. For each unit with flashing, list tank-flashing emissions estimates as a separate line item (20.2.70.300.D.5 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.B.6, & 20.2.74.301 NMAC). Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed with a minimum of two significant figures¹. If there are any significant figures to the left of a decimal point, there shall be no more than one significant figure to the right of the decimal point. Please do not change the column widths on this table.

Unit No.	NOx		CO		VOC		SOx		TSP ²		PM10 ²		PM2.5 ²		H ₂ S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TA-60- BDM	-	95	-	95	-	95	-	50	33.8	95	-	95	-	95	-	-	-	-
All boilers	-	80.0	-	80.0	-	50.0	-	50.0	-	50.0	-	50.0	-	50.0	-	-	-	-
CMRR-BHW-1	0.7	2.9	1.1	4.8	0.1	-	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4	-	-	-	-
CMRR-BHW-2	0.7	2.9	1.1	4.8	0.1	-	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4	-	-	-	-
CMRR-BHW-3	0.7	2.9	1.1	4.8	0.1	-	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4	-	-	-	-
CMRR-BHW-4	0.7	2.9	1.1	4.8	0.1	-	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4	-	-	-	-
CMRR - oil	-	2.9	-	0.9	-	-	-	10.4	-	0.5	-	0.3	-	0.3	-	-	-	-
CMRR-CHEM	-	-	-	-	-	3.75	-	-	-	-	-	-	-	-	-	-	-	-
TA-33-G-1	40.3	18.1	33.7	15.2	0.7	0.3	5.5	2.5	1.4	0.6	1.4	0.6	1.4	0.6	-	-	-	-
TA-33-G-2	0.83	0.21	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
TA-33-G-3	0.83	0.21	0.2	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
TA-33-G-4	9.33	2.33	5.7	1.4	0.75	0.2	0.62	0.16	-	-	-	-	-	-	-	-	-	-
TA-52-11	-	-	-	-	-	-	-	-	2.3	9.9	2.3	9.9	-	-	-	-	-	-
TA-3-22-1																		
gas	10.2	-	7.0	-	1.0	-	1.1	-	1.3	-	1.3	-	1.3	-	-	-	-	-
oil	11.3	-	6.5	-	0.3	-	9.6	-	4.3	-	3.0	-	2.0	-	-	-	-	-
TA-3-22-2																		
gas	10.2	-	7.0	-	1.0	-	1.1	-	1.3	-	1.3	-	1.3	-	-	-	-	-
oil	11.3	-	6.5	-	0.3	-	9.6	-	4.3	-	3.0	-	2.0	-	-	-	-	-
TA-3-22-3																		
gas	10.2	-	7.0	-	1.0	-	1.1	-	1.3	-	1.3	-	1.3	-	-	-	-	-
oil	11.3	-	6.5	-	0.3	-	9.6	-	4.3	-	3.0	-	2.0	-	-	-	-	-
TA-3-22-1,2,3		31.5		21.5		2.8		4.9		4.7		4.4		4.2	-	-	-	-
TA-3-22-CT-1	23.8	59.4	29.0	72.3	0.6	1.5	1.7	4.2	1.9	4.8	1.9	4.8	1.9	4.8	-	-	-	-
Totals																		

¹ Significant Figures Examples: One significant figure – 0.03, 3, 0.3. Two significant figures – 0.34, 34, 3400, 3.4

² Condensables: Include condensable particulate matter emissions in particulate matter calculations.

Table 2-G: Stack Exit and Fugitive Emission Rates for Special Stacks

I have elected to leave this table blank because this facility does not have any stacks/vents that split emissions from a single source or combine emissions from more than one source listed in table 2-A. Additionally, the emission rates of all stacks match the Requested allowable emission rates stated in Table 2-E.

Use this table to list stack emissions (requested allowable) from split and combined stacks. List Toxic Air Pollutants (TAPs) and Hazardous Air Pollutants (HAPs) in Table 2-I. List all fugitives that are associated with the normal, routine, and non-emergency operation of the facility. List tank-flashing emissions estimates as a separate line item. Unit and stack numbering must correspond throughout the application package. Refer to Table 2-E for instructions on use of the "-" symbol and on significant figures.

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		TSP		PM10		PM2.5		<input type="checkbox"/> H ₂ S or <input type="checkbox"/>	
		lb/hr	ton/yr	lb/hr	ton/yr												
CMRR_B	CMRR-BHW-1,2,3,4	2.8	11.6	4.4	19.2	0.4	-	0.4	0.4	0.4	1.6	0.4	1.6	0.4	1.6	-	-
TA3_S1	TA-3-22-1,2																
	gas	20.3		14.0		1.9		2.1		2.7		2.7		2.7		-	-
	oil	22.5		13.0		0.5		19.3		8.6		6.0		4.0		-	-
Totals:																	

Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package.

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H=Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter or
						(acfs)	(dscfs)			L x W (ft)
TA60_BDM	TA-60-BDM	V	No	33	126	13903	-	-	60.7	2.21
CMRR_B	CMRR-BHW-1,2,3,4	V	No	60	410	18040	-	-	28.5	3.70
TA33_G1	TA-33-G-1	V	No	62	851	13428	-	-	170.6	1.33
TA33_G2	TA-33-G-2	H	No	2	Model sets to ambient.	Model calculates horizontal stack.	-	-	0.001	1.00
TA33_G3	TA-33-G-3	H	No	2	Model sets to ambient.	Model calculates horizontal stack.	-	-	0.001	1.00
TA33_G4	TA-33-G-4	V	No	9	980.6	1900.0	-	-	234.0	0.42
TA52_11	TA-52-11	H	No	25.9	Model sets to ambient.	Model calculates horizontal stack.	-	-	0.001	1.00
TA3_S1	TA-3-22-1,2	H	No	68	415	2666.7	-	-	57.2	7.7
TA3_S2	TA-3-22-3	H	No	68	415	1333.3	-	-	28.6	7.7
TA3_CT	TA-3-22-CT-1	H	No	59	921	7361.7	-	-	73.6	11.3
TA55_BHW	TA-55-6-BHW-1,2	V	Yes	29.8	Model sets to ambient.	Model calculates for rain cap.	-	-	0.001	1.00
TA53_BHW	TA-53-365-BHW-1,2	V	Yes	22	Model sets to ambient.	Model calculates for rain cap.	-	-	0.001	1.00
TA16_BS	TA-16-1484-BS-1,2	V	Yes	21	Model sets to ambient.	Model calculates for rain cap.	-	-	0.001	1.00

Note: Stack information provided for all stacks included in modeling criteria pollutants to support LANL New Source Review permit applications. Stack numbers are same as prior modeling with AERMOD.

Table 2-I: Stack Exit and Fugitive Emission Rates for HAPs and TAPs

In the table below, report the Potential to Emit for each HAP from each regulated emission unit listed in Table 2-A, only if the entire facility emits the HAP at a rate greater than or equal to one (1) ton per year. For each such emission unit, HAPs shall be reported to the nearest 0.1 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources calculated to the nearest 0.1 ton per year. Per 20.2.72.403.A.1 NMAC, facilities not exempt [see 20.2.72.402.C NMAC] from TAP permitting shall report each TAP that has an uncontrolled emission rate in excess of its pounds per hour screening level specified in 20.2.72.502 NMAC. TAPs shall be reported using one more significant figure than the number of significant figures shown in the pound per hour threshold corresponding to the substance. Use the HAP nomenclature as it appears in Section 112 (b) of the 1990 CAAA and the TAP nomenclature as it listed in 20.2.72.502 NMAC. Include tank-flashing emissions estimates of HAPs in this table. For each HAP or TAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts

Stack No.	Unit No.(s)	Total HAPs		Provide Pollutant Name Here <input type="checkbox"/> HAP or <input type="checkbox"/> TAP		Provide Pollutant Name Here <input type="checkbox"/> HAP or <input type="checkbox"/> TAP		Provide Pollutant Name Here <input type="checkbox"/> HAP or <input type="checkbox"/> TAP		Provide Pollutant Name Here <input type="checkbox"/> HAP or <input type="checkbox"/> TAP		Provide Pollutant Name Here <input type="checkbox"/> HAP or <input type="checkbox"/> TAP		Provide Pollutant Name Here <input type="checkbox"/> HAP or <input type="checkbox"/> TAP		Provide Pollutant Name Here <input type="checkbox"/> HAP or <input type="checkbox"/> TAP		Provide Pollutant Name Here <input type="checkbox"/> HAP or <input type="checkbox"/> TAP	
		lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
See Calculations Worksheet for HAP estimates by emission unit.																			
See "Beryllium Activities" Worksheet for beryllium emission rates.																			
Totals:																			

Table 2-J: Fuel

Specify fuel characteristics and usage. Unit and stack numbering must correspond throughout the application package.

Unit No.	Fuel Type (No. 2 Diesel, Natural Gas, Coal, ...)	Specify Units				
		Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
TA-60-BDM	Natural Gas	1030 Btu/scf	24,272 scf max	106 MMscf max	-	-
All Boilers	Natural Gas	1030 Btu/scf	N/A	870 MMscf max	-	-
CMRR-BHW-1	Natural Gas	1030 Btu/scf	10,679 scf max	94 MMscf max	-	-
CMRR-BHW-2	Natural Gas	1030 Btu/scf	10,679 scf max	94 MMscf max	-	-
CMRR-BHW-3	Natural Gas	1030 Btu/scf	10,679 scf max	94 MMscf max	-	-
CMRR-BHW-4	Natural Gas	1030 Btu/scf	10,679 scf max	94 MMscf max	-	-
CMRR-BHW-1,2,3,4	No.2 Fuel Oil	137,000 Btu/gal	N/A	289,100 gal max	0.05	-
TA-33-G-1	No.2 Fuel Oil	137,000 Btu/gal	148 gal max	133,200 gal max	0.05	-
TA-33-G-2	No.2 Fuel Oil	137,000 Btu/gal	1.7 gal max	850 gal max	0.05	-
TA-33-G-3	No.2 Fuel Oil	137,000 Btu/gal	1.7 gal max	850 gal max	0.05	-
TA-33-G-4	No.2 Fuel Oil	137,000 Btu/gal	15.8 gal max	7,900 gal max	0.05	-
CMRR-GEN-1	No.2 Fuel Oil	137,000 Btu/gal	103.6 gal max	10,360 gal max	0.05	-
CMRR-GEN-2	No.2 Fuel Oil	137,000 Btu/gal	103.6 gal max	10,360 gal max	0.05	-
CMRR-GEN-3	No.2 Fuel Oil	137,000 Btu/gal	103.6 gal max	10,360 gal max	0.05	-
TA-48-GEN-1	No.2 Fuel Oil	137,000 Btu/gal	12.25 gal max	1,225 gal max	0.05	-
Standby Generators	No.2 Fuel Oil	137,000 Btu/gal	N/A	N/A	0.05	-
TA-3-22-1,2,3	Natural Gas	1030 Btu/scf	N/A	1,000,000 mSCF	-	-
TA-3-22-1,2,3	No.2 Fuel Oil	137,000 Btu/gal	N/A	500,000 gal	0.05	-
TA-3-CT-1	Natural Gas	1030 Btu/scf	281.2 mSCF	1,400,000 mSCF	-	-

Table 2-P: Green House Gas Emissions

Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC that are major for GHGs as determined in Section 22 or this application are required to complete this table if so directed in Section 22 or are major for GHGs and have an existing GHG BACT. Applicants must report potential emission rates in short tons per year. Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table.

Unit No.	GWPs ¹	CO ₂ ton/yr	N ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ton/yr ²									Total GHG Mass Basis	Total CO ₂ e ton/yr ⁵
		1	310	21	23,900	footnote 3										
TA-60-BDM	mass GHG	7418.3	0.07	0.4											7418.8	
	CO ₂ e	7418.3	22.5	7.6												7448.4
Boilers	mass GHG	52371.6	0.6	3.0											52375.2	
	CO ₂ e	52371.6	183.7	62.2												52617.6
RLUOB Boilers	mass GHG	25757.3	0.3	1.4											25759.0	
	CO ₂ e	25757.3	87.1	29.5												25874.0
Permitted Gensets	mass GHG	1970.0	0.02	0.08											1970.1	
	CO ₂ e	1970.0	5.0	1.7												1976.7
TA-3-22-1,2,3	mass GHG	65705.7	0.7	3.6											65710.0	
	CO ₂ e	65705.7	224.9	76.2												66006.8
TA-3-22-CT-1	mass GHG	84112.5	0.95	4.8											84118.2	
	CO ₂ e	84112.5	295.1	99.9												84507.5
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
	mass GHG															
	CO ₂ e															
Total	mass GHG														237351.3	
	CO ₂ e															238430.9

¹ GWP (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

² For HFCs or PFCs describe the specific HFC or PFC compound and use a separate column for each individual compound.

³ For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

⁴ Green house gas emissions on a mass basis is the ton per year green house gas emission before adjustment with its GWP.

⁵ CO₂e means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

Supporting calculations for all emission estimates in this application are included on subsequent pages.

Asphalt Plant Emission Estimates

Process Data

Plant capacity	49 tons/hr
Plant production restriction Current	13000 tons/year 4380 hours/year
Propane burner maximum capacity	25 MMBtu/hr

1 Due to altitude and other factors the maximum plant capacity during the 5/18/2009 source test was 45 tons per hour. As noted in the test report, the plant capacity is now limited to 49 tons per hour (10% about tested rate).

Criteria Pollutants

Criteria Pollutant Emission Factors

		NOx	CO	SOx	VOC	PM	PM10	PM2.5
lb/ton asphalt	Uncontrolled	0.012	0.43	0.0046	0.0082	32	4.5	4.5
	Controlled					0.007	0.005	0.005

- 1 VOC,SOx, and uncontrolled PM and PM10 factors from AP-42, 3/04, Section 11.1, Hot Mix Asphalt Plants.
- 2 Controlled PM factor, NOx, CO from 5/18/2009 compliance source test.
- 3 PM10 factor assumes 64% of PM test value as indicated in AP-42.
- 4 Assume PM2.5 equal to PM10, no factors available.

Maximum Emissions - Criteria Pollutants

	NOx	CO	SOx	VOC	PM	PM10	PM2.5
lb/hr	0.6	21.3	0.2	0.4	1568.0	220.5	220.5
tpy	0.1	2.8	0.03	0.1	208.0	29.3	29.3
tpy, Controlled	0.1	2.8	0.03	0.1	0.05	0.03	0.03

- 1 These values assume no control system but include for tpy the current enforceable production restriction.
- 2 The tpy controlled values are shown to indicate how low actual maximum PM emissions are.

Requested Allowable Emissions - Criteria Pollutants

	NOx	CO	SOx	VOC	PM
lb/hr	n/a	n/a	n/a	n/a	33.8
gr/dscf	n/a	n/a	n/a	n/a	0.04
tpy	95	95	50	95	95

- 1 PM lb/hr limit from 20.2.11 NMAC - Asphalt Process Equipment.
- 2 PM gr/dscf limit from 40 CFR Part 60, Subpart I New Source Performance Standard
- 3 Ton per year limits from GCP-3-2195G
- 4 All requested allowable limits are currently in Permit P100-R1-M1

Hazardous Air Pollutants

Hazardous Air Pollutant Emission Estimates - Potential to Emit

	lb/ton	tpy
Total HAPs	0.0076	0.05

- 1 Assumes total allowable 13,000 tons asphalt processed.
- 2 Emission factor from AP-42, 3/04, Section 11.1, Hot Mix Asphalt Plants.

Greenhouse Gases

Greenhouse Gas Emission Estimates - Potential to Emit

Compound	kg/MMBtu	metric tons	short tons	GWP	CO ₂ e
CO ₂	61.46	6729.9	7418.3	1	7418.3
CH ₄	0.003	0.3	0.4	21	7.6
N ₂ O	0.0006	0.07	0.07	310	22.5
		Total	7418.8		7448.4

- 1 Emission factors are from 40 CFR Part 98, Subpart C, Tables C-1 and C-2.
- 2 CO₂ equivalent or GWP values from 40 CFR Part 98, Subpart A, Table A-1.
- 3 Calculation assumes maximum burner capacity for all allowable hours of the year.
- 4 CO₂ equivalent tons calculated from short tons as specified by NMED form 2-P.

Boiler and Heater Emission Estimates

Process Data

Fuel			
Natural gas			
Heat Content	1030 Btu/scf		
Sulfur Content	2 grains/100 scf		
Distillate Fuel Oil			
Heat Content	137,000 Btu/gallon		
Sulfur Content	0.05 %		
Boilers - Other			
Annual fuel limit	870 MMscf/yr	natural gas	
TA-16-1484-BS-1	7.47 MMBtu/hr	Maximum heat input	
TA-16-1484-BS-2	7.47 MMBtu/hr	Maximum heat input	
TA-53-365-BHW-1	8.37 MMBtu/hr	Maximum heat input	
TA-53-365-BHW-2	8.37 MMBtu/hr	Maximum heat input	
TA-55-6-BHW-1	14.6 MMBtu/hr	Maximum heat input	
TA-55-6-BHW-2	14.6 MMBtu/hr	Maximum heat input	
Boilers - RLUOB			
Annual fuel limit(all)	289,100 gallons/yr	fuel oil	
Annual hour limit (each)		48 hours fuel oil	
Boilers - RLUOB			
Boilers (each)			
Maximum Heat Input (nameplate)		11 MMBtu/hr	
Maximum Fuel Consumption - gas		0.0107 MMscf/hr	
Maximum Fuel Consumption - oil		0.0803 Mgal/hr	

Criteria Pollutants

Criteria Pollutant Emission Factors

	NOx	CO	SOx	TSP	PM ₁₀	PM _{2.5}	VOC
Boilers - Other (lb/MMScf)							
lb/MMScf	100	84	0.006	7.6	7.6	7.6	5.5
lb/MMBtu	0.1	0.08	0.00001	0.007	0.007	0.007	0.005
Boilers - RLUOB							
natural gas (lb/MMBtu)	0.029	0.037	0.006	0.0048	0.0048	0.0048	0.025
fuel oil (lb/MMBtu)	0.126	0.037	0.0525	0.0143	0.0143	0.0143	0.038

1 Boilers - Other emission factors from AP-42, 7/98, Section 1.4, Natural Gas Combustion.

2 Boilers - RLUOB emission factors from burner vendor.

3 SO₂ factor for natural gas calculated as 2 grains S/100 scf x lb/7000 gr x scf/1030 Btu x 10⁶ x 2 lb SO₂/lb S.

Maximum Emissions, lb/hr - Criteria Pollutants

	NOx	CO	SOx	TSP	PM ₁₀	PM _{2.5}	VOC
TA-16-1484-BS-1	0.7	0.6	0.00004	0.06	0.06	0.06	0.04
TA-16-1484-BS-2	0.7	0.6	0.00004	0.06	0.06	0.06	0.04
TA-53-365-BHW-1	0.8	0.7	0.00005	0.06	0.06	0.06	0.05
TA-53-365-BHW-2	0.8	0.7	0.00005	0.06	0.06	0.06	0.05
TA-55-6-BHW-1	1.4	1.2	0.0001	0.1	0.1	0.1	0.08
TA-55-6-BHW-2	1.4	1.2	0.0001	0.1	0.1	0.1	0.08
Boilers - RLUOB							
natural gas	1.0	0.4	0.1	0.05	0.05	0.05	0.3
fuel oil	1.4	0.4	0.6	0.2	0.2	0.2	0.4

1 Low-NOx burners are present on each boiler. This calculation assumes no NOx control present at 67%.

2 The Boilers-Other group has 100's of boilers/heaters of varying sizes. Lb/hr rate cannot be estimated.

Maximum Emissions, tpy - Criteria Pollutants

	NOx	CO	SOx	TSP	PM ₁₀	PM _{2.5}	VOC
Boilers - Other	43.5	36.5	0.002	3.3	3.3	3.3	2.4
TA-16-1484-BS-1	3.2	2.7	0.0002	0.2	0.2	0.2	0.2
TA-16-1484-BS-2	3.2	2.7	0.0002	0.2	0.2	0.2	0.2
TA-53-365-BHW-1	3.6	3.02	0.0002	0.3	0.3	0.3	0.2
TA-53-365-BHW-2	3.6	3.02	0.0002	0.3	0.3	0.3	0.2
TA-55-6-BHW-1	6.3	5.3	0.0003	0.5	0.5	0.5	0.3
TA-55-6-BHW-2	6.3	5.3	0.0003	0.5	0.5	0.5	0.3
Boilers - RLUOB							
natural gas (each)	4.2	1.8	0.3	0.2	0.2	0.2	1.2
natural gas (all)	16.9	7.1	1.1	0.9	0.9	0.9	4.8
fuel oil (each)	0.03	0.01	0.01	0.004	0.004	0.004	0.01
fuel oil (all)	2.5	0.7	1.0	0.3	0.3	0.3	0.8
Total	62.9	44.4	2.1	4.5	4.5	4.5	8.0

- 1 The Boilers - Other tpy assumes no controls but is based on the enforceable annual gas limit.
- 2 RLUOB boiler tpy NOx assumes no controls.
- 3 RLUOB fuel oil (each) assumes no controls but is based on enforceable hourly limit.
- 4 RLUOB fuel oil (all) assumes no controls but is based on enforceable annual fuel limit.

Requested Allowable Emissions - Criteria Pollutants

	NOx	CO	SOx	TSP	PM ₁₀	PM _{2.5}	VOC
Boilers - All LANL, tpy	80	80	50	50	50	50	50
Boilers - RLUOB							
natural gas (each)							
lb/hr	0.7	1.1	0.1	0.1	0.1	0.1	0.1
tpy	2.9	4.8	0.3	0.4	0.4	0.4	-
fuel oil (all)							
tpy	2.9	0.9	10.4	0.5	0.3	0.3	-

- 1 All values are the current allowable emissions within Permit P100-R1-M1.
- 2 The Boilers - All LANL include all boilers at LANL including RLUOB boilers.
- 3 RLUOB boilers had lb/hr and tpy allowable emissions established during NSR permitting.

Hazardous Air Pollutants

Hazardous Air Pollutant Emission Factors

		HAP	lb/MMscf
Boilers - natural gas	Organics	POM	8.82E-05
		Benzene	2.10E-03
		Dichlorobenzene	1.20E-03
		Formaldehyde	7.50E-02
		Hexane	1.80E+00
		Naphthalene	6.10E-04
		Toluene	3.40E-03
		Metals	Arsenic
	Beryllium		1.20E-05
	Cadmium		1.10E-03
	Chromium		1.40E-03
	Cobalt		8.40E-05
	Lead		5.00E-04
	Manganese		3.80E-04
	Mercury		2.60E-04
	Nickel		2.10E-03
	Selenium		2.40E-05
	Total		<u>1.89E+00</u>
	Boilers - fuel oil	Organics	HAP
Formaldehyde			3.30E-03
Metals		POM	
		Arsenic	5.48E-04
		Beryllium	4.11E-04
		Cadmium	4.11E-04
		Chromium	4.11E-04
		Lead	1.23E-03
		Manganese	8.22E-04
		Mercury	4.11E-04
		Nickel	4.11E-04
		Selenium	2.06E-03
		Total	<u>5.80E-02</u>

1 Gas emission factors from AP-42, 7/98, Section 1.4 - Natural Gas Combustion, Tables 1.4-2, 1.4-3, and 1.4-4.

2 Oil emission factors from AP-42, 9/98, Section 1.3, Fuel Oil Combustion, Tables 1.3-8 and 1.3-10, for distillate oil.

Hazardous Air Pollutant Emission Estimates - Potential to Emit

	tpy
Boilers - Other	0.8
Boilers - RLUOB	
natural gas	0.4
fuel oil	0.01
Total	1.18

- 1 Boilers - Other based on annual fuel consumption limit.
- 2 RLUOB boilers - natural gas assumes maximum capacity 8,760 hours per year.
- 3 RLUOB boilers - fuel oil based on annual fuel limit.

Greenhouse Gases

Greenhouse Gas Emission Estimates - Potential to Emit

	Compound	kg/MMBtu	metric tons	short tons	GWP	CO ₂ e	
Boilers - Other	CO ₂	53.02	47511.2	52371.6	1	52371.6	
	CH ₄	0.003	2.7	3.0	21	62.2	
	N ₂ O	0.0006	0.5	0.6	310	183.7	
	Total			52375.2		52617.6	
Boilers - RLUOB	natural gas	Compound	kg/MMBtu	metric tons	short tons	GWP	CO ₂ e
	CO ₂	53.02	20436.0	22526.6	1	22526.6	
	CH ₄	0.003	1.2	1.3	21	26.8	
	N ₂ O	0.0006	0.2	0.3	310	79.0	
	Total			22528.2		22632.4	
fuel oil	Compound	kg/MMBtu	metric tons	short tons	GWP	CO ₂ e	
	CO ₂	73.96	2929.3	3229.0	1	3229.0	
	CH ₄	0.003	0.1	0.1	21	2.8	
	N ₂ O	0.0006	0.02	0.03	310	8.1	
	Total			3229.1		3239.9	
combined	Compound			short tons	GWP	CO ₂ e	
	CO ₂			25757.3	1	25757.3	
	CH ₄			1.4	21	29.5	
	N ₂ O			0.3	310	87.1	
	Total			25759.0		25874.0	

- 1 Emission factors are from 40 CFR Part 98, Subpart C, Tables C-1 and C-2.
- 2 CO2 equivalent or GWP values from 40 CFR Part 98, Subpart A, Table A-1.
- 3 CO2 equivalent tons calculated from short tons as specified by NMED form 2-P.
- 4 Boiler - Other calculation based on annual natural gas limit.
- 5 RLUOB natural gas calculation based on maximum hourly rate and 8,760 hours per year.
- 6 RLUOB fuel oil calculation based on annual fuel oil limit.

Chemical Usage Emission Estimates

Past Actual Emission Estimates, tpy

Year	VOCs	HAPs
2008	9.0	4.5
2009	10.4	4.4
2010	6.7	3.8
2011	6.4	2.6
2012	8.8	6.2

- 1 Maximum emissions or potential to emit cannot be estimated for this source type.
- 2 Estimates include the existing CMR facility.
- 3 At the time of this application, chemical usage had not begun for the CMRR-CHEM unit.
- 4 Emissions from chemical usage count towards LANL facility-wide emission limits.

Requested Allowable Emissions, tpy

	NOx	CO	SOx	TSP	PM ₁₀	PM _{2.5}	VOC
LANL-FW-CHEM	-	-	-	-	-	-	-
CMRR-CHEM	-	-	-	-	-	-	3.75

- 1 There are no applicable regulations which establish emission limits for this source type.
- 2 The emission limit for CMRR-CHEM is from NSR Permit 2195N.

Degreaser Emission Estimates

Past Actual Emission Estimates, lbs/year

Year	TCE
2010	19.2
2011	20.9
2012	12.7

- 1 Maximum emissions or potential to emit cannot be estimated for this source type.
- 2 TCE, trichloroethylene, is a designated VOC and HAP.

Requested Allowable Emissions, tpy

None.

- 1 There are no applicable regulations which establish emission limits for this source type.
- 2 Emissions from this source do count towards the LANL facility-wide emission limits in P100-R1-M1.

Internal Combustion Emission Estimates

TA-33 Generators

Process Data

Generator Ratings		
TA-33-G-1		1500 kW
TA-33-G-2		20 kW
TA-33-G-3		20 kW
TA-33-G-4		225 kW
Engine Fuel Consumption		
TA-33-G-1		148 gal/hr
TA-33-G-2		1.7 gal/hr
TA-33-G-3		1.7 gal/hr
TA-33-G-4		15.8 gal/hr
Operational Restrictions		
TA-33-G-1		
	Annual restriction	1.35E+06 kW
	Hour equivalent	900 hours
TA-33-G-2,3,4		
	Annual restriction	500 hours

1 Operational restrictions are from NSR permits and are within Permit P100-R1-M1.

Criteria Pollutants

Criteria Pollutant Emission Factors

	NOx g/kW-hr	CO g/kW-hr	SOx g/kW-hr	PM g/kW-hr	PM10 g/kW-hr	PM2.5 g/kW-hr	VOC g/kW-hr
TA-33-G-1	12.2	10.2	0.2	0.4	0.4	0.4	0.2
TA-33-G-2,3	18.9	5.5	1.3	1.3	1.3	1.3	1.5
TA-33-G-4	18.9	11.4	1.3	1.3	1.3	1.3	1.5

TA-33-G-1

- 1 SOx, PM, and HAP emission factors from AP-42, Section 3.4 Large Stationary Diesel and All Stationary Dual-fuel Engines.
- 2 To convert AP-42 factor of lb/hp-hr to g/kW-hr: lb/hr-hr x 0.608 kg/kW-hr per lb/hp-hr x 1000 g/kg.
- 3 Sulfur concentration of diesel fuel used is 0.05% verified in March 2007 for Title V emission report. NSR app used 0.34%.
- 4 NOx, CO, and VOC factors are from vendor, used in NSR permit and 2002 and 2008 Title V apps.

TA-33-G-2,3,4

- 1 Emission factors from AP-42, Section 3.3 Gasoline and Diesel Industrial Engines, except CO from EPA Tier 1 nonroad standards.
- 2 NSR permit app prepared with all AP-42, later review showed Tier 1 standards lower than AP-42 except for CO.
- 3 To convert AP-42 factor of lb/hp-hr to g/kW-hr: lb/hr-hr x 0.608 kg/kW-hr per lb/hp-hr x 1000 g/kg.

Maximum Emissions, lb/hr - Criteria Pollutants

	NOx	CO	SOx	PM	PM10	PM2.5	VOC
TA-33-G-1	40.3	33.7	0.8	1.4	1.4	1.4	0.7
TA-33-G-2	0.8	0.2	0.1	0.1	0.1	0.1	0.1
TA-33-G-3	0.8	0.2	0.06	0.06	0.06	0.06	0.07
TA-33-G-4	9.4	5.7	0.6	0.7	0.7	0.7	0.8

- 1 These engines do not have control equipment to consider in estimating maximum emissions.

Maximum Emissions, tpy - Criteria Pollutants

	NOx	CO	SOx	PM	PM10	PM2.5	VOC
TA-33-G-1	18.2	15.2	0.4	0.6	0.6	0.6	0.3
TA-33-G-2	0.2	0.06	0.01	0.01	0.01	0.01	0.02
TA-33-G-3	0.2	0.06	0.01	0.01	0.01	0.01	0.02
TA-33-G-4	2.3	1.4	0.2	0.2	0.2	0.2	0.3
Total	20.9	16.7	0.5	0.8	0.8	0.8	0.7

- 1 Emission estimates reflect the current enforceable annual operating hour restrictions.

Requested Allowable Emissions, lb/hr - Criteria Pollutants

	NOx	CO	SOx	PM	PM10	VOC
TA-33-G-1	40.3	33.7	5.5	1.4	1.4	0.7
TA-33-G-2	0.83	0.2	-	-	-	-
TA-33-G-3	0.83	0.2	-	-	-	-
TA-33-G-4	9.33	5.7	0.62	-	-	0.2

1 All values are the current emission limits in Permit P100-R1-M1.

Requested Allowable Emissions, tpy - Criteria Pollutants

	NOx	CO	SOx	PM	PM10	VOC
TA-33-G-1	18.1	15.2	2.5	0.6	0.6	0.3
TA-33-G-2	0.21	0.1	-	-	-	-
TA-33-G-3	0.21	0.1	-	-	-	-
TA-33-G-4	2.33	1.4	0.16	-	-	0.2

1 All values are the current emission limits in Permit P100-R1-M1.

Hazardous Air Pollutants

Hazardous Air Pollutant Emission Factors

	HAP	lb/MMBtu	lb/kW-hr
> 447 kW	Benzene	7.76E-04	2.65E-06
	Toluene	2.81E-04	9.59E-07
	Xylene	1.93E-04	6.59E-07
	Formaldehyde	7.89E-05	2.69E-07
	Acetaldehyde	2.52E-05	8.60E-08
	Acrolein	7.88E-06	2.69E-08
	Naphthalene	1.30E-04	4.44E-07
	PAH, total	2.12E-04	7.24E-07
			5.82E-06
< 447 KW	Benzene	9.33E-04	3.18E-06
	Toluene	4.09E-04	1.40E-06
	Xylene	2.85E-04	9.73E-07
	1,3-Butadiene	3.91E-05	1.33E-07
	Formaldehyde	1.18E-03	4.03E-06
	Acetaldehyde	7.67E-04	2.62E-06
	Acrolein	9.25E-05	3.16E-07
	Naphthalene	8.48E-05	2.89E-07
PAH, total	1.68E-04	5.73E-07	
			1.35E-05

1 All factors from AP-42, Sections 3.3 Gasoline and Diesel Industrial Engines and 3.4 Large Stationary Diesel and All Stationary Dual-Fuel Engines.

Emission Estimates, each engine

	lb/hr	tpy
TA-33-G-1	8.72E-03	3.93E-03
TA-33-G-2	2.70E-04	6.75E-05
TA-33-G-3	2.70E-04	6.75E-05
TA-33-G-4	3.04E-03	7.60E-04

Emission Estimates, all engines

	lb/hr	ton/year
Totals	1.23E-02	4.82E-03

1 Ton/year values based on allowable hours per year operation.

NSPS/NSR Exempt Generators**RLUOB - CMRR-GEN-1, 2 and 3****Process Data**

Generator Ratings	
Generator Maximum Rating (each)	1500 kW electrical
Engine Maximum Rating (each)	
	2220 hp
	1656.1 kW mechanical
Engine Maximum Fuel Consumption	103.6 gal/hr
Operational Restrictions	
Annual operating hours	100 hr/yr non-emergency

1 Annual hour restriction from engine NSPS and Permit P100-R1-M1.

Emission Factors

NOx	CO	SOx	TSP	PM ₁₀	PM _{2.5}	VOC	HAPs
g/kW-hr	g/kW-hr	lb/kW-hr	g/kW-hr	lb/kW-hr	lb/kW-hr	g/kW-hr	lb/kW-hr
9.2	11.4	0.24	0.54	0.45	0.45	1.3	5.82E-06

1 Factors for NOx, CO, PM, and VOC are the applicable Tier 1 emission standards.

2 Factors for SOx, PM10, PM2.5 and HAPs are from AP-42, Section 3.4
Large Stationary Diesel and All Stationary Dual-fuel Engines.

Maximum Emissions, lb/hr

	NOx	CO	SOx	TSP	PM ₁₀	PM _{2.5}	VOC	HAPs
Each	33.6	41.6	0.89	2.0	1.7	1.7	4.7	9.63E-03

1 These engines do not have control equipment to consider in estimating maximum emissions.

Maximum Emissions, ton/yr

	NOx	CO	SOx	TSP	PM ₁₀	PM _{2.5}	VOC	HAPs
Each	1.7	2.1	0.04	0.10	0.08	0.08	0.24	4.82E-04
All	5.0	6.2	0.13	0.30	0.25	0.25	0.71	1.44E-03

1 Emission estimates reflect the current enforceable annual operating hour restrictions.

Requested Allowable Emissions, g/kW-hr

	NOx	CO	PM	VOC
Each	9.2	11.4	0.54	1.3

- 1 Values are the applicable Tier 1 emission standards from 40 CFR Part 60, Subpart IIII.
- 2 NSR Permit 2195-N did not establish lb/hr or ton/year limits for these engines because emergency generators are exempt equipment under 20.2.72 NMAC - Construction Permits.
- 3 Permit P100-R1-M1 contains these and no other emission limits.

TA-48-GEN-1**Process Data**

Generator rating	150 kW
Engine rating	186 kW 250 hp 12.25 gal/hr
Operational restriction	100 hr/year

1 NSPS Subpart IIII restricts non-emergency operation to 100 hours per year.

Emission Factors

NOx	CO	SOx	PM	PM ₁₀	PM _{2.5}	VOC	HAPs
g/kW-hr	g/kW-hr	lb/kW-hr	g/kW-hr	lb/kW-hr	lb/kW-hr	g/kW-hr	lb/kW-hr
4.0	3.5	0.003	0.2	0.003	0.003	4.0	1.35099E-05

- 1 NOx, CO, VOC and PM factors are the applicable Tier 3 engine standards. NOx/VOC is a combined limit.
- 2 SOx, PM₁₀, PM_{2.5} and HAP factors are from AP-42, Section 3.3 Gasoline and Diesel Industrial Engines.

Maximum Emissions, lb/hr

NOx	CO	SOx	PM	PM ₁₀	PM _{2.5}	VOC	HAPs
1.6	1.4	0.6	0.08	0.6	0.6	1.6	0.003

1 This engine does not have control equipment to consider in estimating maximum emissions.

Maximum Emissions, tpy

NOx	CO	SOx	PM	PM ₁₀	PM _{2.5}	VOC	HAPs
0.08	0.07	0.03	0.004	0.03	0.03	0.08	0.0001

1 Emission estimates reflect the current enforceable annual operating hour restrictions.

Requested Allowable Emissions, g/kW-hr

NOx	CO	PM	VOC
4.0	3.5	0.2	4.0

- 1 Requested emissions are the applicable Tier 3 standards from the NSPS Subpart IIII.
- 2 NOx and VOC values are combined for both compounds as in the NSPS standard.

Stationary Standby Generators

Process Data

TA	Bldg	Manufacturer	Model	kW _e	Fuel Type
3	40	Onan Sons	00DVE15R3137	150	Diesel
3	440	Cummins	DFGA-5005210	500	Diesel
3	1076	Cummins	DGBB-5601289	35	Diesel
3	1400	Cummins	DFEH-5699616	400	Diesel
3	1404	Cummins	DFLC-5554001	1250	Diesel
3	1498	Caterpillar	SR-4	600	Diesel
3	2322	Onan Sons	DGDA-5005757	80	Diesel
16	980	Cummins	KTA50-G2	1100	Diesel
16	1374	Onan Sons	60ENA	60	Nat. Gas
35	2	Onan Sons	100DGDB	100	Diesel
35	402	Cummins	DGCB-5674244	60	Diesel
43	1	Cummins	4BT3.9-GC	50	Diesel
43	1	Onan Sons	DVE	150	Diesel
46	335	Onan Sons	300DEFCB	300	Diesel
48	45	Onan Sons	DFCB-5740130	300	Diesel
50	37	Cummins	680FDR5059FF	500	Diesel
50	69	Onan Sons	DGDB4487482	100	Diesel
50	184	Onan Sons	DGFA-568741	150	Diesel
50	188	Onan Sons	L940563879	1250	Diesel
50	250	Cummins	DFGB-5703304	530	Diesel
53	1	Onan Sons	60ENA	60	Nat. Gas
53	2	Kato Eng.	Kamag-14	50	Diesel
53	3N	Onan Sons	15.0JC-18R	15	LPG
54	412	Olympian	95M-07874-F	500	Diesel
55	5	Kohler	100RZ71	100	Nat. Gas
55	8	Delco/Detroit	E7014DD	600	Diesel
55	28	Onan Sons	40DL6T	40	Diesel
55	47	Onan Sons	200DFAA	200	Diesel
55	142	Cummins	DFEB-4963414	400	Diesel
55	364	Onan Sons	1250DFLC-4987	1250	Diesel
55	371	Caterpillar	SR4B-GD	900	Diesel
59	1	Allis Chalmers	2884-0703	90	Diesel
64	1	Onan Sons	250DVG	250	Diesel
69	33	Cummins	DFLC-5568730	1250	Diesel
Total Ratings by Size and Fuel					
				Large diesel > 447 kW	12787.5 kW _m
				Small diesel < 447 kW	3631.3 kW _m
				Natural gas	293.8 kW _m

1 Assumed generators 80% efficient in converting electrical kW to engine mechanical kW.

Emission Factors

	NOx	CO	SOx	PM	PM10	PM2.5	VOC	HAPs
	lb/kW-hr							
Large diesel > 447 kW	0.032	0.007	0.001	0.001	0.001	0.001	0.001	5.82E-06
Small diesel < 447 kW	0.042	0.009	0.003	0.003	0.003	0.003	0.003	1.35E-05
Natural gas	0.008	0.013	0.000002	0.00003	0.00003	0.00003	0.0001	1.11E-04

1 Emission factors from AP-42, Section 3.4 Large Stationary Diesel and All Stationary Dual-fuel Engines

2 Emission factors from AP-42, Section 3.3 Gasoline and Diesel Industrial Engines

3 Emission factors from AP-42, Section 3.2 Natural Gas-Fired Reciprocating Engines, 4-stroke rich-burn engine factors

Maximum Emissions, tpy

	NOx	CO	SOx	PM	PM10	PM2.5	VOC	HAPs
Large diesel > 447 kW	34.4	7.5	0.6	1.07	1.1	1.1	1.1	0.01
Small diesel < 447 kW	12.8	2.7	0.9	0.92	0.9	0.9	0.9	0.004
Natural gas	0.2	0.3	0.00005	0.001	0.001	0.001	0.002	0.003
Total	47.4	10.6	1.5	2.0	2.0	2.0	2.0	0.01

1 Emission estimates use current enforceable restriction of 168 hours of operation per year per engine.

Requested Allowable Emissions, tpy

1 There are no current or proposed emission limits for these engines. They are exempt from NSR and NSPS requirements.

Greenhouse Gas Emissions

Greenhouse Gas Emission Estimates - Potential to Emit

Genset	Allowable hours/yr	Max. Fuel gal/hr	Max. Fuel gal/yr	Fuel oil,HHV MMBtu/gal	Total MMBtu/yr
TA-33-G-1	900	148	133200	0.138	24164.49
TA-33-G-2	500	1.7	850		
TA-33-G-3	500	1.7	850		
TA-33-G-4	500	15.8	7900		
CMRR-GEN-1	100	103.6	10360		
CMRR-GEN-2	100	103.6	10360		
CMRR-GEN-3	100	103.6	10360		
TA-48-GEN-1	100	12.25	1225		
Totals	2800	490.25	175105		

Compound	kg/MMBtu	metric tons	short tons	GWP	CO ₂ e
CO ₂	73.96	1787.2	1970.0	1	1970.0
CH ₄	0.003	0.1	0.1	21	1.7
N ₂ O	0.0006	0.01	0.02	310	5.0
Total			1970.1		1976.7

1 Emission factors and HHV of fuel oil are from 40 CFR Part 98, Subpart C, Tables C-1 and C-2.

2 CO₂ equivalent or GWP values from 40 CFR Part 98, Subpart A, Table A-1.

3 CO₂ equivalent tons calculated from short tons as specified by NMED form 2-P.

Data Disintegrator Emission Estimates

Process Data

Maximum capacity	1200 lb/hr
Maximum weight 1 box processed	45 lbs
Particle percentage to exhaust system	15 percent
Cyclone particle control	75 percent
Cloth tube filters particle control	95 percent

- 1 Vendor estimates the capacity of the data disintegrator is equal to 500 - 1200 lb/hr.
- 2 The manufacturer of the air handling system estimates that 10 - 15 percent of the materials loaded into the machine potentially are exhausted.
- 3 Control efficiency of cyclone and cloth tube filters provided by vendor.

Maximum Emissions, Particulate Matter

	TSP	PM10	PM2.5
lb/hr	180.0	180.0	180.0
tpy	788.4	788.4	788.4
lb/hr, controlled	2.3	2.3	2.3
tpy, controlled	9.9	9.9	9.9

- 1 Maximum emissions assume no particulate matter control and operation 8,760 hours per year.
- 2 Controlled maximum emissions shown to indicate how low actual maximum emissions are.
- 3 PM10 and PM2.5 assumed equal to TSP which is an over-estimate of emissions.

New Process Restriction, Potential to Emit Pre-Control System

25,000 boxes/yr	TSP, tpy	PM10, tpy	PM2.5, tpy
	84.4	84.4	84.4

1 The highest quantity boxes processed in last 5 years was 7382 boxes in 2008.

Requested Allowable Emissions, particulate matter

	TSP	PM10	PM2.5
lb/hr	2.3	2.3	2.3
tpy	9.9	9.9	9.9

1 Values are the existing emission limits in Permit P100-R1-M1.

2 No information available on PM2.5. Assume equivalent to TSP and PM10.

Power Plant Emission Estimates

Process Data

<u>Fuel</u>			
Natural gas			
Heat Content (HHV)	1030 Btu/scf		
Sulfur Content	2 grains/ 100 scf		
Distillate Fuel Oil			
Heat Content	137,000 Btu/gallon		
Sulfur Content	0.05 %		
<u>Boilers (each)</u>			
Maximum Heat Input (derated)	178.5 MMBtu/hr	Annual Fuel Limit (all)	
Maximum Fuel Consumption - gas	173.3 mSCF/hr	gas	1,000,000 mSCF/yr
Maximum Fuel Consumption - oil	1.303 mGAL/hr	oil	500 mGAL
<u>Combustion Turbine</u>			
Maximum Fuel Consumption	281.2 mSCF/hr	Annual Fuel Limit	1,400,000 mSCF/yr

Derivation of Combustion Turbine NOx and CO Factors

Compliance test results at multiple loads

	6/17/10 77 F Ambient Temp		1/19/11 34 F Ambient Temp	
	100% Load	80% Load	100% Load	80% Load
NOx ppmv	15.1	17	17.7	19.9
NOx lb/hr	15.75	15.13	21.09	19.44
CO ppmv	10.1	14.3	4.1	21.9
CO lb/hr	6.42	7.75	2.95	13.03
DSCFH	6.76E+06	6.77E+06	7.86E+06	7.10E+06

Calculate maximum lb/hr emission rates for each load

	100% load	80% load
NOx, lb/hr	23.8	21.5
CO, lb/hr	29.0	26.2

Example: lb/hr = DSCFH x 25/1000000 / 379 ft3 per lb-mole @ 60 F (520 R) x MW

Calculate emission factors

NOx, lb/mSCF	0.085
CO, lb/mSCF	0.103

Emission Factors

	NOx	CO	SOx	VOC	TSP	PM ₁₀	PM _{2.5}
Boiler - gas (lb/mSCF)	0.0586	0.0404	0.0061	0.0056	0.0077	0.0077	0.0077
Boiler - oil (lb/mGAL)	8.6400	5.0000	7.4	0.2	3.3000	2.3000	1.5500
Combustion Turbine (lb/mSCF)	0.0848	0.1033	0.0060	0.0022	0.0068	0.0068	0.0068

NotesEmission Factors - Boilers -natural gas

- 1 NOx - The factor is the average value from FGR September 2002 compliance test results.
- 2 CO - From AP-42,1995,Section 1.4 -Natural Gas Combustion.Older AP-42 value closer to compliance test values.
- 3 SOx - 2 gr S/100 scf, or 20,000 gr S/MMscf x lb/7000 gr x 2 lbs SO2/1 lb S.
- 4 VOC, PM, PM₁₀ and PM_{2.5} - From AP-42, 7/98, Section 1.4 - Natural Gas Combustion.
- 5 Emission factors adjusted by ratio of average LANL HHV 1030 to AP-42 value of 1020 (1030/1020 = 1.01).

Emission Factors - Boilers - fuel oil

- 1 NOx -Factor assumes similar reduction for oil as test results natural gas.
- 2 CO, VOC, PM, PM₁₀ and PM_{2.5}- From AP-42, 9/98, Section 1.3 - Fuel Oil Combustion.
- 3 SOx - From AP-42,9/98,Section 1.3 -Fuel Oil Combustion,Table 1.3-1 corrected by EPA on 4/28/00,using 0.05% S.

Emission Factors - Combustion Turbine

- 1 NOx and CO factors calculated using highest exhaust flow from recent tests and 25 ppm NOx and 50 ppm CO.
- 2 SOx - 2 gr S/100 scf, or 20,000 gr S/MMscf x lb/7000 gr x 2 lbs SO2/1 lb S.
- 3 VOC,PM, PM₁₀ and PM_{2.5}- From AP-42, 4/00, Section 3.1 - Stationary Gas Turbines.

Maximum Emissions

		NOx	CO	SOx	VOC	TSP	PM ₁₀	PM _{2.5}
Boiler (each) gas	lb/hr	28.2	7.0	1.1	1.0	1.3	1.3	1.3
	tpy	81.4	20.2	3.0	2.8	3.8	3.8	3.8
Boiler (each) oil	lb/hr	31.3	6.5	9.6	0.3	4.3	3.0	2.0
	tpy	6.0	1.3	1.9	0.1	0.8	0.6	0.4
Combustion Turbine	lb/hr	79.5	29.0	1.7	0.6	1.9	1.9	1.9
	tpy	197.9	72.3	4.2	1.5	4.8	4.8	4.8
Totals	lb/hr	195.4	56.6	14.5	3.8	10.2	8.9	7.9
	tpy	285.3	93.7	9.1	4.3	9.4	9.2	9.0

Notes

- 1 Calculations use current enforceable fuel restrictions but no NOx controls on the boilers or turbine.
- 2 Uncontrolled NOx factors calculated assuming 64% control for FGR on boilers and 70% control for turbine.
- 3 Ton per year values for boilers assume all allowable gas or oil is burned in one boiler.

Requested Allowable Emissions

		NOx	CO	SOx	VOC	TSP	PM ₁₀	PM _{2.5}
Boiler (each) gas	lb/hr	10.2	7.0	1.1	1.0	1.3	1.3	1.3
Boiler (each) oil	lb/hr	11.3	6.5	9.6	0.3	4.3	3.0	2.0
Boilers (combined)	tpy	31.5	21.5	4.9	2.8	4.7	4.4	4.2
Combustion Turbine	lb/hr	23.8	29.0	1.7	0.6	1.9	1.9	1.9
	tpy	59.4	72.3	4.2	1.5	4.8	4.8	4.8

Notes

1 Requested allowable emissions reflect NOx controls and natural gas/fuel oil restrictions on boilers and turbines.

Hazardous Air Pollutant Emission Calculations

HAP Emission Estimates - Boilers - natural gas

HAP	Emission Factor lb/MMscf	Emission Estimate	
		lb/hr (each boiler)	tpy (all boilers)
Organics			
POM	8.82E-05	1.53E-05	0.00004
Benzene	2.10E-03	3.64E-04	0.00105
Dichlorobenzene	1.20E-03	2.08E-04	0.00060
Formaldehyde	7.50E-02	1.30E-02	0.03750
Hexane	1.80E+00	3.12E-01	0.90000
Naphthalene	6.10E-04	1.06E-04	0.00031
Toluene	3.40E-03	5.89E-04	0.00170
Metals			
Arsenic	2.00E-04	3.47E-05	0.00010
Beryllium	1.20E-05	2.08E-06	0.00001
Cadmium	1.10E-03	1.91E-04	0.00055
Chromium	1.40E-03	2.43E-04	0.00070
Cobalt	8.40E-05	1.46E-05	0.00004
Lead	5.00E-04	8.67E-05	0.00025
Manganese	3.80E-04	6.59E-05	0.00019
Mercury	2.60E-04	4.51E-05	0.00013
Nickel	2.10E-03	3.64E-04	0.00105
Selenium	2.40E-05	4.16E-06	0.00001
		total	3.27E-01
			0.9
POM			
2-Methylnaphthalene	2.40E-05		
3-Methylchloranthrene	1.80E-06		
7,12-Dimethylbenz(a)anthracene	1.60E-05		
Acenaphthene	1.80E-06		
Acenaphthylene	1.80E-06		
Anthracene	2.40E-06		
Benz(a)anthracene	1.80E-06	POM estimates above	
Benzo(a)pyrene	1.20E-06	under Organics.	
Benzo(b)fluoranthene	1.80E-06		
Benzo(g,h,i)perylene	1.20E-06		
Benzo(k)fluoranthene	1.80E-06		
Chrysene	1.80E-06		
Dibenzo(a,h)anthracene	1.20E-06		
Fluoranthene	3.00E-06		
Fluorene	2.80E-06		
Indeno(1,2,3-cd)pyrene	1.80E-06		
Phenanathrene	1.70E-05		
Pyrene	5.00E-06		
	total	8.82E-05	

Notes

- 1 All emission factors from AP-42, 7/98, Section 1.4 - Natural Gas Combustion, Tables 1.4-2, 1.4-3, and 1.4-4.
- 2 Hourly values based on maximum hourly fuel capacity of each boiler.
- 3 Annual tpy values based on annual quantity of fuel allowed for boilers as a group.

HAP Emission Estimates - Boilers - distillate fuel oil

HAP	Emission Factor lb/1000 gal	Emission Estimate	
		lb/hr (each boiler)	tpy (all boilers)
Organics			
Formaldehyde	4.80E-02	6.25E-02	0.012
POM	3.30E-03	4.30E-03	0.001
Metals			
Arsenic	5.48E-04	7.14E-04	0.0001
Beryllium	4.11E-04	5.36E-04	0.0001
Cadmium	4.11E-04	5.36E-04	0.0001
Chromium	4.11E-04	5.36E-04	0.0001
Lead	1.23E-03	1.60E-03	0.0003
Manganese	8.22E-04	1.07E-03	0.0002
Mercury	4.11E-04	5.36E-04	0.0001
Nickel	4.11E-04	5.36E-04	0.0001
Selenium	2.06E-03	2.68E-03	0.001
		total	7.56E-02
			0.015

Notes

- 1 All emission factors from AP-42, 9/98, Section 1.3, Fuel Oil Combustion, Tables 1.3-8 and 1.3-10, for distillate oil.
- 2 Hourly values based on maximum hourly fuel capacity of each boiler.
- 3 Annual tpy values based on annual quantity of fuel allowed for boilers as a group.

HAP Emission Estimates - Combustion Turbine - natural gas

HAP	Emission Factor		Emission Estimate	
	lb/MMBtu	lbMMscf	lb/hr	tpy
Organics				
1,3-Butadiene	4.30E-07	4.43E-04	1.25E-04	3.10E-04
Acetaldehyde	4.00E-05	4.12E-02	1.16E-02	2.88E-02
Acrolein	6.40E-06	6.59E-03	1.85E-03	4.62E-03
Benzene	1.20E-05	1.24E-02	3.48E-03	8.65E-03
Ethylbenzene	3.20E-05	3.30E-02	9.27E-03	2.31E-02
Formaldehyde	7.10E-04	7.31E-01	2.06E-01	5.12E-01
Naphthalene	1.30E-06	1.34E-03	3.77E-04	9.37E-04
PAH	2.20E-06	2.27E-03	6.37E-04	1.59E-03
Propylene oxide	2.90E-05	2.99E-02	8.40E-03	2.09E-02
Toluene	1.30E-04	1.34E-01	3.77E-02	9.37E-02
Xylenes	6.40E-05	6.59E-02	1.85E-02	4.62E-02
		total	2.98E-01	7.41E-01

0.9

0.015

7.41E-01

1.7

Notes

- 1 All emission factors from AP-42, 4/2000, Section 3-1, Natural Gas Turbines, Table 3.1-3.
- 2 Hourly values based on maximum hourly fuel consumption at 9 degree F, 100% load.
- 3 Annual values based on annual fuel restriction.

Greenhouse Gases

Greenhouse Gas Emission Estimates - Potential to Emit

	Total Fuel	HHV	MMBtu/yr			
	1,400,000 mSCF/yr	0.001028 MMBtu/scf	1439200			
Combustion Turbine						
Boilers - Gas	1,000,000 mSCF/yr	0.001028 MMBtu/scf	1028000			
Boilers - Oil	500 mGAL	0.138 MMBtu/gal	69000			
Combustion Turbine	Compound	kg/MMBtu	metric tons	short tons	GWP	CO ₂ e
	CO ₂	53.02	76306.4	84112.5	1	84112.5
	CH ₄	0.003	4.3	4.8	21	99.9
	N ₂ O	0.0006	0.9	1.0	310	295.1
			Total	84118.2		84507.5
Boilers						
natural gas	Compound	kg/MMBtu	metric tons	short tons	GWP	CO ₂ e
	CO ₂	53.02	54504.6	60080.4	1	60080.4
	CH ₄	0.003	3.1	3.4	21	71.4
	N ₂ O	0.0006	0.6	0.7	310	210.8
			Total	60084.5		60362.5
fuel oil	Compound	kg/MMBtu	metric tons	short tons	GWP	CO ₂ e
	CO ₂	73.96	5103.2	5625.3	1	5625.3
	CH ₄	0.003	0.2	0.2	21	4.8
	N ₂ O	0.0006	0.04	0.05	310	14.1
			Total	5625.6		5644.2
combined	Compound		short tons	GWP	CO ₂ e	
	CO ₂		65705.7	1	65705.7	
	CH ₄		3.6	21	76.2	
	N ₂ O		0.7	310	224.9	
			Total	65710.0		66006.8

- 1 Emission factors are from 40 CFR Part 98, Subpart C, Tables C-1 and C-2.
- 2 CO₂ equivalent or GWP values from 40 CFR Part 98, Subpart A, Table A-1.
- 3 CO₂ equivalent tons calculated from short tons as specified by NMED form 2-P.
- 4 Boiler - Other calculation based on annual natural gas limit.
- 5 RLUOB natural gas calculation based on maximum hourly rate and 8,760 hours per year.
- 6 RLUOB fuel oil calculation based on annual fuel oil limit.

Beryllium Activities Emission Estimates

Potential to Emit and Requested Allowable Emissions - Beryllium (Hazardous Air Pollutant)

	gm/hr	gm/24-hr	gm/year
TA-3-141	N/A	0.35	3.5
TA-55-PF4			
Machining	N/A	0.12	2.99
Foundry	N/A	3.49E-05	8.73E-04
TA-35-213	1.80E-04	N/A	0.36
TA-3-66	N/A	N/A	10

1 All values are the current emission limits in Permit P100-R1-M3.

Potential to Emit and Requested Allowable Emissions - Aluminum (Toxic Air Pollutant)

	gm/24-hr	gm/year
TA-55-PF4		
Machining	0.12	2.99
Foundry	3.49E-05	8.73E-04

1 All values are the current emission limits in Permit P100-R1-M3.

2 Aluminum is a New Mexico toxic air pollutant or TAP for New Source Review permit purposes.

Section 3

Application Summary

The **Application Summary** shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be collocated with another facility, provide details of the other facility including permit number(s). In case of a revision or modification to a facility, provide the lowest level regulatory citation (i.e. 20.2.72.219.B.1.d NMAC) under which the revision or modification is being requested. Also describe the proposed changes from the original permit, how the proposed modification will effect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

Routine or predictable emissions during Startup, Shutdown, and Maintenance (SSM): Provide an overview of how SSM emissions are accounted for in this application. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions on SSM emissions.

This application is for the five-year renewal of the Los Alamos National Laboratory (LANL) Title V operating permit. 20.2.70 NMAC requires all Title V permits to be renewed on a five-year cycle. The first LANL Title V permit was issued on April 30, 2004. The first five year renewal permit was issued on August 7, 2009. As required, this application for the second five-year renewal is being submitted one year prior to the current expiration date of August 7, 2014. The current permit is referenced as Permit P100-R1-M3.

LANL is a federal facility owned by the U.S. Department of Energy and operated under contract by Los Alamos National Security, LLC. LANL conducts research and development to fulfill the missions of ensuring the safety and reliability of the U.S. nuclear deterrent, reducing the global threat of weapons of mass destruction, and solving national problems in energy, environment, infrastructure and health security. Regulated air pollutant emissions subject to the Title V program are primarily associated with mission support sources, such as boilers for electricity and steam generation, asphalt production for road repair, and standby generators. Within research and development activities, small quantities of chemicals are used which result in emissions of volatile organic compounds. These research activities also include beryllium sources which are regulated for air emissions.

This application does not seek to permit any new activity. Any new or modified activity is required to be processed through the New Source Review process under 20.2.72 NMAC – Construction Permits first prior to becoming part of the Title V permit. This application is primarily an update to the current Title V permit. Some changes to existing permit conditions are recommended either for clarity or corrections. Note that since some of the forms in this uniform permit application are only for New Source Review applications, they are not included here.

LANL sources do not have any routine or predictable emissions during startup, shutdown, and maintenance. Therefore, there are no emission estimates for this type of emission or attempt to permit them. This is discussed further in Section 2.0 of the application for each source category.

Section 4

Process Flow Sheet

A **process flow sheet** and/or block diagram indicating the individual equipment, all emission points and types of control applied to those points. The unit numbering system should be consistent throughout this application.

See Section 2.0 of the application for a process flow sheet for each source category.

Section 5

Plot Plan Drawn To Scale

A **plot plan drawn to scale** showing emissions points, roads, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. This plot plan must clearly designate the restricted area as defined in UA1, Section 1-D.12. The unit numbering system should be consistent throughout this application.

See Section 2.0 of the application for a plot plan for each source category.

Section 6

All Calculations

Show all calculations used to determine both the hourly and annual controlled and uncontrolled emission rates. All calculations shall be performed keeping a minimum of three significant figures. Document the source of each emission factor used (if an emission rate is carried forward and not revised, then a statement to that effect is required). If identical units are being permitted and will be subject to the same operating conditions, submit calculations for only one unit and a note specifying what other units to which the calculations apply. All formulas and calculations used to calculate emissions must be submitted. The "Calculations" tab in the UA2 has been provided to allow calculations to be linked to the emissions tables. Add additional "Calc" tabs as needed. If the UA2 or other spread sheets are used, all calculation spread sheet(s) shall be submitted electronically in Microsoft Excel compatible format so that formulas and input values can be checked. Format all spread sheets and calculations such that the reviewer can follow the logic and verify the input values. Define all variables. If calculation spread sheets are not used, provide the original formulas with defined variables. Additionally, provide subsequent formulas showing the input values for each variable in the formula. All calculations, including those calculations are imbedded in the Calc tab of the UA2 portion of the application, the printed Calc tab(s), should be submitted under this section.

Tank Flashing Calculations: The information provided to the AQB shall include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., NOI, permit, or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis. If Hysis is used, all relevant input parameters shall be reported, including separator pressure, gas throughput, and all other relevant parameters necessary for flashing calculation.

SSM Calculations: It is the applicant's responsibility to provide an estimate of SSM emissions or to provide justification for not doing so. In this Section, provide emissions calculations for Startup, Shutdown, and Routine Maintenance (SSM) emissions listed in the Section 2 SSM and/or Section 22 GHG Tables and the rationale for why the others are reported as zero (or left blank in the SSM/GHG Tables). Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions on calculating SSM emissions. If SSM emissions are greater than those reported in the Section 2, Requested Allowables Table, modeling may be required to ensure compliance with the standards whether the application is NSR or Title V. Refer to the Modeling Section of this application for more guidance on modeling requirements.

Glycol Dehydrator Calculations: The information provided to the AQB shall include the manufacturer's maximum design recirculation rate for the glycol pump. If GRI-Glycalc is used, the full input summary report shall be included as well as a copy of the gas analysis that was used.

Road Calculations: Calculate fugitive particulate emissions and enter haul road fugitives in Tables 2-A, 2-D and 2-E for:

1. If you transport raw material, process material and/or product into or out of or within the facility and have PER emissions greater than 0.5 tpy.
2. If you transport raw material, process material and/or product into or out of the facility more frequently than one round trip per day.

Significant Figures:

A. All emissions standards are deemed to have at least two significant figures, but not more than three significant figures.

B. At least 5 significant figures shall be retained in all intermediate calculations.

C. In calculating emissions to determine compliance with an emission standard, the following rounding off procedures shall be used:

- (1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;
- (2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**
- (3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.
- (4) The final result of the calculation shall be expressed in the units of the standard.

Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device

regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

All assumptions and calculations are shown by source type in the included Excel workbook "UA2_2013_Renewal.xls". Calculations for each source type are organized by individual worksheets which are named accordingly.

Section 7

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

- If manufacturer data are used, include specifications for emissions units and control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.
 - If test data are used, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly effect emission rates.
 - If the most current copy of AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emissions factors, and clearly mark the factors used in the calculations.
 - If an older version of AP-42 is used, include a complete copy of the section.
 - If an EPA document or other material is referenced, include a complete copy.
 - Fuel specifications sheet.
 - If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.
-

Information used to support emission calculations is organized by source type and included as Appendix 2 to this application.

Section 8

Map(s)

A map such as a 7.5 minute topographic quadrangle showing the exact location of the source. The map shall also include the following:

The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public access
A graphical scale	

A map showing the location of each source is included in Section 2.0 of this application.

Section 9 – Not Applicable to Title V

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)

(This proof is required by: 20.2.72.203.A.14 NMAC “Documentary Proof of applicant’s public notice”)

I have read the AQB “Guidelines for Public Notification for Air Quality Permit Applications”

This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

Unless otherwise allowed elsewhere in this document, the following items document proof of the applicant’s Public Notification. Please include this page in your proof of public notice submittal with checkmarks indicating which documents are being submitted with the application.

New Permit and **Significant Permit Revision** public notices must include all items in this list.

Technical Revision public notices require only items 1, 5, 9, and 10.

Per the Guidelines for Public Notification document mentioned above, include:

1. A copy of the certified letter receipts with post marks (20.2.72.203.B NMAC)
 2. A list of the places where the public notice has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (e.g: post office, library, grocery, etc.)
 3. A copy of the property tax record (20.2.72.203.B NMAC).
 4. A sample of the letters sent to the owners of record.
 5. A sample of the letters sent to counties, municipalities, and Indian tribes.
 6. A sample of the public notice posted and a verification of the local postings.
 7. A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
 8. A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
 9. A copy of the classified or legal ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
 10. A copy of the display ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
 11. A map with a graphic scale showing the facility boundary and the surrounding area in which owners of record were notified by mail. This is necessary for verification that the correct facility boundary was used in determining distance for notifying land owners of record.
-

Section 10

Written Description of the Routine Operations of the Facility

A written description of the routine operations of the facility. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

Routine operations for each source type are described in Section 2.0 of this application. There are no modifications and/or revisions being requested since this are not a New Source Review application. LANL is a research and development facility so the concept of process bottlenecks and limiting production is not applicable.

Section 11

Source Determination

Source submitting under 20.2.70, 20.2.72, and 20.2.74 NMAC

Sources applying for a construction permit, PSD permit, or operating permit shall evaluate surrounding and/or associated sources (including those sources directly connected to this source for business reasons) and complete this section. Responses to the following questions shall be consistent with the Air Quality Bureau's permitting guidance, Single Source Determination Guidance, which may be found on the Applications Page in the Permitting Section of the Air Quality Bureau website.

Typically, buildings, structures, installations, or facilities that have the same SIC code, that are under common ownership or control, and that are contiguous or adjacent constitute a single stationary source for 20.2.70, 20.2.72, and 20.2.74 NMAC applicability purposes. Submission of your analysis of these factors in support of the responses below is optional, unless requested by NMED.

A. Identify the emission sources evaluated in this section (list and describe):

All sources described in Section 2.0 of this application which are all sources within Permit P100-R1-M1.

B. Apply the 3 criteria for determining a single source:

SIC Code: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility, **OR** surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

Yes **No**

Common Ownership or Control: Surrounding or associated sources are under common ownership or control as this source.

Yes **No**

Contiguous or Adjacent: Surrounding or associated sources are contiguous or adjacent with this source.

Yes **No**

C. Make a determination:

The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "YES" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "NO" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, and 20.2.74 NMAC applicability purposes.

The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12 – Not Applicable for Title V

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

A PSD applicability determination for all sources. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

A. This facility is:

- a minor PSD source before and after this modification (if so, delete C and D below).
- a major PSD source before this modification. This modification will make this a PSD minor source.
- an existing PSD Major Source that has never had a major modification requiring a BACT analysis.
- an existing PSD Major Source that has had a major modification requiring a BACT analysis
- a new PSD Major Source after this modification.

B. This facility **[is or is not]** one of the listed 20.2.74.501 Table I – PSD Source Categories. The “project” emissions for this modification are **[significant or not significant]**. **[Discuss why.]** The “project” emissions listed below **[do or do not]** only result from changes described in this permit application, thus no emissions from other **[revisions or modifications, past or future]** to this facility. Also, specifically discuss whether this project results in “de-bottlenecking”, or other associated emissions resulting in higher emissions. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:

- a. NOx: **XX.X** TPY
- b. CO: **XX.X** TPY
- c. VOC: **XX.X** TPY
- d. SOx: **XX.X** TPY
- e. TSP (PM): **XX.X** TPY
- f. PM10: **XX.X** TPY
- g. PM2.5: **XX.X** TPY
- h. Fluorides: **XX.X** TPY
- i. Lead: **XX.X** TPY
- j. Sulfur compounds (listed in Table 2): **XX.X** TPY
- k. GHG: **XX.X** TPY

C. Netting **[is required, and analysis is attached to this document.] OR [is not required (project is not significant)] OR [Applicant is submitting a PSD Major Modification and chooses not to net.]**

D. BACT is **[not required for this modification, as this application is a minor modification.] OR [required, as this application is a major modification. List pollutants subject to BACT review and provide a full top down BACT determination.]**

E. If this is an existing PSD major source, or any facility with emissions greater than 250 TPY (or 100 TPY for 20.2.74.501 Table 1 – PSD Source Categories), determine whether any permit modifications are related, or could be considered a single project with this action, and provide an explanation for your determination whether a PSD modification is triggered.

Section 13

Discussion Demonstrating Compliance With Each Applicable State & Federal Regulation

Provide a discussion demonstrating compliance with applicable state & federal regulation. If there is a state or federal regulation (other than those listed here) for your facility’s source category that does not apply to your facility, but seems on the surface that it should apply, add the regulation to the appropriate table below and provide the analysis. Examples of regulatory requirements that may or may not apply to your facility include 40 CFR 60 Subpart OOO (crushers), 40 CFR 63 Subpart HHH (HAPs), or 20.2.74 NMAC (PSD major sources). We don’t want a discussion of every non-applicable regulation, but if there is questionable applicability, explain why it does not apply. All input cells should be filled in, even if the response is ‘No’ or ‘N/A’.

In the “Justification” column, identify the criteria that are critical to the applicability determination, numbering each. For each unit listed in the “Applies to Unit No(s)” column, after each listed unit, include the number(s) of the criteria that made the regulation applicable. For example, TK-1 & TK-2 would be listed as: TK-1 (1, 3, 4), TK-2 (1, 2, 4). Doing so will provide the applicability criteria for each unit, while also minimizing the length of these tables.

As this table will become part of the SOB, please do not change the any formatting in the table, especially the width of the table.

If this application includes any proposed exemptions from otherwise applicable requirements, provide a narrative explanation of these proposed exemptions. These exemptions are from specific applicable requirements, which are spelled out in the requirements themselves, not exemptions from 20.2.70 NMAC or 20.2.72 NMAC.

<u>STATE REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS			X	X	20.2.3 NMAC is a SIP approved regulation that specifies the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide in the ambient air. Title V applications are exempt from the rule (see exemption at 20.2.3.9 NMAC).
20.2.7 NMAC	Excess Emissions	X		X		This rule defines compliance requirements with respect to excess emissions above emission limits in regulations and NSR and Title V permit conditions.
20.2.11 NMAC	Asphalt Process Equipment		TA-60-BDM	X		The rule is applicable to asphalt process equipment which includes the LANL asphalt plant. It establishes an emission limit for particulate matter emissions.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide		TA-3-22-1; TA-3-22-2; TA-3-22-3	X		This facility has gas burning equipment having a maximum heat input of greater than 1,000,000 million British Thermal Units per year. These are the three boilers at the LANL Power Plant. The boilers were installed in the 1950s and thus are defined as existing equipment under the rule and subject to the nitrogen dioxide emission limit.
20.2.34 NMAC	Oil Burning Equipment – Nitrogen Dioxide		TA-3-22-1; TA-3-22-2; TA-3-22-3	X		This facility has oil burning equipment having a maximum heat input of greater than 1,000,000 million British Thermal Units per year per unit subject to the nitrogen dioxide emission limit. These are the three boilers at the LANL Power Plant.

<u>STATE REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
20.2.60 NMAC	Open Burning	X		X		The regulation applies to the open burning of different materials including vegetative. Open burning conducted under this regulation is not considered a stationary source for any other New Mexico air regulation (Section 108 of the rule.) Under Section 113 - Open Burning of Hazardous Waste of the rule, the LANL TA-16 Burn Ground conducts explosive waste burning in compliance with hazardous waste regulations and is not a source subject to air permitting. LANL has not conducted any other open burning regulated under the rule during the current five-year term of Permit P100-R1-M3.
20.2.61 NMAC	Smoke & Visible Emissions		All combustion equipment except TA-60-BDM.	X		The rule applies to all stationary combustion equipment in Permit P100-R1-M3 and establishes among other requirements an opacity standard of 20%. It does not apply to combustion equipment if an applicable regulation specifies a limit for particulate matter.
20.2.65 NMAC	Smoke Management	X		X		This regulation would apply if LANL conducted prescribed burning. To date, no prescribed burning has taken place since the rule was adopted.
20.2.70 NMAC	Operating Permits	X		X		LANL a is major source as defined by the rule for NO ₂ , CO, VOC, SO ₂ , TSP, PM ₁₀ , PM _{2.5} , and greenhouse gas emissions and required to obtain a Title V operating permit. For each pollutant, this is based on potential to emit as opposed to actual emissions.
20.2.71 NMAC	Operating Permit Fees	X		X		All Title V facilities are subject to the rule and an annual fee payment based on allowable emission rates.
20.2.72 NMAC	Construction Permits	X		X		When the applicability requirements of the rule are triggered for new or modified sources, a construction or NSR permit must be obtained. To date, LANL has received the following NSR permits for operations still current: 632, 634, 1081, 2195B, 2195F, GCP-2195G, 2195H, 2195N, and 2195P. Several of these permits have been modified or revised several times with corresponding numbering changed appropriately.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	X		X		An NOI could be required if triggered for new or modified sources. LANL is required to submit an annual emission inventory report.
20.2.74 NMAC	Permits – PSD			X	X	This rule does not apply. LANL does not have emissions or potential to emit above applicability thresholds because it has enforceable facility-wide emission limits in Permit P100-R1-M3 to be a minor source for PSD permit purposes. With respect to GHG emissions, as specified in 20.2.74 GHGs are not yet subject to regulation since a modification exceeding applicability thresholds has not yet occurred.
20.2.75 NMAC	Construction Permit Fees	X		X		Construction permit fees have been required for each NSR permit issued under 20.2.72 NMAC.
20.2.77 NMAC	New Source Performance Standards		TA-55-6-BHW-1; TA-55-6-BHW-2; CMRR-BHW-1 through CMRR-BHW-4; TA-60-BMD;	X		The units listed are subject to federal New Source Performance Standards at 40 CFR Part 60 adopted by reference in this state regulation. See the discussion below under Federal Regulations for specific information.

<u>STATE REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
			CMRR-GEN-1 through CMRR-GEN-3; TA-48-GEN-1;TA-3-22-CT-1			
20.2.78 NMAC	Emission Standards for Hazardous Air Pollutants	X		X		The facility is subject to federal National Emission Standards for Hazardous Air Pollutants at 40 CFR Part 61 adopted by reference in this state regulation. See the discussion below under Federal Regulations for specific information.
20.2.82 NMAC	Maximum Achievable Control Technology Standards for Source Categories of Hazardous Air Pollutants		TA-55-DG-1; TA-33-G-1			The units listed are subject to federal Maximum Achievable Control Technology Standards at 40 CFR Part 63 adopted by reference in this state regulation. See the discussion below under Federal Regulations for specific information

<u>FEDERAL REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
40 CFR Part 50	National Primary and Secondary Ambient Air Quality Standards	X		X		NAAQS are applicable requirements for Title V operating permits as specified in 20.2.70 NMAC.
40 CFR Part 60, Subpart A	General Provisions		TA-55-6-BHW-1; TA-55-6-BHW-2; CMRR-BHW-1 through CMRR-BHW-4; TA-60-BDM; TA-3-22-CT-1; CMRR-GEN-1 through CMRR-GEN-3; TA-48-GEN-1	X		The NSPS General Provisions may apply to any unit which is subject to an NSPS.
40 CFR Part 60, Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units				X	This NSPS applies to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)). The three boilers at LANL which have a heat input capacity greater than 100 MMBtu/hr were installed in the early 1950's. These are the LANL Power Plant boilers.
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units		TA-55-6-BHW-1; TA-55-6-BHW-2; CMRR-BHW-1 through CMRR-BHW-4;	X		This NSPS subpart applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h) or less, but greater than or equal to 2.9 MW (10 MMBtu/h). Boilers TA-55-6-BHW-1 and -2 have a maximum design heat capacity of 14.6 MMBtu/hr. Boilers CMRR-BHW-1 through -4 each have a maximum design heat input capacity of 11.0 MMBtu/hr. Each of these units was constructed after June 1989 and are regulated under this subpart. There are no other boilers at LANL greater than 10 MMBtu/hr heat input capacity other than the Power Plant boilers which were constructed in the 1950's.
40 CFR Part 60, Subpart I	Standards of Performance for Hot Mix Asphalt Facilities		TA-60-BDM	X		This NSPS is applicable to any hot mix asphalt plant constructed after June 11, 1973. The rule is applicable to the LANL asphalt plant.
40 CFR Part 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels					The NSPS subpart applies to storage vessels with a capacity greater than or equal to 75 cubic meters (m3) which are used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. The subpart does not apply to storage vessels with a

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce- able	Does Not Apply	JUSTIFICATION:
	(Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984				X	capacity greater than or equal to 151 m ³ storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75 m ³ but less than 151 m ³ storing a liquid with a maximum true vapor pressure less than 15.0 kPa. Two storage tanks at the LANL Power Plant are larger than 75 m ³ but each stores No.2 fuel oil which has a vapor pressure less than 0.2 kPa.
40 CFR Part 60, Subpart GG	Standards of Performance for Stationary Gas Turbines		TA-3-22-CT-1	X		The subpart applies to stationary gas turbines with a heat input at peak load equal to or greater than 10.7 gigajoules (10 million Btu) per hour, based on the lower heating value of the fuel fired which commence construction, modification, or reconstruction after October 3, 1977. This unit has a heat input at peak load of approximately 290 MMBtu/hr and was constructed after 1977. This simple cycle combustion turbine is located at the LANL Power Plant.
40 CFR Part 60, Subpart III	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines		CMRR-GEN-1 through CMRR-GEN-3; TA-48-GEN-1	X		The provisions of this subpart apply to stationary diesel engines of any size manufactured or constructed after specified dates depending on different variables. For engine owners, the rule applies to any stationary diesel engine for which construction is commenced after July 11, 2005 and the engine was manufactured after April 1, 2006. The diesel engines in the three CMRR generators noted were manufactured in September 2006 and installed in September 2009. The standby generator TA-48-GEN-1 was manufactured in 2010 and recently installed in 2013. All other diesel stationary engines at LANL pre-date this NSPS subpart.
40 CFR 61, Subpart A	General Provisions		TA-3-141; TA-35-213; TA-55-PF4; TA-3-66	X		This subpart applies to the owner or operator of any stationary source for which a standard is prescribed under this part.
40 CFR Part 61, Subpart C	National Emission Standard for Beryllium		TA-3-141; TA-35-213; TA-55-PF4; TA-3-66	X		The beryllium NESHAP applies only to specified activities using beryllium. The four regulated LANL sites use beryllium in activities defined by the NESHAP as either a foundry or machine shop. These terms have been interpreted broadly to encompass LANL activities.
40 CFR Part 61, Subpart H	National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities	X		X		The radionuclide NESHAP is applicable to operations at any facility owned or operated by the Department of Energy that emits any radionuclide other than radon-222 and radon-220 into the air. This rule is the primary air quality regulation for radionuclides at LANL. Although this is a Title V applicable requirement, NMED has not adopted the regulation. The primary regulatory authority for the rule remains EPA Region VI.
40 CFR Part 61, Subpart M	National Emission Standard for Asbestos	X		X		The asbestos NESHAP is applicable to specified activities which involve asbestos. The rule is applicable facility-wide at LANL where demolitions or renovations occur.
	National	X		X		The provisions of this subpart apply to the design and

FEDERAL REGU- LATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce- able	Does Not Apply	JUSTIFICATION:
40 CFR Part 61, Subpart Q	Emission Standards for Radon Emissions From Department of Energy Facilities					operation of all storage and disposal facilities for radium-containing material (i.e., by product material as defined under section 11.e(2) of the Atomic Energy Act of 1954 (as amended)) that are owned or operated by the Department of Energy that emit radon-222 into air. Although this is a Title V applicable requirement, NMED has not adopted the regulation. The primary regulatory authority for the rule remains EPA Region VI.
40 CFR Part 63, Subpart A	General Provisions	X		X		The NESHAP for source categories General Provisions may apply to any unit which is subject to a MACT standard. Each Subpart specifies which sections of the general provisions are applicable.
40 CFR Part 63, Subpart T	National Emission Standards for Halogenated Solvent Cleaning		TA-55-DG-1	X		This subpart applies to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform, or any combination of these halogenated HAP solvents. LANL operates one cold solvent degreaser which uses trichloroethylene and is subject to the rule.
40 CFR Part 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines		TA-33-G-1	X		The RICE NESHAP applies to all existing and new stationary diesel engines. Existing engines are defined as those constructed prior to June 12, 2006. The rule has differing requirements according to engine size as well as whether the engine is located at a major HAP source or area HAP source. LANL is a minor or area HAP source. By letter dated October 11, 2012, EPA Region VI determined this rule only applies at LANL to one existing engine within generator TA-33-G-1. All other stationary diesel engines at LANL are for emergency use only and fall under the exemption for emergency use engines at institutional facilities. Although the rule also applies to new engines, a new engine is only required by the RICE NESHAP to meet the applicable engine NSPS and no other NESHAP requirements.
40 CFR Part 64	Compliance Assurance Monitoring			X	X	The CAM rule is applicable to emission units at a Title V facility which are 1) subject to an emission limit or standard for a regulated pollutant, 2) use a control device to achieve compliance with any such emission limit or standard, and 3) have potential pre-control device emissions of the regulated pollutant equal to or greater than 100 tons per year. For units with a potential to emit after controls of less than 100 tons year, CAM requirements are required to be addressed in five-year Title V renewal applications. See Section 2.1 Asphalt Production and Section 2.7 Data Disintegrator for discussion on CAM applicability for these emission units.
40 CFR Part 68	Chemical Accident Prevention Provisions			X	X	Part 68 implements the risk management planning requirements of Section 112 (r) of the Clean Air Act. It requires risk management planning if the quantity of a regulated toxic or flammable substance stored or used in a process exceeds threshold quantities specified by the rule. There are no LANL processes to which the Part 68 is applicable. New LANL processes are reviewed for Part 68 applicability to ensure the rule is not triggered.

<u>FEDERAL REGU- LATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforce- able	Does Not Apply	JUSTIFICATION:
40 CFR Part 82, Subpart B	Servicing of Motor Vehicle Air Conditioners	X		X		LANL maintains motor vehicle air conditioners and is subject to the rule.
40 CFR Part 82, Subpart F	Recycling and Emission Reduction	X		X		LANL maintains equipment with regulated refrigerants and is subject to the rule.
40 CFR Part 82, Subpart H	Halon Emissions Reduction	X		X		LANL maintains equipment with regulated halons and is subject to the rule.
40 CFR Part 82, Subpart I	Ban on Refrigeration and Air-Conditioning Appliances Containing HCFCs	X		X		LANL is subject to the prohibitions on sale or distribution of HCFC containing equipment as specified in the rule.

Section 14

Operational Plan to Mitigate Emissions

(submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

- Title V Sources** (20.2.70 NMAC): By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- Title V** (20.2.70 NMAC), **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) **& Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.
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Section 15

Alternative Operating Scenarios

(submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Alternative Operating Scenarios: Provide all information required by the department to define alternative operating scenarios. This includes process, material and product changes; facility emissions information; air pollution control equipment requirements; any applicable requirements; monitoring, recordkeeping, and reporting requirements; and compliance certification requirements. Please ensure applicable Tables in this application are clearly marked to show alternative operating scenario.

There are no alternative operating scenarios currently in Permit P100-R1-M3 or proposed by this application.

Section 16

Air Dispersion Modeling

NSR (20.2.72 NMAC) and PSD (20.2.74 NMAC) Modeling: Provide an air quality **dispersion modeling** demonstration (if applicable) as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines. If air dispersion modeling has been waived for this permit application, attach the AQB Modeling Section modeling waiver documentation.

SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions using realistic worst case scenarios following guidance from the Air Quality Bureau's dispersion modeling section. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions on SSM emissions modeling requirements.

Title V (20.2.70 NMAC) Modeling: Title V applications must specify the NSR Permit number for which air quality dispersion modeling was last submitted. Additionally, Title V facilities reporting new SSM emissions require modeling or a modeling waiver to demonstrate compliance with standards.

Facility-wide dispersion modeling, which included all LANL sources and neighboring non-LANL sources, was last submitted in support of NSR Permit 2195B-M2 for the LANL Power Plant. The permit was issued on November 1, 2011.

Section 17

Compliance Test History

(submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history.

Compliance Test History Table

Unit No.	Test Description	Test Date
TA-3-22-1,-2,-3	Startup compliance test for NOx and CO as required by NSR Permit No. 2195B.	9/25/2002 – 9/27/2002
TA-3-22-CT-1	Startup compliance test for NOx and CO as required by NSR Permit No. 2195B.	10/5/2007
TA-3-22-CT-1	Annual compliance test for NOx and CO with portable analyzer as required by NSR Permit No. 2195B.	10/23/2009
TA-3-22-CT-1	Annual compliance test for NOx and CO with portable analyzer as required by NSR Permit No. 2195B.	6/17/2010
TA-3-22-CT-1	Annual compliance test for NOx and CO with portable analyzer as required by NSR Permit No. 2195B.	1/19/2011
TA-3-22-CT-1	Annual compliance test for NOx and CO with portable analyzer as required by NSR Permit No. 2195B.	12/11/2012
CMRR-BHW-1 through 3	Startup compliance test for NOx and CO as required by NSR Permit No. 2195N.	1/18-19/2012
TA-60-BDM	Startup compliance test for PM as required by GCP-3-2195G.	8/25-26/2005
TA-60-BDM	Compliance test for PM, NO _x and CO to increase plant throughput.	5/18/2009
TA-33-G-4	Startup compliance test for NOx and CO as required by NSR Permit No. 2195P.	12/4/2007
TA-35-213	Startup compliance test for beryllium as required by NSR Permit No. 632.	9/9/1986
TA-3-141	Startup compliance test for beryllium as required by NSR Permit No. 634.	6/21/2001
TA-55-PF-4	Startup compliance test for beryllium as required by NSR Permit No. 1081.	2/17-18/1993
TA-55-PF-4	Startup compliance test for beryllium as required by NSR Permit No. 1081.	2/15/1994
TA-55-PF-4	Startup compliance test for beryllium as required by NSR Permit No. 1081.	9/26-27/2002

Section 18 – Not Applicable to Title V

Addendum for Streamline Applications

Do not print this section unless this is a streamline application.

Streamline Applications do not require a complete application. Submit Sections 1-A, 1-B, 1-D, 1-F, 1-G, 2-A, 2-C thru L, Sections 3 thru 8, Section 13, Section 18, Section 22, and Section 23 (Certification). Other sections may be required at the discretion of the Department. 20.2.72.202 NMAC Exemptions do not apply to Streamline sources. 20.2.72.219 NMAC revisions and modifications do not apply to Streamline sources, thus 20.2.72.219 type actions require a complete new application submittal. Please do not print sections of a streamline application that are not required.

18-A: Streamline Category	
1	<p>Indicate under which part of 20.2.72.301.D this facility is applying. Refer to the forth column of Table 18-D below, to assist in this determination:</p> <p style="margin-left: 100px;"> <input type="checkbox"/> 20.2.72.301.D(1) NMAC <input type="checkbox"/> 20.2.72.301.D(2) NMAC <input type="checkbox"/> 20.2.72.301.D(3) NMAC </p>

18-B: Streamline Applicability Criteria		Answer (yes/no)
1	<p>Does the source category for this facility meet one of those listed in the following table? (20.2.72.301.A NMAC)</p> <p>20.2.72.501 Table 2 – Permit Streamlining Source Class Categories</p> <ol style="list-style-type: none"> 1. Reciprocating internal combustion engines including portable or temporary engines 2. Turbines 	<input type="checkbox"/> Yes <input type="checkbox"/> No
2	<p>If this facility is a compressor station, does it meet the definition of a “Compressor station” below? (20.2.72.301.D NMAC)</p> <p>“Compressor station” means a facility whose primary function is the extraction of crude oil, natural gas, or water from the earth with compressors, or movement of any fluid, including crude oil or natural gas, or products refined from these substances through pipelines or the injection of natural gas or CO₂ back into the earth using compressors. A compressor station may include engines to generate power in conjunction with the other functions of extraction, injection or transmission and may contain emergency flares. A compressor station may have auxiliary equipment which emits <u>small quantities</u> of regulated air contaminants, including but not limited to, separators, de-hydration units, heaters, treaters and storage tanks, provided the equipment is located within the same property boundaries as the compressor engine (underline added). (20.2.72.301.A NMAC)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
3	<p>Will the source operate in compliance with all applicable state and federal regulations, including federal new source performance standards incorporated by 20.2.77 NMAC and permit conditions? (20.2.72.305.B NMAC)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No
4	<p>Will the fuel combusted at this facility be produced natural gas, sweet natural gas, liquid petroleum gas, or fuel gas containing 0.1 grain of total sulfur or less per dry standard cubic foot; or refinery grade diesel or No. 2 fuel oil that is not a blend containing waste oils or solvents and contains less than 0.3% by weight sulfur? (20.2.72.306 NMAC)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No

5	Will all spark ignited gas-fired or any compression ignited dual fuel-fired engine which operates <u>with a non-selective catalytic converter</u> be equipped <u>and</u> operated with an automatic air-fuel ratio (AFR) controller which maintains AFR in the range required to minimize NOx emissions, as recommended by the manufacturer? (20.2.72.306 NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No
6	Has payment of <u>all</u> fees that are specified in 20.2.75 NMAC (Construction Permit Fees), as payable at the time the application is submitted, been included with the application package? (20.2.72.302.15 NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No
7	Is the answer to each of the above questions, #1 through #6, 'Yes'? If the answer to this question is "No", this facility does not qualify for a streamline permit.	<input type="checkbox"/> Yes <input type="checkbox"/> No
8	Will the facility, either before or after construction or modification, have a total potential to emit of any regulated air contaminant ² greater than 200 tons per year (tpy) of any one regulated air pollutant (CO, NOx, SO2, or VOC)? (20.2.72.301.B.2 NMAC); "Potential to emit" or "potential emissions" means the maximum capacity of a stationary source to emit a regulated air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a regulated air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitations or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.	<input type="checkbox"/> Yes <input type="checkbox"/> No
9	Is the facility a "major stationary source" as defined in 20 NMAC 2.74? (20.2.72.301.B.1 NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No
10	Is this source subject 20.2.78 NMAC, other than 40CFR61 Subpart M <u>National Emission Standard for Asbestos</u> ? (20.2.72.301.B.3 NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No
11	Is this a source of potential air toxic emissions (20 NMAC 2.72. 400-499)? (20.2.72.301.B.3 NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No
12	Will the reciprocating internal combustion (IC) engines and/or turbines be located at a petroleum refinery, chemical manufacturing plant, bulk gasoline terminal, natural gas processing plant, or at any facility containing sources in addition to IC engines and/or turbines for which an air quality permit is required through state or federal air quality regulations in the absence of the (IC) engines and/or turbines? (20.2.72.301.B.4 NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No
13	Will the proposed facility be located within any of the 20.2.72.301.B.5 exclusion areas specified in the Air Dispersion Modeling Guidelines ¹ , Table: <u>Areas Where Streamline Permits Are Prohibited ?</u> (20.2.72.301.B.5 NMAC) http://www.nmenv.state.nm.us/aqb/modeling	<input type="checkbox"/> Yes <input type="checkbox"/> No
14	Will the proposed facility's impact area intersect any of the areas specified in the Air Dispersion Modeling Guidelines ¹ , Table: <u>Areas Where Streamline Permits Are Prohibited ?</u> (20.2.72.301.B.5 NMAC) http://www.nmenv.state.nm.us/aqb/modeling	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
15	Is the answer to each of the above questions, #8 through #14, 'No'? If the answer to this question is "No", this facility does not qualify for a streamline permit.	<input type="checkbox"/> Yes <input type="checkbox"/> No

¹ The Air Dispersion Modeling Guidelines contain a section on streamline permitting. The table mentioned above can be found within those guidelines at <http://www.nmenv.state.nm.us/aqb/modeling>

² The potential to emit for nitrogen dioxide shall be based on total oxides of nitrogen

18-C: Streamline Location Restrictions		Answer (yes/no)	Identify: Name and Distance (km)
1	Will the distance from the nearest property boundary to the nearest school, residence, office building or occupied structure, excluding the immediate facility complex be greater than one (1.0) km? (20.2.72.301.B.6.a NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2	Will the distance from the nearest property boundary to the nearest state park, Class II wilderness or wildlife refuge, historic park, state recreation area be greater than three (3.0) km? (20.2.72.301.B.6.b NMAC) The <u>Air Dispersion Modeling Guidelines</u> ¹ , Table: <u>List Of State Parks, Class II Wilderness Areas, Class II National Wildlife Refuge, National Historic Parks, State Recreation Areas, and Class I Areas</u> contains a list of most of these areas in New Mexico, but may not include new areas designated since the modeling guidelines were published.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3	Will the distance from the nearest property boundary to the nearest community with a population of more than 20,000 people be greater than three (3.0) km? (20.2.72.301.B.6 NMAC).b	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4	Will the distance from the nearest property boundary to the nearest community with a population of more than 40,000 people be greater than 10 km? (20.2.72.301.B.6.c NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Will the distance from the nearest property boundary to the nearest Class I area be greater than 30 km? (20.2.72.301.B.6.d NMAC) The <u>Air Dispersion Modeling Guidelines</u> ¹ , Table: <u>List Of State Parks, Class II Wilderness Areas, Class II National Wildlife Refuge, National Historic Parks, State Recreation Areas, and Class I Areas</u> contains a list of most of these areas in New Mexico, but may not include new areas designated since the modeling guidelines were published.	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6	Will the distance from the nearest property boundary to Bernalillo County be greater than 15 km? (20.2.72.301.B.7 NMAC)	<input type="checkbox"/> Yes <input type="checkbox"/> No	-NA-
7	Is the answer to all of the above question yes or N/A? If the answer to this question is “No”, this facility does <u>not</u> qualify for a streamline permit.	<input type="checkbox"/> Yes <input type="checkbox"/> No	-NA-

¹The Air Dispersion Modeling Guidelines contain a section on streamline permitting. The table mentioned above can be found within those guidelines at <http://www.nmenv.state.nm.us/aqb/modeling>.

18-D: Source Category Determination			
1	Is the total potential to emit of each regulated contaminant from all sources at the facility less than 40 tpy?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<ul style="list-style-type: none"> • If the answers to this question is “Yes”, the facility qualifies for a 20.2.72.301.D.1 NMAC streamline permit. • Public notice is not required, 20.2.72.303.A NMAC. • Modeling is not required, 20.2.72.301.D NMAC. • If “Yes”, leave the remainder of this table blank.
2	Is the total potential to emit of each regulated contaminant from all emission sources at the facility less than 100 tons per year (tpy) AND the impact on ambient air from all sources at the facility less than the ambient significance levels in 20.2.72.500 NMAC?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<ul style="list-style-type: none"> • If the answer to this question is “Yes”, the facility qualifies for a 20.2.72.301.D.2 NMAC streamline permit. • Public notice is not required, 20.2.72.303.A NMAC. • Modeling is required in accordance with 20.2.72.301.D.2 NMAC • If “Yes”, leave the remainder of this table blank.

3.a	Is the total potential to emit of each regulated contaminant from all emission sources at the facility less than 200 tons per year (tpy) AND the maximum modeled ambient impact from the total potential emissions at the facility less than 50 percent of each applicable PSD increment, state and federal ambient air quality standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<ul style="list-style-type: none"> • If the answers to these questions (3.a, 3.b, 3.c, and 3.d) are all “Yes”, the facility qualifies for a 20.2.72.301.D.3 NMAC streamline permit. • Public notice is required in accordance with NMAC 20.2.72.303 NMAC. • Modeling is required in accordance with 20.2.72.301.D.3 NMAC • If the answers to questions 1, 2, and any of questions in question 3 (3.a, 3.b, 3.c, or 3.d) are “No”, this facility does not qualify for a streamline permit.
3.b	Are there no adjacent sources emitting the same regulated air contaminant(s) as the source within 2.5 km of the modeled nitrogen dioxide (NO ₂) impact area?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.c	Is the "sum of the potential emissions for oxides of nitrogen from all adjacent sources" (SUM) within 15 km of the NO ₂ impact area (SUM15) less than 740 tpy?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.d	Is the "sum of the potential emissions for oxides of nitrogen from all adjacent sources" (SUM) within 25 km of the NO ₂ impact area (SUM25) less than 1540 tpy?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Note: All modeling demonstrations have the option of demonstrating compliance with 20.2.72.301.D.3 NMAC. All public notices are required to comply with the public notice requirements of a NMAC20.2.72.301.D.3 facility.

18-E: Submittals	
1	If a facility is required to submit a modeling analysis to demonstrate compliance with NMAC 20.2.72.300-399, use the Department’s most current version of the Departments Air Dispersion Modeling Guidelines, and include a copy of the modeling in the application. A copy of the most current version of the guidelines can be obtained at the following web address: http://www.nmenv.state.nm.us/aqb/modeling .
2	<p>Public Notice: Per 20.2.72.303.A NMAC, public notice is only required for sources subject to NMAC 20.2.72.301.D.3. Public notice submittals shall consist of the following:</p> <ol style="list-style-type: none"> 1. Proof of Public Notice 2. Include a copy of the certified letter receipts (Field office & Federal Land Managers) (20.2.72.206.A.7, 302.A & 302.12) 3. A copy of the letters sent to the appropriate federal land manager if the source will locate within 50 km of a boundary of a Class I area (302.A.2) 4. A statement stating a complete copy of the application and public notice has been provided to the Departments field or district office nearest the source (302.A.1) 5. The location where the public notice has been posted on the site (303.B.2) 6. A copy of the classified or legal ad and its affidavit of publication (303.B.1)

Section 19

Requirements for Title V Program

Do not print this section unless this is a Title V application.

Who Must Use this Attachment:

- * Any major source as defined in 20.2.70 NMAC.
 - * Any source, including an area source, subject to a standard or other requirement promulgated under Section 111 - Standards of Performance for New Stationary Sources, or Section 112 Hazardous Air Pollutants, of the 1990 federal Clean Air Act ("federal Act"). Non-major sources subject to Sections 111 or 112 of the federal Act are exempt from the obligation to obtain an 20.2.70 NMAC operating permit until such time that the EPA Administrator completes rulemakings that require such sources to obtain operating permits. In addition, sources that would be required to obtain an operating permit solely because they are subject to regulations or requirements under Section 112(r) of the federal Act are exempt from the requirement to obtain an Operating Permit.
 - * Any Acid Rain source as defined under title IV of the federal Act. The Acid Rain program has additional forms. See <http://www.nmenv.state.nm.us/aqb/index.html>. Sources that are subject to both the Title V and Acid Rain regulations are encouraged to submit both applications simultaneously.
 - * Any source in a source category designated by the EPA Administrator ("Administrator"), in whole or in part, by regulation, after notice and comment.
-

19.1 - 40 CFR 64, Compliance Assurance Monitoring (CAM) (20.2.70.300.D.10.e NMAC)

Any source subject to 40CFR, Part 64 (Compliance Assurance Monitoring) must submit all the information required by section 64.7 with the operating permit application. The applicant must prepare a separate section of the application package for this purpose; if the information is already listed elsewhere in the application package, make reference to that location. Facilities not subject to Part 64 are invited to submit periodic monitoring protocols with the application to help the AQB to comply with 20.2.70 NMAC. Sources subject to 40 CFR Part 64, must submit a statement indicating your source's compliance status with any enhanced monitoring and compliance certification requirements of the federal Act.

40 CFR Part 64 requires CAM requirements to be addressed in Title V five-year renewal applications. This application identifies two emission units potentially subject to this rule. As proposed in this application, neither emission unit is subject to the Part 64 requirements.

19.2 - Compliance Status (20.2.70.300.D.10.a & 10.b NMAC)

Describe the facility's compliance status with each applicable requirement at the time this permit application is submitted. This statement should include descriptions of or references to all methods used for determining compliance. This statement should include descriptions of monitoring, recordkeeping and reporting requirements and test methods used to determine compliance with all applicable requirements. Refer to Section 2, Tables 2-N and 2-O of the Application Form as necessary. (20.2.70.300.D.11 NMAC) For facilities with existing Title V permits, refer to most recent Compliance Certification for existing requirements. Address new requirements such as CAM, here, including steps being taken to achieve compliance.

This facility is in compliance with all applicable requirements. Attachment 3 includes a copy of the most recent Annual Compliance Certification report submitted to NMED as required under Permit P100-R1-M3. This report is for the period of June through December 2012. The report lists each applicable requirement and describes all monitoring, recordkeeping, reporting and test methods used to demonstrate compliance. There were no compliance deviations noted in the report.

With respect to 40 CFR Part 64 CAM requirements, the currently permitted asphalt plant (Unit TA-60-BDM) and data disintegrator (Unit TA-52-11) are potentially subject to the rule. For each unit, potential pre-control emissions exceed 100 tons per year for a regulated pollutant although actual pre-control emissions have never done so. As discussed in Section 2.0 of this application, the asphalt plant is exempt from Part 64 under the exclusion provided for emission units where existing Title V permits already specify a continuous compliance determination method. As allowed by Part 64 and EPA CAM policy, a new process limitation is proposed for the data disintegrator which limits pre-control potential emissions below the CAM threshold of 100 tons per year and.

19.3 - Continued Compliance (20.2.70.300.D.10.c NMAC)

Provide a statement that your facility will continue to be in compliance with requirements for which it is in compliance at the time of permit application. This statement must also include a commitment to comply with other applicable requirements as they come into effect during the permit term. This compliance must occur in a timely manner or be consistent with such schedule expressly required by the applicable requirement.

This facility will continue to be in compliance with requirements for which it is in compliance at the time of this permit application, and will in a timely manner, meet additional applicable requirements that become effective during the permit term.

19.4 - Schedule for Submission of Compliance (20.2.70.300.D.10.d NMAC)

You must provide a proposed schedule for submission to the department of compliance certifications during the permit term. This certification must be submitted annually unless the applicable requirement or the department specifies a more frequent period. A sample form for these certifications will be attached to the permit.

The proposed schedule for submission of the Annual Compliance Certification Report is the schedule currently in Section A109 of Permit P100-R1-M3. The schedule requires submittal of the report within 30 days of the end of the 12-month reporting period which starts on January 1st each year.

19.5 - Stratospheric Ozone and Climate Protection

In addition to completing the four (4) questions below, you must submit a statement indicating your source's compliance status with requirements of Title VI, Section 608 (National Recycling and Emissions Reduction Program) and Section 609 (Servicing of Motor Vehicle Air Conditioners).

-
1. Does your facility have any air conditioners or refrigeration equipment that uses CFCs, HCFCs or other ozone-depleting substances? Yes No
 2. Does any air conditioner(s) or any piece(s) of refrigeration equipment contain a refrigeration charge greater than 50 lbs? Yes No
(If the answer is yes, describe the type of equipment and how many units are at the facility.)

There are 262 refrigeration units in active inventory at this facility containing a charge of 50 pounds or more of refrigerant. There are various duty types of units such as chillers and heating and air conditioning units. Nearly 85% of the units are used for comfort cooling purposes. The remaining percentage consists of units that are tied to different processes. An example of this would be chillers that cool computer rooms.

3. Do your facility personnel maintain, service, repair, or dispose of any motor vehicle air conditioners (MVACs) or appliances ("appliance" and "MVAC" as defined at 82. 152)? Yes No
4. Cite and describe which Title VI requirements are applicable to your facility (i.e. 40 CFR Part 82, Subpart A through G.) 40 CFR Part 82, Subparts B, F, H and I

This facility is in compliance with all Title VI, Section 608 and Section 609 requirements.

19.6 - Compliance Plan and Schedule

Applications for sources, which are not in compliance with all applicable requirements at the time the permit application is submitted to the department, must include a proposed compliance plan as part of the permit application package. This plan shall include the information requested below:

A. Description of Compliance Status: (20.2.70.300.D.11.a NMAC)

A narrative description of your facility's compliance status with respect to all applicable requirements (as defined in 20.2.70 NMAC) at the time this permit application is submitted to the department.

B. Compliance plan: (20.2.70.300.D.11.B NMAC)

A narrative description of the means by which your facility will achieve compliance with applicable requirements with which it is not in compliance at the time you submit your permit application package.

C. Compliance schedule: (20.2.70.300D.11.c NMAC)

A schedule of remedial measures that you plan to take, including an enforceable sequence of actions with milestones, which will lead to compliance with all applicable requirements for your source. This schedule of compliance must be at least as stringent as that contained in any consent decree or administrative order to which your source is subject. The obligations of any consent decree or administrative order are not in any way diminished by the schedule of compliance.

D. Schedule of Certified Progress Reports: (20.2.70.300.D.11.d NMAC)

A proposed schedule for submission to the department of certified progress reports must also be included in the compliance schedule. The proposed schedule must call for these reports to be submitted at least every six (6) months.

E. Acid Rain Sources: (20.2.70.300.D.11.e NMAC)

If your source is an acid rain source as defined by EPA, the following applies to you. For the portion of your acid rain source subject to the acid rain provisions of title IV of the federal Act, the compliance plan must also include any additional requirements under the acid rain provisions of title IV of the federal Act. Some requirements of title IV regarding the schedule and methods the source will use to achieve compliance with the acid rain emissions limitations may supersede the requirements of title V and 20.2.70 NMAC. You will need to consult with the Air Quality Bureau permitting staff concerning how to properly meet this requirement.

NOTE: The Acid Rain program has additional forms. See <http://www.nmenv.state.nm.us/aqb/index.html>. Sources that are subject to both the Title V and Acid Rain regulations are **encouraged** to submit both applications **simultaneously**.

A compliance plan and schedule is not required for this facility.

19.7 - 112(r) Risk Management Plan (RMP)

Any major sources subject to section 112(r) of the Clean Air Act must list all substances that cause the source to be subject to section 112(r) in the application. The permittee must state when the RMP was submitted to and approved by EPA.

This facility is not subject to the Section 112 (r) requirements.

19.8 - Distance to Other States, Bernalillo, Indian Tribes and Pueblos

Will the property on which the facility is proposed to be constructed or operated be closer than 80 km (50 miles) from other states, local pollution control programs, and Indian tribes and pueblos (20.2.70.402.A.2 and 20.2.70.7.B NMAC)?

(If the answer is yes, state which apply and provide the distances.)

This facility is within 80 km of the following Indian tribes and pueblos and a local pollution control program as follows with distances indicated in km:

Taos Pueblo (69), Picuris Pueblo (56), Jicarilla Apache (67), Ohkay Owingeh Pueblo (19), Santa Clara Pueblo (10), San Ildefonso Pueblo (5), Pojoaque Pueblo (13), Nambe Pueblo (24), Tesuque Pueblo (19), Cochiti Pueblo (13), Santa Domingo Pueblo (27), Zia Pueblo (30), San Felipe Pueblo (38), Santa Ana Pueblo (40), Jemez Pueblo (19), Sandia Pueblo (61), Laguna Pueblo (77), Bernalillo County - Albuquerque Air Quality Division (56).

19.9 - Responsible Official

Provide the Responsible Official as defined in 20.2.70.7.AD NMAC: Michael T. Brandt

Section 20

Other Relevant Information

Other relevant information. Use this attachment to clarify any part in the application that you think needs explaining. Reference the section, table, column, and/or field. Include any additional text, tables, calculations or clarifying information.

Additionally, the applicant may propose specific permit language for AQB consideration. In the case of a revision to an existing permit, the applicant should provide the old language and the new language in track changes format to highlight the proposed changes. If proposing language for a new facility or language for a new unit, submit the proposed operating condition(s), along with the associated monitoring, recordkeeping, and reporting conditions. In either case, please limit the proposed language to the affected portion of the permit.

All relevant information is included elsewhere in this application and appendixes.

Section 21- Not Applicable to Title V

Addendum for Landfill Applications

Do not print this section unless this is a landfill application.

Landfill Applications are not required to complete Sections 1-C and 1-E. All other Sections are required.

21-A: Landfill Information

1	How long will the landfill be operated?		
2	Maximum operational hours per year:		
3	Landfill Operating hours (open to the public) M-F:	Sat.	Sun.
4	Landfill Design Capacity (Tons):	Megagrams:	Cubic meters:
5	Landfill NMOC Emission Rate	<input type="checkbox"/> Less than 50mg/year	<input type="checkbox"/> Greater than 50mg/year
6	Annual Waste Acceptance Rate:		
7	Is Petroleum Contaminated Soil Accepted?	If so, what is the annual acceptance rate?	
8	NM Solid Waste Permit No.:	SW Permit Date:	
9	Describe NM Solid Waste Permit, Status, and Type of waste deposited at landfill		
10	Describe briefly any process(es) or any other operations conducted at the landfill		

21-B: NMOC Emissions

1	NMOC Emissions based on LandGEM:
2	Tier 1:
3	Tier 2:
4	Tier 3:

EMISSIONS (refer to 40 CFR 60.754 for test methods and procedures or AP-42 Sect.2.4)
 Include the latest LandGEM calculations and/or testing results.
 Facilities that have a Landfill GCCS complete the following section.

21-C: Landfill Gas Collection and Control System (GCCS) Design Plan		Yes	No
1	Was the GCCS design certified by a P.E?		
2	Was the Design System Plan submitted within 12 months of the first report of the site exceeding 50Mg/yr?		
3	Is the GCCS planned to be operational within 30 months of the first report of the site exceeding 50 Mg/yr?		
4	Does the GCCS comply with the 2 year/5 year rule?		
5	Is the design life of the GCCS more than 15 years?		
6	Have measures been taken in the GCCS Plan to control lateral gas migration?		
7	If the GCCS design is for a passive system (non enhanced), are the necessary liners in place?		
8	Is adequate density of collectors planned?		
9	Is the Landfill gas conveyance system sized properly?		
10	Is the landfill gas planned to be routed to a control device? (Utility flare, enclosed flare or other)		
11	If the control device is a flare, does it include continuous temperature monitoring and a flow measurement device?		
12	Is the flare sized properly?		
13	Does the GCCS include fittings to allow connection of additional collectors if necessary in the future?		
14	Does the wellhead for all collectors include at least one sample port and one thermometer port?		
15	Operational Issues: 1. Will the GCCS be operated at a vacume at every well? 2. Will the GCCS be operated at the appropriate gas temps? 3. Will the GCCS be operated with minimal amounts of air? 4. Will monitoring be done monthly to conform with these operational issues? 5. Will surface emissions monitoring be completed? 6. Will the blower automatically be shut down if the control device is inoperable?		
16	Was the design diagram for the GCCS, including the flare, blower, and well location attached to the permit application?		

Section 22

Green House Gas Applicability

(submitting under 20.2.70, 20.2.72, 20.2.73, 20.2.74 NMAC)

Title V (20.2.70 NMAC), NSR (20.2.72 NMAC), NOI (20.2.73 NMAC) and PSD (20.2.74 NMAC) applicants must determine if they are subject to Title V permitting and/or PSD permitting for green house gas (GHG) emissions. GHG emissions are the sum of the aggregate group of six green house gases that include carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). There are two thresholds that must be computed to determine applicability. The first threshold is the sum of GHG mass emissions in TPY. GHG mass emissions are the sum of the total annual tons of green house gases without adjusting with the GWPs. The second threshold is the sum of CO₂ equivalent (CO₂e) emissions in TPY GHG. CO₂e emissions are the sum of the mass emissions of each individual GHG multiplied by its global warming potential (GWP) found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.

Green House Gas TV and PSD Applicability Determination:

Notice of Intent Sources (20.2.73 NMAC): By checking this box and certifying this application the applicant certifies that the facility, based upon the quantity of stack emissions, including start up, shut down, and maintenance emissions, is not subject to 20.2.70 NMAC or 20.2.74 NMAC for Green House Gas (GHG) Emissions. The Department may request the emissions calculations and other documents supporting this determination.

Minor NSR (20.2.72 NMAC), PSD Major (20.2.74 NMAC), and Title V (20.2.70 NMAC) sources must complete the steps outlined below to determine GHG TV and/or PSD applicability.

1. Calculate existing mass GHG and CO₂e emissions from your source. For PSD purposes, if this is a modification to an existing source, you must also calculate the increase in mass GHG and CO₂e emissions due to the modification. Start up, shut down, and maintenance emissions must be included.
2. See Tables 1 and 2 below and compare your mass GHG and CO₂e emissions to the appropriate category for your source.
3. If your source meets all of the criteria within a category, then you must obtain a PSD permit and/or a Title V permit for green house gas emissions.
4. If this is a GHG Major source with an existing BACT or if this is a permit application for a PSD or Title V permit with GHG above the thresholds in Tables 1 or 2, include the emissions calculations and supporting documents in the appropriate sections of this application unless instructed otherwise in Tables 1 or 2. Report GHG mass and CO₂e emissions in Table 2-P of this application unless instructed otherwise in Tables 1 or 2. Emissions are reported in short tons per year and represent each emission unit's Potential to Emit (PTE).

NSR (20.2.72 NMAC), PSD Major (20.2.74 NMAC), and Title V (20.2.70 NMAC): Based upon the GHG applicability criteria in this section the applicant certifies that the source is (check all that apply):

- Title V Minor and PSD Minor for GHG Emissions [The Department may request the emissions calculations and other documents supporting this determination.]
- Title V Major for GHG Emissions
- PSD Major for GHG Emissions

Table 1 - Title V Applicability Criteria		
On or after July 1, 2011, newly constructed source, or existing source that does not have a Title V permit	On or after July 1, 2011, modification or Renewal to Existing Title V Source	Requirement
Source emits or has potential to emit (PTE) ≥ 100,000 TPY CO ₂ e and 100 TPY GHG mass basis	Source emits or has PTE of ≥100,000 TPY CO ₂ e and 100 TPY GHG mass basis	For new sources: For a source that meets the criteria on July 1, 2011, submit a Title V permit application no later than June 30, 2012.

Table 1 - Title V Applicability Criteria

		<p>For a source that meets the criteria after July 1, 2011, submit a Title V application within 12 months of becoming subject to the GHG operating permit program (12 months from commencement of operation of the new unit or modification that caused the source to be subject to Title V).</p> <p><u>For existing sources:</u> Include GHG with the next Title V application for a renewal or modification.</p> <p><u>For both new and existing sources:</u> Include in the TV application, GHG emissions calculations and supporting documents, report CO₂e and GHG emissions in Table 2-P, and address any applicable CAA requirements (e.g. PSD BACT, NSPS). If there are no applicable requirements and if GHG emissions have been reported to the Department under 20.2.73 NMAC, the requirements of the previous sentence do not apply, but changes in GHG emissions resulting in GHG emission limits must be calculated and reported in Table 2-P for Title V permit modifications. Typically GHG emission limits would be established only when there is an applicable requirement, such as a PSD GHG BACT or limits taken to be GHG synthetic minor.</p>
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Table 2 - PSD Applicability Criteria

On or After July 1, 2011, New Source	On or After July 1, 2011, Major Modification to Existing PSD Major Source	On or After July 1, 2011, Modification to Existing PSD Minor Source	Requirement
<p>Source is subject to PSD for another pollutant and GHG PTE is \geq than 75,000 tpy CO₂e</p> <p>or</p> <p>GHG PTE is \geq 100,000 TPY CO₂e and \geq 100/250 TPY mass basis</p>	<p>Source is subject to PSD for another regulated pollutant and net GHG emissions increase is \geq 75,000 tpy CO₂e and greater than zero TPY mass basis</p> <p>or</p> <p>existing source has GHG PTE \geq 100,000 TPY CO₂e and \geq 100/250 TPY mass basis and net emissions GHG increase is \geq 75,000 TPY</p>	<p>Actual or potential emissions of GHGs from the modification is \geq 100,000 TPY CO₂e and \geq 100/250 TPY mass basis.</p> <p>Minor PSD sources cannot net out of PSD review.</p>	<p>The source is subject to PSD permitting for GHG emissions and other regulated pollutants that are significant. In the application include GHG emissions calculations and supporting documents, report CO₂e and GHG emissions in Table 2-P, complete a GHG BACT determination, and include the TPY CO₂e and GHG mass emissions in the public notice.</p> <p>Note: If a minor source permit is issued after January 2, 2011, but before July 1, 2011, and construction has not commenced by July 1, 2011, the permit must be</p>

Table 2 - PSD Applicability Criteria

	CO ₂ e and greater than zero TPY mass basis		cancelled, reopened, or an additional PSD permitting action taken, if the approved change/construction would trigger GHG PSD after July 1, 2011.
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Additional Information:**Sources for Calculating GHG Emissions:**

- Manufacturer's Data
- AP-42 Compilation of Air Pollutant Emission Factors at <http://www.epa.gov/ttn/chief/ap42/index.html>
- EPA's Internet emission factor database WebFIRE at <http://cfpub.epa.gov/webfire/>
- Subparts C through UU of 40 CFR 98 Mandatory Green House Gas Reporting except that tons should be reported in short tons rather than in metric tons for the purpose of PSD and TV applicability.
- API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry. August 2009 or most recent version.
- Sources listed on EPA's NSR Resources for Estimating GHG Emissions at <http://www.epa.gov/nsr/ghgresources.html>:
 - ENERGY STAR Industrial Sector Energy Guides and Plant Energy Performance Indicators (benchmarks) <http://www.energystar.gov>;
 - US EPA National Greenhouse Gas Inventory, <http://epa.gov/climatechange/emissions/usinventoryreport.html>;
 - EPA's Climate Leaders, <http://www.epa.gov/climateleaders/index.html>
 - EPA Voluntary Partnerships of GHG Reductions that include the landfill methane outreach program, the CHP partnership program, the Green Power Partnership, the Coalbed Methane Outreach program, the Natural Gas STAR program, and the Voluntary Aluminum Industrial Partnership.
 - SF Emission Reduction Partnership for the Magnesium Industry <http://www.epa.gov/highgw/magnesium-sf6/index.html>
 - PFC Reduction/Climate Partnership for the Semiconductor Industry <http://www.epa.gov/highgw/semiconductor-pfc/index.html>

Global Warming Potentials (GWP):

Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. Please note that sources not subject to 40 CFR 98 and/or 20.2.300 NMAC may still be subject to the GHG PSD and/or TV permitting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of CO₂ over a specified time period.

"Greenhouse gas" for the purpose of this part is defined as the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. (20.2.70.7.O NMAC, 20.2.74.7.Y NMAC). You may also find GHGs defined in 40 CFR 86.1818-12(a).

Short Tons:

Short tons for GHGs and other regulated pollutants are the standard unit of measure for PSD and title V permitting programs. 40 CFR 98 Mandatory Greenhouse Reporting requires metric tons.

1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

EPA's GHG Tailoring Rule:

To review EPA's final GHG Tailoring rule and pre-ambble, See "Final GHG Tailoring Rule dated May 13, 2010 located on EPA's NSR Regulations Webpage or Federal Register June 3, 2010 Volume 75, No. 106 <http://www.epa.gov/nsr/actions.html>

EPA Permitting Guidance:

EPA's Permitting Guidance for GHG and other GHG information can be found on EPA's NSR Clear Air Act Permitting for Greenhouse Gases webpage.

<http://www.epa.gov/nsr/ghgpermitting.html>

Section 23: Certification

Company Name: Los Alamos National Security, LLC

I, Michael T. Brandt, hereby certify that the information and data submitted in this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 9 day of July, 2013, upon my oath or affirmation, before a notary of the State of

New Mexico


*Signature

7/9/13
Date

Michael T. Brandt
Printed Name

Associate Director, ESM
Title

Scribed and sworn before me on this 9th day of July, 2013.

My authorization as a notary of the State of New Mexico expires on the

14th day of February, 2015.


Notary's Signature

7/9/2013
Date

Taylor A. Valdez
Notary's Printed Name

*For Title V applications, the signature must be of the Responsible Official as defined in 20.2.70.7.AE NMAC.

Appendix B

Supporting Information on Emission Calculations

Appendix B

Asphalt Plant

Table 11.1-1. PARTICULATE MATTER EMISSION FACTORS FOR BATCH MIX HOT MIX ASPHALT PLANTS^a

Process	Filterable PM			Condensable PM ^b			Total PM		
	PM ^c	EMISSION FACTOR RATING	PM-10 ^d	EMISSION FACTOR RATING		PM ^e	EMISSION FACTOR RATING		
				Inorganic	Organic		Inorganic	Organic	
Dryer, hot screens, mixef (SCC 3-05-002-45, -46, -47)									
Uncontrolled	32 ^h	E	4.5	E	0.0041 ^j	E	0.0041 ^j	32	E
Venturi or wet scrubber	0.12 ^k	C	ND	NA	0.0041 ^m	B	0.0041 ^m	0.14	NA
Fabric filter	0.025 ^p	A	0.0098	C	0.013 ^m	A	0.0041 ⁿ	0.042	C

^a Factors are lb/ton of product. SCC = Source Classification Code. ND = no data. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

^b Condensable PM is that PM collected using an EPA Method 202, Method 5 (analysis of "back-half" or impingers), or equivalent sampling train.

^c Filterable PM is that PM collected on or before the filter of an EPA Method 5 (or equivalent) sampling train.

^d Particle size data from Reference 23 were used in conjunction with the filterable PM emission factors shown.

^e Total PM is the sum of filterable PM, condensable inorganic PM, and condensable organic PM.

^f Total PM-10 is the sum of filterable PM-10, condensable inorganic PM, and condensable organic PM.

^g Batch mix dryer fired with natural gas, propane, fuel oil, waste oil, and coal. The data indicate that fuel type does not significantly effect PM emissions.

^h Reference 5.

^j Although no data are available for uncontrolled condensable PM, values are assumed to be equal to the controlled value measured. Reference 1, Table 4-19. Average of data from 16 facilities. Range: 0.047 to 0.40 lb/ton. Median: 0.049 lb/ton. Standard deviation: 0.11 lb/ton.

^m Reference 1, Table 4-19. Average of data from 35 facilities. Range: 0.00073 to 0.12 lb/ton. Median: 0.0042 lb/ton. Standard deviation: 0.024 lb/ton.

ⁿ Reference 1, Table 4-19. Average of data from 24 facilities. Range: 0.000012 to 0.018 lb/ton. Median: 0.0026 lb/ton. Standard deviation: 0.0042 lb/ton.

^p Reference 1, Table 4-19. Average of data from 89 facilities. Range: 0.0023 to 0.18 lb/ton. Median: 0.012 lb/ton. Standard deviation: 0.033 lb/ton.

Table 11.1-5. EMISSION FACTORS FOR CO, CO₂, NO_x, AND SO₂ FROM BATCH MIX HOT MIX ASPHALT PLANTS^a

Process	CO ^b	EMISSION FACTOR RATING	CO ₂ ^c	EMISSION FACTOR RATING	NO _x	EMISSION FACTOR RATING	SO ₂ ^c	EMISSION FACTOR RATING
Natural gas-fired dryer, hot screens, and mixer (SCC 3-05-002-45)	<u>0.40</u>	C	37 ^d	A	<u>0.025^e</u>	D	<u>0.0046^f</u>	E
No. 2 fuel oil-fired dryer, hot screens, and mixer (SCC 3-05-002-46)	0.40	C	37 ^d	A	0.12 ^g	E	0.088 ^h	E
Waste oil-fired dryer, hot screens, and mixer (SCC 3-05-002-47)	0.40	C	37 ^d	A	0.12 ^g	E	0.088 ^h	E
Coal-fired dryer, hot screens, and mixer ^j (SCC 3-05-002-98)	ND	NA	37 ^d	A	ND	NA	0.043 ^k	E

^a Emission factor units are lb per ton of HMA produced. SCC = Source Classification Code. ND = no data available. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

^b References 24, 34, 46-47, 49, 161, 204, 215-217, 282, 370, 378, 381. The CO emission factors represent normal plant operations without scrutiny of the burner design, operation, and maintenance. Information is available that indicates that attention to burner design, periodic evaluation of burner operation, and appropriate maintenance can reduce CO emissions. Data for dryers firing natural gas, No. 2 fuel oil, and No. 6 fuel oil were combined to develop a single emission factor because the magnitude of emissions was similar for dryers fired with these fuels.

^c Emissions of CO₂ and SO₂ can also be estimated based on fuel usage and the fuel combustion emission factors (for the appropriate fuel) presented in AP-42 Chapter 1. The CO₂ emission factors are an average of all available data, regardless of the dryer fuel (emissions were similar from dryers firing any of the various fuels). Based on data for drum mix facilities, 50 percent of the fuel-bound sulfur, up to a maximum (as SO₂) of 0.1 lb/ton of product, is expected to be retained in the product, with the remainder emitted as SO₂.

^d Reference 1, Table 4-20. Average of data from 115 facilities. Range: 6.9 to 160 lb/ton. Median: 32 lb/ton. Standard deviation: 22 lb/ton.

^e References 24, 34, 46-47.

^f References 46-47.

^g References 49, 226.

^h References 49, 226, 228, 385.

^j Dryer fired with coal and supplemental natural gas or fuel oil.

^k Reference 126.

Table 11.1-6. EMISSION FACTORS FOR TOC, METHANE, AND VOC FROM BATCH MIX HOT MIX ASPHALT PLANTS^a

Process	TOC ^b	EMISSION FACTOR RATING	CH ₄ ^c	EMISSION FACTOR RATING	VOC ^d	EMISSION FACTOR RATING
Natural gas-fired dryer, hot screens, and mixer (SCC 3-05-002-45)	0.015 ^e	D	0.0074	D	<u>0.0082</u>	D
No. 2 fuel oil-fired dryer, hot screens, and mixer (SCC 3-05-002-46)	0.015 ^e	D	0.0074	D	0.0082	D
No. 6 fuel oil-fired dryer, hot screens, and mixer (SCC 3-05-002-47)	0.043 ^f	E	0.0074	D	0.036	E

^a Emission factor units are lb per ton of HMA produced. SCC = Source Classification Code. ND = no data available. NA = not applicable. To convert from lb/ton to kg/Mg, multiply by 0.5.

^b TOC equals total hydrocarbons as propane, as measured with an EPA Method 25A or equivalent sampling train plus formaldehyde.

^c References 24, 46-47, 49. Factor includes data from natural gas- and No. 6 fuel oil-fired dryers. Methane measured with an EPA Method 18 or equivalent sampling train.

^d The VOC emission factors are equal to the TOC factors minus the methane emission factors; differences in values reported are due to rounding.

^e References 24, 46-47, 155.

^f Reference 49.

Table 11.1-9. EMISSION FACTORS FOR ORGANIC POLLUTANT EMISSIONS FROM BATCH MIX HOT MIX ASPHALT PLANTS^a

Process	Pollutant		Emission Factor, lb/ton	Emission Factor Rating	Ref. Nos.
	CASRN	Name			
Natural gas- or No. 2 fuel oil-fired dryer, hot screens, and mixer with fabric filter (SCC 3-05-002-45,-46)	Non-PAH Hazardous Air Pollutants ^b				
	75-07-0	Acetaldehyde	0.00032	E	24,34
	71-43-2	Benzene	0.00028	D	24,34,46, 382
	100-41-4	Ethylbenzene	0.0022	D	24,46,47,49
	50-00-0	Formaldehyde	0.00074	D	24,34,46,47,49,226,382
	106-51-4	Quinone	0.00027	E	24
	108-88-3	Toluene	0.0010	D	24,34,46,47
	1330-20-7	Xylene	0.0027	D	24,46,47,49
		Total non-PAH HAPs	0.0075		
	PAH HAPs				
	91-57-6	2-Methylnaphthalene ^c	7.1x10 ⁻⁵	D	24,47,49
	83-32-9	Acenaphthene ^c	9.0x10 ⁻⁷	D	34,46,226
	208-96-8	Acenaphthylene ^c	5.8x10 ⁻⁷	D	34,46,226
	120-12-7	Anthracene ^c	2.1x10 ⁻⁷	D	34,46,226
	56-55-3	Benzo(a)anthracene ^c	4.6x10 ⁻⁹	E	46,226
	50-32-8	Benzo(a)pyrene ^c	3.1x10 ⁻¹⁰	E	226
	205-99-2	Benzo(b)fluoranthene ^c	9.4x10 ⁻⁹	D	34,46,226
	191-24-2	Benzo(g,h,i)perylene ^c	5.0x10 ⁻¹⁰	E	226
	207-08-9	Benzo(k)fluoranthene ^c	1.3x10 ⁻⁸	E	34,226
	218-01-9	Chrysene ^c	3.8x10 ⁻⁹	E	46,226
	53-70-3	Dibenz(a,h)anthracene ^c	9.5x10 ⁻¹¹	E	226
	206-44-0	Fluoranthene ^c	1.6x10 ⁻⁷	D	34,46,47,226
	86-73-7	Fluorene ^c	1.6x10 ⁻⁶	D	34,46,47,226
	193-39-5	Indeno(1,2,3-cd)pyrene ^c	3.0x10 ⁻¹⁰	E	226
	91-20-3	Naphthalene	3.6x10 ⁻⁵	D	34,46,47,49,226
	85-01-8	Phenanthrene ^c	2.6x10 ⁻⁶	D	34,46,47,226
	129-00-0	Pyrene ^c	6.2x10 ⁻⁸	D	34,46,226
		Total PAH HAPs	0.00011		
	Total HAPs		0.0076		
	Non-HAP organic compounds				
	100-52-7	Benzaldehyde	0.00013	E	24
	78-84-2	Butyraldehyde/ isobutyraldehyde	3.0x10 ⁻⁵	E	24
4170-30-3	Crotonaldehyde	2.9x10 ⁻⁵	E	24	
66-25-1	Hexanal	2.4x10 ⁻⁵	E	24	
	Total non-HAPs	0.00019			

Appendix B

Boilers and Heaters

Table 1.4-1. EMISSION FACTORS FOR NITROGEN OXIDES (NO_x) AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION^a

Combustor Type (MMBtu/hr Heat Input) [SCC]	NO _x ^b		CO	
	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
Large Wall-Fired Boilers (>100) [1-01-006-01, 1-02-006-01, 1-03-006-01]				
Uncontrolled (Pre-NSPS) ^c	280	A	84	B
Uncontrolled (Post-NSPS) ^c	190	A	84	B
Controlled - Low NO _x burners	140	A	84	B
Controlled - Flue gas recirculation	100	D	84	B
Small Boilers (<100) [1-01-006-02, 1-02-006-02, 1-03-006-02, 1-03-006-03]				
Uncontrolled	$\frac{100}{50}$	B	$\frac{84}{84}$	B
Controlled - Low NO _x burners	50	D	84	B
Controlled - Low NO _x burners/Flue gas recirculation	32	C	84	B
Tangential-Fired Boilers (All Sizes) [1-01-006-04]				
Uncontrolled	170	A	24	C
Controlled - Flue gas recirculation	76	D	98	D
Residential Furnaces (<0.3) [No SCC]				
Uncontrolled	94	B	40	B

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. Emission factors are based on an average natural gas higher heating value of 1,020 Btu/scf. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. SCC = Source Classification Code. ND = no data. NA = not applicable.

^b Expressed as NO_x. For large and small wall fired boilers with SNCR control, apply a 24 percent reduction to the appropriate NO_x emission factor. For tangential-fired boilers with SNCR control, apply a 13 percent reduction to the appropriate NO_x emission factor.

^c NSPS=New Source Performance Standard as defined in 40 CFR 60 Subparts D and Db. Post-NSPS units are boilers with greater than 250 MMBtu/hr of heat input that commenced construction modification, or reconstruction after August 17, 1971, and units with heat input capacities between 100 and 250 MMBtu/hr that commenced construction modification, or reconstruction after June 19, 1984.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION^a

Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
CO ₂ ^b	120,000	A
Lead	0.0005	D
N ₂ O (Uncontrolled)	2.2	E
N ₂ O (Controlled-low-NO _x burner)	0.64	E
PM (Total) ^c	<u>7.6</u>	D
PM (Condensable) ^c	5.7	D
PM (Filterable) ^c	1.9	B
SO ₂ ^d	<u>0.6</u>	A
TOC	11	B
Methane	2.3	B
VOC	<u>5.5</u>	C

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds.

VOC = Volatile Organic Compounds.

^b Based on approximately 100% conversion of fuel carbon to CO₂. CO₂[lb/10⁶ scf] = (3.67) (CON) (C)(D), where CON = fractional conversion of fuel carbon to CO₂, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2x10⁴ lb/10⁶ scf.

^c All PM (total, condensable, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM₁₀, PM_{2.5} or PM₁ emissions. Total PM is the sum of the filterable PM and condensable PM. Condensable PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

^d Based on 100% conversion of fuel sulfur to SO₂. Assumes sulfur content is natural gas of 2,000 grains/10⁶ scf. The SO₂ emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO₂ emission factor by the ratio of the site-specific sulfur content (grains/10⁶ scf) to 2,000 grains/10⁶ scf.

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION^a

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
91-57-6	2-Methylnaphthalene ^{b,c}	2.4E-05	D
56-49-5	3-Methylchloranthrene ^{b,c}	<1.8E-06	E
	7,12-Dimethylbenz(a)anthracene ^{b,c}	<1.6E-05	E
83-32-9	Acenaphthene ^{b,c}	<1.8E-06	E
203-96-8	Acenaphthylene ^{b,c}	<1.8E-06	E
120-12-7	Anthracene ^{b,c}	<2.4E-06	E
56-55-3	Benz(a)anthracene ^{b,c}	<1.8E-06	E
71-43-2	Benzene ^b	2.1E-03	B
50-32-8	Benzo(a)pyrene ^{b,c}	<1.2E-06	E
205-99-2	Benzo(b)fluoranthene ^{b,c}	<1.8E-06	E
191-24-2	Benzo(g,h,i)perylene ^{b,c}	<1.2E-06	E
205-82-3	Benzo(k)fluoranthene ^{b,c}	<1.8E-06	E
106-97-8	Butane	2.1E+00	E
218-01-9	Chrysene ^{b,c}	<1.8E-06	E
53-70-3	Dibenzo(a,h)anthracene ^{b,c}	<1.2E-06	E
25321-22-6	Dichlorobenzene ^b	1.2E-03	E
74-84-0	Ethane	3.1E+00	E
206-44-0	Fluoranthene ^{b,c}	3.0E-06	E
86-73-7	Fluorene ^{b,c}	2.8E-06	E
50-00-0	Formaldehyde ^b	7.5E-02	B
110-54-3	Hexane ^b	1.8E+00	E
193-39-5	Indeno(1,2,3-cd)pyrene ^{b,c}	<1.8E-06	E
91-20-3	Naphthalene ^b	6.1E-04	E
109-66-0	Pentane	2.6E+00	E
85-01-8	Phenanathrene ^{b,c}	1.7E-05	D

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION (Continued)

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
74-98-6	Propane	1.6E+00	E
129-00-0	Pyrene ^{b,c}	5.0E-06	E
108-88-3	Toluene ^b	3.4E-03	C

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. Emission Factors preceded with a less-than symbol are based on method detection limits.

^b Hazardous Air Pollutant (HAP) as defined by Section 112(b) of the Clean Air Act.

^c HAP because it is Polycyclic Organic Matter (POM). POM is a HAP as defined by Section 112(b) of the Clean Air Act.

^d The sum of individual organic compounds may exceed the VOC and TOC emission factors due to differences in test methods and the availability of test data for each pollutant.

TABLE 1.4-4. EMISSION FACTORS FOR METALS FROM NATURAL GAS COMBUSTION^a

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
7440-38-2	Arsenic ^b	2.0E-04	E
7440-39-3	Barium	4.4E-03	D
7440-41-7	Beryllium ^b	<1.2E-05	E
7440-43-9	Cadmium ^b	1.1E-03	D
7440-47-3	Chromium ^b	1.4E-03	D
7440-48-4	Cobalt ^b	8.4E-05	D
7440-50-8	Copper	8.5E-04	C
7439-96-5	Manganese ^b	3.8E-04	D
7439-97-6	Mercury ^b	2.6E-04	D
7439-98-7	Molybdenum	1.1E-03	D
7440-02-0	Nickel ^b	2.1E-03	C
7782-49-2	Selenium ^b	<2.4E-05	E
7440-62-2	Vanadium	2.3E-03	D
7440-66-6	Zinc	2.9E-02	E

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. Emission factors preceded by a less-than symbol are based on method detection limits. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to 1b/MMBtu, divide by 1,020.

^b Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.



Typical Flue Product Emissions Data for Power Flame Burners

	Natural Gas	# 2 Fuel Oil (1)
Carbon Monoxide - CO	.037 lb CO per 10 ⁶ BTU input (50 PPM)	.037 lb per 10 ⁶ BTU INPUT (50 PPM)
Sulfur Dioxide - SO ₂	(1.05) x (% Sulphur by weight in fuel) = lb SO ₂ per 10 ⁶ BTU Input	
Particulate Matter	.0048 lb PM per 10 ⁶ BTU input	.0143 lb PM per 10 ⁶ BTU input
Hydrocarbons	.025 lb HC's per 10 ⁶ BTU input	.038 lb HC's per 10 ⁶ BTU input
CO ₂	9 % to 10%	10% to 13%
Nitrogen Oxides - NO_x		
Standard J, FDM & X4 Gas Burners	.088 lb NO _x per 10 ⁶ BTU input (75 PPM)	N/A N/A
Standard C Burners	.088 lb NO _x per 10 ⁶ BTU input (75 PPM)	.159 lb NO _x per 10 ⁶ BTU Input (120) PPM
LNIAC Burners	.029 lb NO _x per 10 ⁶ BTU input (25 PPM)	.12 lb NO _x per 10 ⁶ BTU Input (90) PPM
CM Burners	.070 lb NO _x per 10 ⁶ BTU input (60 PPM)	.146 lb NO _x per 10 ⁶ BTU Input (110) PPM
IFGR LNIC NO _x Burners	.029 lb NO _x per 10 ⁶ BTU input (25 PPM)	.126 lb NO _x per 10 ⁶ BTU Input (110) PPM
LNICM Burners	.029 lb NO _x per 10 ⁶ BTU input (25) PPM	.12 lb NO _x per 10 ⁶ BTU Input (90) PPM
NPM Premix Burners	.029 lb NO _x per 10 ⁶ BTU input (25) PPM	N/A N/A
Nova Plus Burners	.010 lb NO _x per 10 ⁶ BTU input (9) PPM	N/A N/A

(1) NO_x emissions at 3.0 % O₂ will vary based on the percent of fuel bound nitrogen and boiler or heat exchanger configurations

These emission rates are general estimates and do not constitute guarantees by Power Flame Inc. In instances where guarantees are required, please consult the factory with the specific application information.

Appendix B

Internal Combustion

Table 3.3-1. EMISSION FACTORS FOR UNCONTROLLED GASOLINE AND DIESEL INDUSTRIAL ENGINES^a

Pollutant	Gasoline Fuel (SCC 2-02-003-01, 2-03-003-01)		Diesel Fuel (SCC 2-02-001-02, 2-03-001-01)		EMISSION FACTOR RATING
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	
NO _x	0.011	1.63	0.031	4.41	D
CO	0.439	62.7	6.68 E-03	0.95	D
SO _x	5.91 E-04	0.084	2.05 E-03	0.29	D
PM-10 ^b	7.21 E-04	0.10	2.20 E-03	0.31	D
CO ₂ ^c	1.08	154	1.15	164	B
Aldehydes	4.85 E-04	0.07	4.63 E-04	0.07	D
TOC					
Exhaust	0.015	2.10	2.47 E-03	0.35	D
Evaporative	6.61 E-04	0.09	0.00	0.00	E
Crankcase	4.85 E-03	0.69	4.41 E-05	0.01	E
Refueling	1.08 E-03	0.15	0.00	0.00	E

^a References 2.5-6.9-14. When necessary, an average brake-specific fuel consumption (BSFC) of 7.000 Btu/hp-hr was used to convert from lb/MMBtu to lb/hp-hr. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code. TOC = total organic compounds.

^b PM-10 = particulate matter less than or equal to 10 µm aerodynamic diameter. All particulate is assumed to be ≤ 1 µm in size.

^c Assumes 99% conversion of carbon in fuel to CO₂ with 87 weight % carbon in diesel, 86 weight % carbon in gasoline, average BSFC of 7.000 Btu/hp-hr, diesel heating value of 19.300 Btu/lb, and gasoline heating value of 20.300 Btu/lb.

Table 3.3-2. SPECIATED ORGANIC COMPOUND EMISSION FACTORS FOR UNCONTROLLED DIESEL ENGINES^a

EMISSION FACTOR RATING: E

Pollutant	Emission Factor (Fuel Input) (lb/MMBtu)
Benzene ^b	9.33 E-04
Toluene ^b	4.09 E-04
Xylenes ^b	2.85 E-04
Propylene ^b	2.58 E-03
1,3-Butadiene ^{b,c}	<3.91 E-05
Formaldehyde ^h	1.18 E-03
Acetaldehyde ^h	7.67 E-04
Acrolein ^h	<9.25 E-05
Polycyclic aromatic hydrocarbons (PAH)	
Naphthalene ^h	8.48 E-05
Acenaphthylene	<5.06 E-06
Acenaphthene	<1.42 E-06
Fluorene	2.92 E-05
Phenanthrene	2.94 E-05
Anthracene	1.87 E-06
Fluoranthene	7.61 E-06
Pyrene	4.78 E-06
Benzo(a)anthracene	1.68 E-06
Chrysene	3.53 E-07
Benzo(b)fluoranthene	<9.91 E-08
Benzo(k)fluoranthene	<1.55 E-07
Benzo(a)pyrene	<1.88 E-07
Indeno(1,2,3-cd)pyrene	<3.75 E-07
Dibenzo(a,h)anthracene	<5.83 E-07
Benzo(g,h,i)perylene	<4.89 E-07
TOTAL PAH	1.68 E-04

^a Based on the uncontrolled levels of 2 diesel engines from References 6-7. Source Classification Codes 2-02-001-02, 2-03-001-01. To convert from lb/MMBtu to ng/J, multiply by 430.

^b Hazardous air pollutant listed in the *Clean Air Act*.

^c Based on data from 1 engine.

Table 3.4-1. GASEOUS EMISSION FACTORS FOR LARGE STATIONARY DIESEL AND ALL STATIONARY DUAL-FUEL ENGINES^a

Pollutant	Diesel Fuel (SCC 2-02-004-01)			Dual Fuel ^b (SCC 2-02-004-02)		
	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	EMISSION FACTOR RATING	Emission Factor (lb/hp-hr) (power output)	Emission Factor (lb/MMBtu) (fuel input)	EMISSION FACTOR RATING
NO _x						
Uncontrolled	0.024	3.2	B	0.018	2.7	D
Controlled	0.013 ^c	1.9 ^c	B	ND	ND	NA
CO	5.5 E-03	0.85	C	7.5 E-03	1.16	D
SO _x ^d	8.09 E-03S ₁	1.01S ₁	B	4.06 E-04S ₁ + 9.57 E-03S ₂	0.05S ₁ + 0.895S ₂	B
CO ₂ ^e	1.16	165	B	0.772	110	B
PM	0.0007 ^c	0.1 ^c	B	ND	ND	NA
TOC (as CH ₄)	7.05 E-04	0.09	C	5.29 E-03	0.8	D
Methane	f	f	E	3.97 E-03	0.6	E
Nonmethane	f	f	E	1.32 E-03	0.2 ^g	E

^a Based on uncontrolled levels for each fuel, from References 2,6-7. When necessary, the average heating value of diesel was assumed to be 19,300 Btu/lb with a density of 7.1 lb/gallon. The power output and fuel input values were averaged independently from each other, because of the use of actual brake-specific fuel consumption (BSFC) values for each data point and of the use of data possibly sufficient to calculate only 1 of the 2 emission factors (e. g., enough information to calculate lb/MMBtu, but not lb/hp-hr). Factors are based on averages across all manufacturers and duty cycles. The actual emissions from a particular engine or manufacturer could vary considerably from these levels. To convert from lb/hp-hr to kg/kw-hr, multiply by 0.608. To convert from lb/MMBtu to ng/J, multiply by 430. SCC = Source Classification Code.

^b Dual fuel assumes 95% natural gas and 5% diesel fuel.

^c References 8-26. Controlled NO_x is by ignition timing retard.

^d Assumes that all sulfur in the fuel is converted to SO₂. S₁ = % sulfur in fuel oil; S₂ = % sulfur in natural gas. For example, if sulfur content is 1.5%, then S = 1.5.

^e Assumes 100% conversion of carbon in fuel to CO₂ with 87 weight % carbon in diesel, 70 weight % carbon in natural gas, dual-fuel mixture of 5% diesel with 95% natural gas, average BSFC of 7,000 Btu/hp-hr, diesel heating value of 19,300 Btu/lb, and natural gas heating value of 1050 Btu/scf.

^f Based on data from 1 engine, TOC is by weight 9% methane and 91% nonmethane.

^g Assumes that nonmethane organic compounds are 25% of TOC emissions from dual-fuel engines. Molecular weight of nonmethane gas stream is assumed to be that of methane.

**Table 3.4-2. PARTICULATE AND PARTICLE-SIZING
EMISSION FACTORS FOR LARGE UNCONTROLLED STATIONARY DIESEL ENGINES^a**

EMISSION FACTOR RATING: E

Pollutant	Emission Factor (lb/MMBtu) (fuel input)
Filterable particulate ^b	
< 1 μm	0.0478
< 3 μm	0.0479
< 10 μm	0.0496
Total filterable particulate	0.0620
Condensable particulate	0.0077
Total PM-10 ^c	0.0573
Total particulate ^d	0.0697

^a Based on 1 uncontrolled diesel engine from Reference 6. Source Classification Code 2-02-004-01. The data for the particulate emissions were collected using Method 5, and the particle size distributions were collected using a Source Assessment Sampling System. To convert from lb/MMBtu to ng/J, multiply by 430. PM-10 = particulate matter \leq 10 micrometers (μm) aerometric diameter.

^b Particle size is expressed as aerodynamic diameter.

^c Total PM-10 is the sum of filterable particulate less than 10 μm aerodynamic diameter and condensable particulate.

^d Total particulate is the sum of the total filterable particulate and condensable particulate.

Table 3.4-3. SPECIATED ORGANIC COMPOUND EMISSION FACTORS FOR LARGE UNCONTROLLED STATIONARY DIESEL ENGINES^a

EMISSION FACTOR RATING: E

Pollutant	Emission Factor (lb/MMBtu) (fuel input)
Benzene ^b	7.76 E-04
Toluene ^b	2.81 E-04
Xylenes ^b	1.93 E-04
Propylene	2.79 E-03
Formaldehyde ^b	7.89 E-05
Acetaldehyde ^b	2.52 E-05
Acrolein ^b	7.88 E-06

^aBased on 1 uncontrolled diesel engine from Reference 7. Source Classification Code 2-02-004-01. Not enough information to calculate the output-specific emission factors of lb/hp-hr. To convert from lb/MMBtu to ng/J, multiply by 430.

^bHazardous air pollutant listed in the *Clean Air Act*.

Table 3.4-4. PAH EMISSION FACTORS FOR LARGE UNCONTROLLED STATIONARY DIESEL ENGINES^a

EMISSION FACTOR RATING: E

PAH	Emission Factor (lb/MMBtu) (fuel input)
Naphthalene ^b	1.30 E-04
Acenaphthylene	9.23 E-06
Acenaphthene	4.68 E-06
Fluorene	1.28 E-05
Phenanthrene	4.08 E-05
Anthracene	1.23 E-06
Fluoranthene	4.03 E-06
Pyrene	3.71 E-06
Benz(a)anthracene	6.22 E-07
Chrysene	1.53 E-06
Benzo(b)fluoranthene	1.11 E-06
Benzo(k)fluoranthene	<2.18 E-07
Benzo(a)pyrene	<2.57 E-07
Indeno(1,2,3-cd)pyrene	<4.14 E-07
Dibenz(a,h)anthracene	<3.46 E-07
Benzo(g,h,l)perylene	<5.56 E-07
TOTAL PAH	<2.12 E-04

^a Based on 1 uncontrolled diesel engine from Reference 7. Source Classification Code 2-02-004-01. Not enough information to calculate the output-specific emission factors of lb/hp-hr. To convert from lb/MMBtu to ng/J, multiply by 430.

^b Hazardous air pollutant listed in the *Clean Air Act*.

Electronic Code of Federal Regulations

e-CFR™

e-CFR Data is current as of August 18, 2010

Title 40: Protection of Environment**PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES****Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**[Browse Next](#)**Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder**

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO _x	HC	NO _x	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8 ≤KW<19 (11 ≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19 ≤KW<37 (25 ≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37 ≤KW<56 (50 ≤HP<75)			9.2 (6.9)		
56 ≤KW<75 (75 ≤HP<100)			9.2 (6.9)		
75 ≤KW<130 (100 ≤HP<175)			9.2 (6.9)		
130 ≤KW<225 (175 ≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225 ≤KW<450 (300 ≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450 ≤KW ≤560 (600 ≤HP ≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Appendix B
Data Disintegrator

SECURITY ENGINEERED MACHINERY

ENGINEERING REPORT

SEM Document Disintegrators with Waste Evacuation/Air Systems

This evaluation report is prepared as an outline of 'how' the disintegrator and waste collection units function and effectively provide a clean air environment to satisfy state and local requirements.

The Document Destruction system is comprised of two basic units: (1) a mechanical cutting machine and (2) a Waste Evacuation/Air System.

The security disintegrator machine destroys paper, micrographics and other materials by a dry slicing and cutting process that leaves the end result in the shape of miniature confetti particles.

The Waste Evacuation system pulls the confetti waste particles through a security screen, located in the base of the machine. The confetti particles travel in an air stream via a rigid duct run, to a fan cyclone separator. The waste particles are then deposited into a waste container. The air system is supplied with a dust filter which exhausts clean filtered air. The optional air lock valve permits 'zero-pressure' discharge at the waste container, allowing waste particles to fall by gravity.

Since basis for concern of dust emission while using SEM Disintegrator systems is quite often brought up in discussion, the concern has been somewhat eased due to the fact that the waste materials and dust particles are traveling in a closed system/ductwork.

Engineers and consultants who have designed and installed the inter-connecting pneumatic/paper waste removal systems generally have been confident that these type of systems are in fact safe, due to the low concentration of materials in a rapidly moving air stream.

The after filters remove dust particles as small as 0.3 microns, returning clean air into the work area where permitted.

The cyclone efficiency is based on percentage and micron size as follows:

- 99% - 20 microns
- 85% - 10 microns
- 80% - 9 microns
- 75% - 8 microns ← *Average*
- 60% - 7 microns
- 50% - 6 microns



5 Walkup Drive • Westboro, MA 01581 • (508) 366-1488 • Fax (508) 836-4154 • www.semshred.com

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The world leader in document and sensitive waste destruction solutions

The cloth tube filter efficiency is as follows:

- 99% - 5 microns
- 98% - 3 microns
- 97% - 2 microns
- 93% - 1 micron
- 90% - .6 micron
- 88% - .5 micron
- 85% - .4 micron
- 82% - .3 micron

Most dust residue is in the range of 5-20 micron.
 ∴ Considering the upper range of efficiencies & taking an average to get 95%; this would be a conservative estimate

The cloth bag filter efficiency of F-type fan systems is approximately as follows:

- N/A
 (BAG TYPE)
- 99% - 7 microns
 - 98% - 5 microns
 - 91% - 1 micron
 - 85% - .5 micron

If you have any questions or need additional information, please contact us at 1-800-225-9293.

Very truly yours,

Lawrence W. Parker
 Lawrence W. Parker
 Engineering Manager

3/00 LWP



Notes: Leslie Martinez

11/6/03 - SEM 1800 308 9283

- Mike Wakefield - Sales Rep.

Paper Shredder.

Model: 1424

→ Max. capacity not 2200 lbs/hr as shown on web due to ^{requirements, a} lank's High Security Screen was purchased which reduces the capacity of the paper shredder.

* Optional features.

- air lock valve

- High Security Screen.

- cloth-tube filter. FT40-model.

→ w/ Regards to Exhaust Rate & Particle distribution & efficiency Mike referred me to the Engineers of these systems.

Larry Parker / David LaFrance 1800 225 9293

→

Larry ^{Parker} 11/6/03 SEM 1800:225-9293 Ext. 1040.

→ Exhaust Rate of 1200 cfm w/ a 7" duct.

- asked for pre & post air system emissions

- asked for Distribution of efficiencies

relative to PM.

- Air System is vented to outdoors.

517.263.578) 11/17/03 Ray Wakefield ABET Manufacturing (cyclone/air system)
10-15% of material shredded could potentially be emitted in an uncontrolled system (i.e. No Air System)

→

Appendix B

Power Plant



4221-A Balloon Park Road NE
Albuquerque, NM 87109

505.761.0099 PHONE
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www.TRCSolutions.com

July 2, 2010

David L. Paulson, CSP, CHMM, CESM
Ecology and Air Quality Group
Environmental Protection Division
Los Alamos National Laboratory

RE: Annual Emissions Testing of CT-1 at TA-3

Dear Mr. Paulson:

Enclosed with this letter are the summary of results and supporting documentation for the annual testing performed on the combustion turbine (Source ID CT-1) located at TA-3 at Los Alamos National Labs on June 17, 2010.

Exhaust emissions vented to the atmosphere were measured in the stack of the unit according to the New Mexico Environment Department's SOP for Using Portable Analyzers in Performance Testing. Stack flow rates were directly measured by the use of EPA Methods 1-4. Method 19 (based on fuel consumption) was additionally used to compare the volumetric flow rate.

Mass emissions rates in terms of pounds per hour and tons per year were calculated to determine compliance with the permits in place for this unit. Six twenty-minute test runs were performed on the unit, three each at two load conditions. The attached data sheets give a detailed summary of the results of this test. The quality assurance data sheets are also attached. Data files are available in the Albuquerque office.

Please feel free to call me at (505) 238-2088 with any questions.

Sincerely,

Richard Stallings

Summary of Results and Unit Operational Data: Unit CT-1 (100% Load)

Client: Los Alamos National Labs
 Location: TA-3
 Source: Rolls-Royce Gas Turbine (Unit CT-1)
 Technicians: RS/GG

Test Number	1	2	3	
Date	6/17/2010	6/17/2010	6/17/2010	
Start Time	12:14	12:41	13:14	
Stop Time	12:34	13:01	13:34	
Turbine/Generator Operation				
NL (RPM)	6380	6380	6380	
NH (RPM)	9114	9114	9114	
PT (RPM)	4846	4846	4846	
Ambient (°F)	77	77	77	
GG Exit (°F)	1452	1452	1452	
P30 (psia)	226	226	226	
Ambient Conditions				
Atmospheric Pressure (in. Hg)	30.20	30.20	30.20	
Fuel Heating Value (BTU) (HHV @ 60°F & 30 in. Hg)				
Fuel Heating Value (BTU) (HHV @ 60°F & 30 in. Hg)	1022.95	1022.95	1022.95	
Fuel Flow Rate from Turbine Reference Meter (SCFH)				
Fuel Flow Rate from Turbine Reference Meter (SCFH)	218240	215835	215975	
Fuel O2 F-Factor (DSCF/MMBTU)				
Fuel O2 F-Factor (DSCF/MMBTU)	8640.92	8640.92	8640.92	
Measured Emissions (dry) (corrected per equation 7e-5)				Averages
NOx (ppmv)	15.3	15.1	14.9	15.1
CO (ppmv)	10.9	9.8	9.6	10.1
O2 (%)	15.0	15.0	15.0	14.97
CO2 (%)	3.1	3.1	3.1	3.08
Fo Factor	1.93	1.92	1.93	1.93
Exhaust Flow Rates				
via EPA Methods 1-4, O2 F-Factor (DSCFH)	8.75E+06	8.75E+06	8.75E+06	8.75E+06
via EPA Method 19, O2 F-Factor (DSCFH)	6.79E+06	6.73E+06	6.75E+06	6.76E+06
Mass Emission Rates (Based on Methods 1-4)				
NOx (lbs/hr)	15.96	15.75	15.53	15.75
CO (lbs/hr)	6.91	6.24	6.10	6.42
NSR Permit 2195-BM1 Allowable Emissions				
Allowable NOx Emissions (lb/hr)				23.8
Allowable CO Emissions (lb/hr)				170.9

Testing by TRC Air Measurements, Albuquerque, New Mexico

Summary of Results and Unit Operational Data: Unit CT-1 (80% Load)

Client: Los Alamos National Labs
 Location: TA-3
 Source: Rolls-Royce Gas Turbine (Unit CT-1)
 Technicians: RS/GG

Test Number	4	5	6	
Date	6/17/2010	6/17/2010	6/17/2010	
Start Time	13:44	14:11	14:37	
Stop Time	14:04	14:31	14:57	
Turbine/Generator Operation				
NL (RPM)	6381	6378	6202	
NH (RPM)	9118	9119	8923	
PT (RPM)	4847	4846	4846	
Ambient (°F)	79	79	79	
GG Exit (°F)	1452	1452	1369	
P30 (psia)	227	226	202	
Ambient Conditions				
Atmospheric Pressure (in. Hg)	30.20	30.20	30.20	
Fuel Heating Value (BTU) (HHV @ 60°F & 30 in. Hg)				
Fuel Heating Value (BTU) (HHV @ 60°F & 30 in. Hg)	1022.95	1022.95	1022.95	
Fuel Flow Rate from Turbine Reference Meter (SCFH)				
Fuel Flow Rate from Turbine Reference Meter (SCFH)	216130	207225	184300	
Fuel O2 F-Factor (DSCF/MMBTU)				
Fuel O2 F-Factor (DSCF/MMBTU)	8640.92	8640.92	8640.92	
Measured Emissions (dry) (corrected per equation 7e-5)				Averages
NOx (ppmv)	16.6	17.1	17.1	17.0
CO (ppmv)	14.7	14.4	13.8	14.3
O2 (%)	15.4	15.4	15.4	15.37
CO2 (%)	2.8	2.8	2.8	2.81
Fo Factor	1.98	1.97	1.96	1.97
Exhaust Flow Rates				
via EPA Methods 1-4, O2 F-Factor (DSCFH)	7.47E+06	7.47E+06	7.47E+06	7.47E+06
via EPA Method 19, O2 F-Factor (DSCFH)	7.23E+06	6.93E+06	6.14E+06	6.77E+06
Mass Emission Rates (Based on Methods 1-4)				
NOx (lbs/hr)	14.83	15.28	15.28	15.13
CO (lbs/hr)	7.99	7.80	7.47	7.75
NSR Permit 2195-BM1 Allowable Emissions				
Allowable NOx Emissions (lb/hr)				23.8
Allowable CO Emissions (lb/hr)				170.9

Testing by TRC Air Measurements, Albuquerque, New Mexico



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February 15, 2011

David L. Paulson, CSP, CHMM, CESM
Ecology and Air Quality Group
Environmental Protection Division
Los Alamos National Laboratory

RE: Annual Emissions Testing of CT-1 at TA-3

Dear Mr. Paulson:

Enclosed with this letter are the summary of results and supporting documentation for the annual testing performed on the combustion turbine (Source ID CT-1) located at TA-3 at Los Alamos National Labs on January 19, 2011.

Exhaust emissions vented to the atmosphere were measured in the stack of the unit according to the New Mexico Environment Department's SOP for Using Portable Analyzers in Performance Testing. Stack flow rates were directly measured by the use of EPA Methods 1-4. Method 19 (based on fuel consumption) was additionally used to compare the volumetric flow rate.

Mass emissions rates in terms of pounds per hour and tons per year were calculated to determine compliance with the permits in place for this unit. Six twenty-minute test runs were performed on the unit, three each at two load conditions. The attached data sheets give a detailed summary of the results of this test. The quality assurance data sheets are also attached. Data files are available in the Albuquerque office.

Please feel free to call me at (505) 238-2088 with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Stallings", written over a horizontal line.

Richard Stallings

Summary of Results and Unit Operational Data: Unit CT-1 (100% Load)

Client: Los Alamos National Labs
 Location: TA-3
 Source: Rolls-Royce Gas Turbine (Unit CT-1)
 Technicians: RS/GG

Test Number	1	2	3	
Date	1/19/2011	1/19/2011	1/19/2011	
Start Time	7:25	7:53	8:21	
Stop Time	7:45	8:13	8:41	
Turbine/Generator Operation				
NL (RPM)	6424	6424	6422	
NH (RPM)	9101	9101	9101	
PT (RPM)	4848	4848	4846	
Ambient (°F)	34	34	34	
GG Exit (°F)	1452	1452	1452	
Ambient Conditions				
Atmospheric Pressure (in. Hg)	22.68	22.68	22.68	
Fuel Heating Value (BTU) (HHV @ 60°F & 30 in. Hg)	1029.29	1029.29	1029.29	
Fuel Flow Rate from Turbine Reference Meter (SCFH)	257980	257790	258170	
Fuel O2 F-Factor (DSCF/MMBTU)	8646.74	8646.74	8646.74	
Measured Emissions (dry) (corrected per equation 7e-5)				Averages
NOx (ppmv)	17.9	17.7	17.5	17.7
CO (ppmv)	4.6	3.8	3.8	4.1
O2 (%)	14.8	14.8	14.8	14.80
CO2 (%)	3.8	3.8	3.8	3.80
Fo Factor	1.61	1.59	1.62	1.61
Exhaust Flow Rates				
via EPA Methods 1-4, O2 F-Factor (DSCFH)	1.04E+07	9.99E+06	9.62E+06	9.99E+06
via EPA Method 19, O2 F-Factor (DSCFH)	7.82E+06	7.92E+06	7.86E+06	7.86E+06
Mass Emission Rates (Based on Methods 1-4)				
NOx (lbs/hr)	22.15	21.07	20.07	21.09
CO (lbs/hr)	3.45	2.73	2.66	2.95
NSR Permit 2195-BM1 Allowable Emissions				
			Allowable NOx Emissions (lb/hr)	23.8
			Allowable CO Emissions (lb/hr)	170.9

Summary of Results and Unit Operational Data: Unit CT-1 (80% Load)

Client: Los Alamos National Labs
 Location: TA-3
 Source: Rolls-Royce Gas Turbine (Unit CT-1)
 Technicians: RS/GG

Test Number	4	5	6	
Date	1/19/2011	1/19/2011	1/19/2011	
Start Time	10:00	10:28	11:01	
Stop Time	10:20	10:48	11:21	
Turbine/Generator Operation				
NL (RPM)	6138	6146	6151	
NH (RPM)	8807	8817	8822	
PT (RPM)	4847	4847	4845	
Ambient (°F)	39.2	39.2	39.2	
GG Exit (°F)	1321	1326	1330	
Ambient Conditions				
Atmospheric Pressure (in. Hg)	22.68	22.68	22.68	
Fuel Heating Value (BTU) (HHV @ 60°F & 30 in. Hg)				
Fuel Heating Value (BTU) (HHV @ 60°F & 30 in. Hg)	1029.29	1029.29	1029.29	
Fuel Flow Rate from Turbine Reference Meter (SCFH)	209750	210010	211240	
Fuel O2 F-Factor (DSCF/MMBTU)	8646.74	8646.74	8646.74	
Measured Emissions (dry) (corrected per equation 7e-5)				Averages
NOx (ppmv)	19.8	19.9	19.8	19.9
CO (ppmv)	25.6	22.6	17.3	21.9
O2 (%)	15.4	15.4	15.4	15.39
CO2 (%)	3.4	3.4	3.4	3.40
Fo Factor	1.61	1.63	1.61	1.62
Exhaust Flow Rates				
via EPA Methods 1-4, O2 F-Factor (DSCFH)	8.19E+06	8.33E+06	8.08E+06	8.20E+06
via EPA Method 19, O2 F-Factor (DSCFH)	7.08E+06	7.08E+06	7.13E+06	7.10E+06
Mass Emission Rates (Based on Methods 1-4)				
NOx (lbs/hr)	19.40	19.80	19.12	19.44
CO (lbs/hr)	15.24	13.69	10.16	13.03
NSR Permit 2195-BM1 Allowable Emissions				
			Allowable NOx Emissions (lb/hr)	23.8
			Allowable CO Emissions (lb/hr)	170.9

Table 3.1-3. EMISSION FACTORS FOR HAZARDOUS AIR POLLUTANTS FROM NATURAL GAS-FIRED STATIONARY GAS TURBINES^a

Emission Factors ^b - Uncontrolled		
Pollutant	Emission Factor (lb/MMBtu) ^c	Emission Factor Rating
1,3-Butadiene ^d	< 4.3 E-07	D
Acetaldehyde	4.0 E-05	C
Acrolein	6.4 E-06	C
Benzene ^e	1.2 E-05	A
Ethylbenzene	3.2 E-05	C
Formaldehyde ^f	7.1 E-04	A
Naphthalene	1.3 E-06	C
PAH	2.2 E-06	C
Propylene Oxide ^d	< 2.9 E-05	D
Toluene	1.3 E-04	C
Xylenes	6.4 E-05	C

^a SCC for natural gas-fired turbines include 2-01-002-01, 2-02-002-01, 2-02-002-03, 2-03-002-02, and 2-03-002-03. Hazardous Air Pollutants as defined in Section 112 (b) of the *Clean Air Act*.

^b Factors are derived from units operating at high loads (>80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at "www.epa.gov/ttn/chief".

^c Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10⁶ scf), multiply by 1020. These emission factors can be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this heating value.

^d Compound was not detected. The presented emission value is based on one-half of the detection limit.

^e Benzene with SCONOX catalyst is 9.1 E-07, rating of D.

^f Formaldehyde with SCONOX catalyst is 2.0 E-05, rating of D.

Table 3.1-2a. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM STATIONARY GAS TURBINES

Emission Factors ^a - Uncontrolled				
Pollutant	Natural Gas-Fired Turbines ^b		Distillate Oil-Fired Turbines ^d	
	(lb/MMBtu) ^c (Fuel Input)	Emission Factor Rating	(lb/MMBtu) ^c (Fuel Input)	Emission Factor Rating
CO ₂ ^f	110	A	157	A
N ₂ O	0.003 ^g	E	ND	NA
Lead	ND	NA	1.4 E-05	C
SO ₂	0.94S ^h	B	1.01S ^h	B
Methane	8.6 E-03	C	ND	NA
VOC	2.1 E-03	D	4.1 E-04 ^j	E
TOC ^k	1.1 E-02	B	4.0 E-03 ^l	C
PM (condensable)	4.7 E-03 ^l	C	7.2 E-03 ^l	C
PM (filterable)	1.9 E-03 ^l	C	4.3 E-03 ^l	C
PM (total)	6.6 E-03 ^l	C	1.2 E-02 ^l	C

^a Factors are derived from units operating at high loads (≥ 80 percent load) only. For information on units operating at other loads, consult the background report for this chapter (Reference 16), available at "www.epa.gov/ttn/chiefp". ND = No Data, NA = Not Applicable.

^b SCCs for natural gas-fired turbines include 2-01-002-01, 2-02-002-01 & 03, and 2-03-002-02 & 03.

^c Emission factors based on an average natural gas heating value (HHV) of 1020 Btu/scf at 60°F. To convert from (lb/MMBtu) to (lb/10⁶ scf), multiply by 1020. Similarly, these emission factors can be converted to other natural gas heating values.

^d SCCs for distillate oil-fired turbines are 2-01-001-01, 2-02-001-01, 2-02-001-03, and 2-03-001-02.

^e Emission factors based on an average distillate oil heating value of 139 MMBtu/10³ gallons. To convert from (lb/MMBtu) to (lb/10³ gallons), multiply by 139.

^f Based on 99.5% conversion of fuel carbon to CO₂ for natural gas and 99% conversion of fuel carbon to CO₂ for distillate oil. CO₂ (Natural Gas) [lb/MMBtu] = (0.0036 scf/Btu)(%CON)(C)(D), where %CON = weight percent conversion of fuel carbon to CO₂, C = carbon content of fuel by weight, and D = density of fuel. For natural gas, C is assumed at 75%, and D is assumed at 4.1 E+04 lb/10⁶scf. For distillate oil, CO₂ (Distillate Oil) [lb/MMBtu] = (26.4 gal/MMBtu) (%CON)(C)(D), where C is assumed at 87%, and the D is assumed at 6.9 lb/gallon.

^g Emission factor is carried over from the previous revision to AP-42 (Supplement B, October 1996) and is based on limited source tests on a single turbine with water-steam injection (Reference 5).

^h All sulfur in the fuel is assumed to be converted to SO₂. S = percent sulfur in fuel. Example, if sulfur content in the fuel is 3.4 percent, then S = 3.4. If S is not available, use 3.4 E-03 lb/MMBtu for natural gas turbines, and 3.3 E-02 lb/MMBtu for distillate oil turbines (the equations are more accurate).

^j VOC emissions are assumed equal to the sum of organic emissions.

^k Pollutant referenced as THC in the gathered emission tests. It is assumed as TOC, because it is based on EPA Test Method 25A.

^l Emission factors are based on combustion turbines using water-steam injection.

TABLE 1.4-2. EMISSION FACTORS FOR CRITERIA POLLUTANTS AND GREENHOUSE GASES FROM NATURAL GAS COMBUSTION^a

Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
CO ₂ ^b	120,000	A
Lead	0.0005	D
N ₂ O (Uncontrolled)	2.2	E
N ₂ O (Controlled-low-NO _x burner)	0.64	E
PM (Total) ^c	<u>7.6</u>	D
PM (Condensable) ^c	5.7	D
PM (Filterable) ^c	1.9	B
SO ₂ ^d	<u>0.6</u>	A
TOC	11	B
Methane	2.3	B
VOC	<u>5.5</u>	C

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. TOC = Total Organic Compounds. VOC = Volatile Organic Compounds.

^b Based on approximately 100% conversion of fuel carbon to CO₂. $CO_2[\text{lb}/10^6 \text{ scf}] = (3.67) (\text{CON}) (\text{C})(\text{D})$, where CON = fractional conversion of fuel carbon to CO₂, C = carbon content of fuel by weight (0.76), and D = density of fuel, 4.2x10⁴ lb/10⁶ scf.

^c All PM (total, condensable, and filterable) is assumed to be less than 1.0 micrometer in diameter. Therefore, the PM emission factors presented here may be used to estimate PM₁₀, PM_{2.5} or PM₁ emissions. Total PM is the sum of the filterable PM and condensable PM. Condensable PM is the particulate matter collected using EPA Method 202 (or equivalent). Filterable PM is the particulate matter collected on, or prior to, the filter of an EPA Method 5 (or equivalent) sampling train.

^d Based on 100% conversion of fuel sulfur to SO₂. Assumes sulfur content is natural gas of 2,000 grains/10⁶ scf. The SO₂ emission factor in this table can be converted to other natural gas sulfur contents by multiplying the SO₂ emission factor by the ratio of the site-specific sulfur content (grains/10⁶ scf) to 2,000 grains/10⁶ scf.

Table 1.4-2 (Metric And English Units). EMISSION FACTORS FOR SULFUR DIOXIDE (SO₂), NITROGEN OXIDES (NO_x), AND CARBON MONOXIDE (CO) FROM NATURAL GAS COMBUSTION^a

Combustor Type (Size, 10 ⁶ Btu/hr Heat Input) (SCC) ^b	SO ₂ ^c		NO _x ^d		CO ^e				
	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	RATING	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	RATING	kg/10 ⁶ m ³	lb/10 ⁶ ft ³	RATING
Utility/large Industrial Boilers (>100) (1-01-006-01, 1-01-006-04)									
Uncontrolled	9.6	0.6	A	8800	550 ^f	A	640	40	A
Controlled - Low NO _x burners	9.6	0.6	A	1300	81 ^f	D	ND	ND	NA
Controlled - Flue gas recirculation	9.6	0.6	A	850	53 ^f	D	ND	ND	NA
Small Industrial Boilers (10 - 100) (1-02-006-02)									
Uncontrolled	9.6	0.6	A	2240	140	A	560	35	A
Controlled - Low NO _x burners	9.6	0.6	A	1300	81 ^f	D	980	61	D
Controlled - Flue gas recirculation	9.6	0.6	A	480	30	C	590	37	C
Commercial Boilers (0.3 - <10) (1-03-006-03)									
Uncontrolled	9.6	0.6	A	1600	100	B	330	21	C
Controlled - Low NO _x burners	9.6	0.6	A	270	17	C	425	27	C
Controlled - Flue gas recirculation	9.6	0.6	A	580	36	D	ND	ND	NA
Residential Furnaces (<0.3) (No SCC)									
Uncontrolled	9.6	0.6	A	1500	94	B	640	40	B

^a Units are kg of pollutant/10⁶ cubic meters natural gas fired and lb of pollutant/10⁶ cubic feet natural gas fired. Based on an average natural gas fired higher heating value of 8270 kcal/m³ (1000 Btu/scf). The emission factors in this table may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value. ND = no data. NA = not applicable.

^b SCC = Source Classification Code.

^c Reference 7. Based on average sulfur content of natural gas, 4600 g/10⁶ Nm³ (2000 gr/10⁶ scf).

Table 1.4-2 (cont.).

^d References 10,15-19. Expressed as NO₂. For tangentially fired units; use 4400 kg/10⁶ m³ (275 lb/10⁶ ft³). At reduced loads, multiply factor by load reduction coefficient in Figure 1.4-1. Note that NO_x emissions from controlled boilers will be reduced at low load conditions.

^e References 9-10,16-18,20-21.

^f Emission factors apply to packaged boilers only.

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION^a

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
91-57-6	2-Methylnaphthalene ^{b,c}	2.4E-05	D
56-49-5	3-Methylchloranthrene ^{b,c}	<1.8E-06	E
	7,12-Dimethylbenz(a)anthracene ^{b,c}	<1.6E-05	E
83-32-9	Acenaphthene ^{b,c}	<1.8E-06	E
203-96-8	Acenaphthylene ^{b,c}	<1.8E-06	E
120-12-7	Anthracene ^{b,c}	<2.4E-06	E
56-55-3	Benz(a)anthracene ^{b,c}	<1.8E-06	E
71-43-2	Benzene ^b	2.1E-03	B
50-32-8	Benzo(a)pyrene ^{b,c}	<1.2E-06	E
205-99-2	Benzo(b)fluoranthene ^{b,c}	<1.8E-06	E
191-24-2	Benzo(g,h,i)perylene ^{b,c}	<1.2E-06	E
205-82-3	Benzo(k)fluoranthene ^{b,c}	<1.8E-06	E
106-97-8	Butane	2.1E+00	E
218-01-9	Chrysene ^{b,c}	<1.8E-06	E
53-70-3	Dibenzo(a,h)anthracene ^{b,c}	<1.2E-06	E
25321-22-6	Dichlorobenzene ^b	1.2E-03	E
74-84-0	Ethane	3.1E+00	E
206-44-0	Fluoranthene ^{b,c}	3.0E-06	E
86-73-7	Fluorene ^{b,c}	2.8E-06	E
50-00-0	Formaldehyde ^b	7.5E-02	B
110-54-3	Hexane ^b	1.8E+00	E
193-39-5	Indeno(1,2,3-cd)pyrene ^{b,c}	<1.8E-06	E
91-20-3	Naphthalene ^b	6.1E-04	E
109-66-0	Pentane	2.6E+00	E
85-01-8	Phenanthrene ^{b,c}	1.7E-05	D

TABLE 1.4-3. EMISSION FACTORS FOR SPECIATED ORGANIC COMPOUNDS FROM NATURAL GAS COMBUSTION (Continued)

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
74-98-6	Propane	1.6E+00	E
129-00-0	Pyrene ^{b,c}	5.0E-06	E
108-88-3	Toluene ^b	3.4E-03	C

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020. Emission Factors preceded with a less-than symbol are based on method detection limits.

^b Hazardous Air Pollutant (HAP) as defined by Section 112(b) of the Clean Air Act.

^c HAP because it is Polycyclic Organic Matter (POM). POM is a HAP as defined by Section 112(b) of the Clean Air Act.

^d The sum of individual organic compounds may exceed the VOC and TOC emission factors due to differences in test methods and the availability of test data for each pollutant.

TABLE 1.4-4. EMISSION FACTORS FOR METALS FROM NATURAL GAS COMBUSTION^a

CAS No.	Pollutant	Emission Factor (lb/10 ⁶ scf)	Emission Factor Rating
7440-38-2	Arsenic ^b	2.0E-04	E
7440-39-3	Barium	4.4E-03	D
7440-41-7	Beryllium ^b	<1.2E-05	E
7440-43-9	Cadmium ^b	1.1E-03	D
7440-47-3	Chromium ^b	1.4E-03	D
7440-48-4	Cobalt ^b	8.4E-05	D
7440-50-8	Copper	8.5E-04	C
7439-96-5	Manganese ^b	3.8E-04	D
7439-97-6	Mercury ^b	2.6E-04	D
7439-98-7	Molybdenum	1.1E-03	D
7440-02-0	Nickel ^b	2.1E-03	C
7782-49-2	Selenium ^b	<2.4E-05	E
7440-62-2	Vanadium	2.3E-03	D
7440-66-6	Zinc	2.9E-02	E

^a Reference 11. Units are in pounds of pollutant per million standard cubic feet of natural gas fired. Data are for all natural gas combustion sources. Emission factors preceded by a less-than symbol are based on method detection limits. To convert from lb/10⁶ scf to kg/10⁶ m³, multiply by 16. To convert from lb/10⁶ scf to lb/MMBtu, divide by 1,020.

^b Hazardous Air Pollutant as defined by Section 112(b) of the Clean Air Act.

Table 1.3-1. CRITERIA POLLUTANT EMISSION FACTORS FOR FUEL OIL COMBUSTION^a

Firing Configuration (SCC) ^a	SO ₂ ^b		SO ₃ ^c		NO _x ^d		CO ^e		Filterable PM ^f	
	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING	Emission Factor (lb/10 ³ gal)	EMISSION FACTOR RATING
Boilers > 100 Million Btu/hr										
No. 6 oil fired, normal firing, (1-01-004-01), (1-02-004-01), (1-03-004-01)	157S	A	5.7S	C	47	A	5	A	9.19(S)+3.22	A
No. 6 oil fired, normal firing, low NO _x burner (1-01-004-01), (1-02-004-01)	157S	A	5.7S	C	40	B	5	A	9.19(S)+3.22	A
No. 6 oil fired, tangential firing, (1-01-004-04)	157S	A	5.7S	C	32	A	5	A	9.19(S)+3.22	A
No. 6 oil fired, tangential firing, low NO _x burner (1-01-004-04)	157S	A	5.7S	C	26	E	5	A	9.19(S)+3.22	A
No. 5 oil fired, normal firing (1-01-004-05), (1-02-004-04)	157S	A	5.7S	C	47	B	5	A	10	B
No. 5 oil fired, tangential firing (1-01-004-06)	157S	A	5.7S	C	32	B	5	A	10	B
No. 4 oil fired, normal firing (1-01-005-04), (1-02-005-04)	150S	A	5.7S	C	47	B	5	A	7	B
No. 4 oil fired, tangential firing (1-01-005-05)	150S	A	5.7S	C	32	B	5	A	7	B
No. 2 oil fired (1-01-005-01), (1-02-005-01), (1-03-005-01)	157S 142S	A	5.7S	C	24	D	5	A	2	A
No. 2 oil fired, LNB/FGR (1-01-005-01), (1-02-005-01), (1-03-005-01)	157S	A	5.7S	A	10	D	5	A	2	A



U.S. Environmental Protection Agency

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AP-42 Section 1.3 - Fuel Oil Combustion Errata

Updated 4/28/00

1. In table 1.3-1, for boilers > 100 million BTU/hr, the SO₂ emission factor for both no. 2 oil fired and for no. 2 oil fired with LNB/FGR, is 142S, not 157S. ←
2. In table 1.3-1, for boilers < 100 million BTU/hr, the filterable PM emission factor for no. 6 oil fired is 9.19(S)+3.22, not 10. The factor for no. 5 oil fired is 10, not 9.19(S)+3.22. These two factors were reversed.
3. In table 1.3-8, the correct N₂O factor is 0.53 lb/1000 gal for No 6 oil and 0.26 lb/1000 gal for distillate oil.

AP-42 Emission Factors by Chapter

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Last updated on Monday, July 1st, 2002

URL: <http://www.epa.gov/ttn/chief/ap42/ch01/final/c01s03erra.html>

Table 1.3-3. EMISSION FACTORS FOR TOTAL ORGANIC COMPOUNDS (TOC), METHANE, AND NONMETHANE TOC (NMTOC) FROM UNCONTROLLED FUEL OIL COMBUSTION^a

EMISSION FACTOR RATING: A

Firing Configuration (SCC)	TOC ^b Emission Factor (lb/10 ³ gal)	Methane ^b Emission Factor (lb/10 ³ gal)	NMTOC ^b Emission Factor (lb/10 ³ gal)
Utility boilers			
No. 6 oil fired, normal firing (1-01-004-01)	1.04	0.28	0.76
No. 6 oil fired, tangential firing (1-01-004-04)	1.04	0.28	0.76
No. 5 oil fired, normal firing (1-01-004-05)	1.04	0.28	0.76
No. 5 oil fired, tangential firing (1-01-004-06)	1.04	0.28	0.76
No. 4 oil fired, normal firing (1-01-005-04)	1.04	0.28	0.76
No. 4 oil fired, tangential firing (1-01-005-05)	1.04	0.28	0.76
Industrial boilers			
No. 6 oil fired (1-02-004-01/02/03)	1.28	1.00	0.28
No. 5 oil fired (1-02-004-04)	1.28	1.00	0.28
Distillate oil fired (1-02-005-01/02/03)	0.252	0.052	0.2
No. 4 oil fired (1-02-005-04)	0.252	0.052	0.2
Commercial/institutional/residential combustors			
No. 6 oil fired (1-03-004-01/02/03)	1.605	0.475	1.13
No. 5 oil fired (1-03-004-04)	1.605	0.475	1.13
Distillate oil fired (1-03-005-01/02/03)	0.556	0.216	0.34
No. 4 oil fired (1-03-005-04)	0.556	0.216	0.34
Residential furnace (A2104004/A2104011)	2.493	1.78	0.713

^a To convert from lb/10³ gal to kg/10³ L, multiply by 0.12. SCC = Source Classification Code.

^b References 29-32. Volatile organic compound emissions can increase by several orders of magnitude if the boiler is improperly operated or is not well maintained.

Appendix C

2012 Annual Compliance Certification



**New Mexico Environment Department
Air Quality Bureau
Compliance and Enforcement Section
1301 Siler Road Building B
Santa Fe, NM 87507
Phone (505) 476-4300 Fax (505) 476-4375**



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PLEASE NOTE: ® - Indicates required field

SECTION I - GENERAL COMPANY AND FACILITY INFORMATION					
A. ® Company Name: Los Alamos National Security			D. ® Facility Name: Los Alamos National Laboratory		
B.1 ® Company Address: P.O. Box 1663 MS J978			E.1 ® Facility Address: Same as Company		
B.2 ® City: Los Alamos		B.3 ® State: NM	B.4 ® Zip: 87545	E.2 ® City:	
E.3 ® State:		E.4 ® Zip:			
C.1 ® Company Environmental Contact: Patricia Gallagher		C.2 ® Title: ES Group Leader		F.1 ® Facility Contact: Steve Story	
F.2 ® Title: Air Compliance Team Leader		C.3 ® Phone Number: 505 667 2278		C.4 ® Fax Number: 505 665 8858	
F.3 ® Phone Number: 505 665 2169		F.4 ® Fax Number: 505 665 8858		C.5 ® Email Address: patg@lanl.gov	
F.5 ® Email Address: story@lanl.gov		G. Responsible Official: (Title V only): Michael T. Brandt		H. Title: Associate Director for ESH	
I. Phone Number: 505 667 4218		J. Fax Number: 505 665 3811			
K. ® AI Number: 856		L. Title V Permit Number: P100-R1-M1		M. Title V Permit Issue Date: 6/15/2012	
N. NSR Permit Number: 2195		O. NSR Permit Issue Date:			
P. Reporting Period: From: 6/15/2012 To: 12/31/2012			OR	Q. Proposed Test Date:	
			OR	R. Actual Test Date:	

SECTION II - TYPE OF SUBMITTAL (check one that applies)					
A.	<input checked="" type="checkbox"/>	Title V Annual Compliance Certification	Permit Condition(s): All	Description: LANL 2012 Compliance Certification Report (2 of 2 Reports)	
B.	<input type="checkbox"/>	Title V Semi-annual Monitoring Report	Permit Condition(s):	Description:	
C.	<input type="checkbox"/>	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:
D.	<input type="checkbox"/>	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:
E.	<input type="checkbox"/>	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:
F.	<input type="checkbox"/>	Permit or Notice of Intent (NOI) Requirement	Permit No. <input type="checkbox"/> or NOI No. <input type="checkbox"/>	Condition(s):	Description:
G.	<input type="checkbox"/>	Requirement of an Enforcement Action	NOV No. <input type="checkbox"/> or SFO No. <input type="checkbox"/> or CD No. <input type="checkbox"/> or Other <input type="checkbox"/>	Section(s):	Description:

SECTION III - PERIODIC EMISSIONS TEST NOTIFICATIONS, TEST PROTOCOLS AND TEST REPORTS (if applicable)						
T.	<input type="checkbox"/>	A. Test Report <input type="checkbox"/> CMT:	<input type="checkbox"/>	B. Test Protocol <input type="checkbox"/>	<input type="checkbox"/>	Description: (Emission Units to be Tested)
	<input type="checkbox"/>	D. Test (EPA Methods)	<input type="checkbox"/>	E. Test (EPA Methods)	<input type="checkbox"/>	
		<input type="checkbox"/>	F. RATA Test	<input type="checkbox"/>	G. Opacity Test	<input type="checkbox"/>
					H. Portable Analyzer (Periodic Test)	<input type="checkbox"/>

SECTION IV - CERTIFICATION					
After reasonable inquiry, I <u>Michael T. Brandt</u> certify that the information in this submittal is true, accurate and complete. (name of reporting official)					
® Signature of Reporting Official: 		® Title: Associate Director for ESH		® Date: 1/24/13	® Responsible Official for Title V? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Reviewed By: _____

Date Reviewed: _____



Associate Director for (ESH)
Environmental, Safety and Health

P. O. Box 1663, MS K491
Los Alamos, New Mexico 87545
505-667-4218/Fax 505-665-3811

Date: January 24, 2013
Refer To: ADESH-13-003

Manager, Compliance & Enforcement Section
New Mexico Environment Department
Air Quality Bureau
1301 Siler Road, Building B
Santa Fe, New Mexico 87507-3113

Dear Compliance & Enforcement Manager:

**SUBJECT: ANNUAL COMPLIANCE CERTIFICATION REPORTS FOR 2012
TITLE V OPERATING PERMIT P100
IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)**

Attached are Los Alamos National Laboratory's Title V Operating Permit Annual Compliance Certification Reports. On June 15, 2012, NMED issued a modification to the Operating Permit. The modified permit took on a new format and changes were made to several permit conditions. As requested by your bureau, two reports are being submitted. The first report is for the period **January 1 – June 15, 2012**, and the second report, using the new format, is for the period **June 15 – December 31, 2012**.

These reports are required by permit condition A109.C of Operating Permit P100-R1-M1, and are being submitted by January 30, 2013, as required by this condition. In addition, these certifications are made on the NMED provided Annual Compliance Certification Report Forms, is certified by LANL's "Responsible Official" as defined in 20.2.70 NMAC, and a copy is being provided to the U.S. EPA Region 6.

Part 2 of the report is the "Deviation Summary." There were no permit deviations during 2012.

If you have any questions or comments regarding this submittal or would like to discuss the submittal in greater detail, please contact Steve Story at (505) 665-2169 or David Paulson at (505) 665-8884.

Sincerely,

Michael T. Brandt, DrPH, MS, MPH, CIH
Associate Director for Environment, Safety, and Health

- Atts: 1. Los Alamos National Laboratory's Title V Operating Permit Annual Compliance Certification Report, January 1 — June 15, 2012
2. Los Alamos National Laboratory's Title V Operating Permit Annual Compliance Certification Report, June 15 — December 31, 2012

Cy: Chief, Air Enforcement Section, U.S. EPA Region 6, 6EN-AA, w/att.
Carl A. Beard, PADOPS, A102
Hai Shen, DOE-LASO, A316
Cynthia Blackwell, LC-EHS, A187
Alison M. Dorries, ENV-DO, K491
Patricia E. Gallagher, ENV-ES, J978
Steven L. Story, ENV-ES, J978
IRM-RMSSO, A150
ADESH File, K491
ENV-ES Title V Certification Report File w/att.

Title V Report Certification Form

I. Report Type

Annual Compliance Certification

Semi-Annual Monitoring Report

Other Specify:

II. Identifying Information

Facility Name: Los Alamos National Laboratory

Facility Address: P.O. Box 1663, MS J978, Los Alamos

State: NM

Zip: 87545

Responsible Official (RO): Michael T. Brandt

Phone: 505-667-4218

Fax: 505-665-3811

RO Title: Associate Director - Environmental, Safety, Health

RO e-mail: mtbrandt@lanl.gov

Permit No.: P100-R1-M1

Date Permit Issued: June 15, 2012

Report Due Date (as required by the permit): 01/30/2013

Permit AI number: 856

Time period covered by this Report: From: June 15, 2012

To: December 31, 2012

III. Certification of Truth, Accuracy, and Completeness

I am the Responsible Official indicated above. I, (Michael T. Brandt) certify that I meet the requirements of 20.2.70.7.AD NMAC. I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in the attached Title V report are true, accurate, and complete.

Signature



Date:

1/24/13

Attachment 2

2012 Annual Compliance Certification Data

For Title V Operating Permit P100-R1-M1

(June 15 - December 31, 2012)

LA-UR-13-20307

Approved for public release;
distribution is unlimited.

Title: Annual Compliance Certification Data for Title V Permit
Number P100-R1-M1 (2012 Reporting Year)

Author(s): David L. Paulson

Intended for: Manager, Compliance & Enforcement Section
New Mexico Environment Department-Air Quality Bureau
1301 Siler Road, Building B
Santa Fe, New Mexico 87507-3113



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Part 1 - Permit Requirements Certification Table

Annual Compliance Certification Data for Title V Permit No. P100-R1-M1				
1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>PART A FACILITY SPECIFIC REQUIREMENTS</p> <p style="text-align: center;"><u>A 101 Permit Duration (expiration)</u></p> <p>A. This permit P100R1M1 supersedes permit P100R1, and will expire on August 7, 2014. Application for renewal of this permit is due twelve (12) months prior to the date of expiration. (20.2.70.300.B.2 and 302.B NMAC)</p>	<p>The permit renewal application is on schedule to be submitted by August 7, 2013, 12 months prior to expiration.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p>B. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate beyond the expiration date, provided that a timely renewal application is submitted no later than twelve (12) months prior to the expiration date. (20.2.70.400.D NMAC)</p>	<p>The permit renewal application is on schedule to be submitted by August 7, 2013, 12 months prior to expiration.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>A102 Facility: Description</p> <p>B. The Laboratory is located at UTM Zone 13, UTMH 380.790 km, UTMV 3970.800 km, in and adjacent to Los Alamos, New Mexico in Los Alamos County. These coordinates are in north central New Mexico, approximately 60 miles north of Albuquerque and 25 miles northwest of Santa Fe. The facility borders the community of Los Alamos to the north and the community of White Rock toward the southeast. The surrounding land is largely undeveloped, with large tracts of land being held by Santa Fe National Forest, Bureau of Land Management, Bandelier National Monument, and San Ildefonso Pueblo. This facility is a stationary source and not allowed to relocate. (20.2.70.302.F NMAC)</p>	<p>The facility description and location provided in this permit condition are correct. These coordinates were determined using a geographical information system and identify the geographical center of the Laboratory.</p>	<p><input checked="" type="checkbox"/> Continuous</p> <p><input type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p>A103 Facility: Applicable Regulations and Non-Applicable Regulations</p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 103.A.</p>	<p>The applicable requirements for sources listed in this permit are covered in each source specific section. Refer to each section to see how the applicable requirements are addressed.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>

Table 103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permit Nos: 632, 634-M2, 1081-M1, 1081-M1-R1, 1081-M1-R3, 1081-M1-R5, 1081-M1-R6, 2195B-M2, 2195F-R3, GCP-3-2195G, 2195H, 2195N, 2195N-R1, and 2195P	X	As referenced in this permit.
20.2.1.116 General Provisions – Significant Figures	X	Entire Facility
20.2.7 NMAC Excess Emissions	X	Entire Facility
20.2.11 NMAC Asphalt Process Equipment	X	TA-60-BDM
20.2.33 NMAC Gas Burning Equipment – Nitrogen Dioxide	X	TA-3-22-1, TA-3-22-2, TA3-22-3

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
20.2.34 NMAC Oil Burning Equipment – Nitrogen Dioxide	X	TA-3-22-1, TA-3-22-2, TA3-22-3		
20.2.60 NMAC Open Burning	X	Entire Facility		
20.2.61 NMAC Smoke and Visible Emissions	X	All stationary combustion sources		
20.2.65 NMAC Smoke Management	X	Entire Facility		
20.2.70 NMAC Operating Permits	X	Entire Facility		
20.2.71 NMAC Operating Permit Emission Fees	X	Entire Facility		
20.2.72 NMAC Construction Permits	X	As referenced in NSR Permit Nos. 632, 634-M2, 1081-M1, 1081-M1-R1, 1081-M1-R3, 1081-M1-R5, 1081-M1-R6, 2195B-M2, 2195F-R3, GCP-3-2195G, 2195H, 2195N, 2195N-R1, and 2195P		
20.2.73 NMAC Notice of Intent and Emissions Inventory Requirements	X	Entire Facility		
20.2.77 NMAC New Source Performance Standards	X	Sources subject to 40 CFR 60		
20.2.78 NMAC NESHAPs	X	Sources subject to 40 CFR 61		
20.2.82 NMAC MACT Standards for Source Categories of HAPS	X	Sources subject to 40 CFR 63		
40 CFR 50 National Ambient Air Quality Standards	X	Entire Facility		
40 CFR 60, Subpart A, General Provisions	X	All sources subject to any NSPS Subpart		
40 CFR 60, Subpart Dc, NSPS for Small Industrial-Commercial-Institutional Steam Generating Units	X	TA-55-6-BHW-1, TA-55-5-BHW-2, CMRR-BHW-1 through CMRR-BHW-4		
40 CFR 60, Subpart I, NSPS for Hot Mix Asphalt Facilities	X	TA-60-BDM		
40 CFR 60, Subpart GG, NSPS for Stationary Gas Turbines	X	TA-3-22 CT-1		
40 CFR 60, Subpart IIII, NSPS for Stationary Compression Ignition Reciprocating Internal Combustion Engines	X	CMRR-GEN-1 through CMRR-GEN-3		
40 CFR 61, Subpart A, General Provisions	X	All sources subject to any NESHAPs Subpart		
40 CFR 61, Subpart C, NESHAP for Beryllium	X	TA-3-141, TA-35-213, TA-55-PF4, TA-3-66		
40 CFR 61, Subpart H, NESHAP for Radionuclides other than Radon from DOE Facilities	X	Entire Facility		
40 CFR 61, Subpart M, NESHAP for Asbestos	X	Entire Facility		

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
40 CFR 61, Subpart Q, NESHAP for Radon Emissions from DOE Facilities	X	Entire Facility		
40 CFR 63, Subpart A, General Provisions	X	All sources subject to any MACT Subpart		
40 CFR 63, Subpart T, MACT for Halogenated Solvent Cleaning	X	TA-55-DG-1		
40 CFR 63, Subpart ZZZZ, RICE MACT	X	CMRR-GEN-1through CMRR-GEN -3		
40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners (MVAC)	X	Entire Facility		
40 CFR 82, Subpart F, Recycling and Emission Reduction	X	Entire Facility		
40 CFR 82, Subpart H, Halon Emissions Reduction	X	Entire Facility		
40 CFR 82, Subpart I, Ban on Refrigeration and Air Conditioning Appliances Containing HCFCs.	X	Entire Facility		
40 CFR 89, Control of Emissions from New and In-Use Nonroad Compression Ignition Engines	X	TA-33-G-2 through TA-33-G-4		
<p>A104 Facility: Regulated Sources</p>				
<p>A.Source category specific Regulated Equipment Tables are included in sections A600 through A1400 under the Equipment Specific Requirements part of this permit. The Regulated Equipment Tables list all of the process equipment authorized for this facility. Emission units that were identified as insignificant or trivial activities (as defined in 20.2.70.7 NMAC) and equipment not regulated pursuant to the Act are not included.</p>				
<p>A105 Facility: Control Equipment</p>				
<p>A.Source category specific Control Equipment Tables are included in sections A601 through A1401 under the Equipment Specific Requirements part of this permit. The Control Equipment Tables list all the pollution control equipment required for this facility. Each emission point is identified by the same number that was assigned to it in the permit application.</p>				
<p>A106 Facility: Allowable Emissions</p> <p>A. Source category specific Allowable Emissions are established in sections A602 through A1402 under the Equipment Specific Requirements part of this permit. Table 106.A below shows a summary of these emission limits, which are subject to permit fees. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC and NSR Permit Nos. 632, 634-M2, 1081-M1, 1081-M1-R1, 1081-M1-R3, 1081-M1-R5, 1081-M1-R6, 2195B-M2, 2195F-R3, GCP-3-2195G, 2195H, 2195N, 2195N-R1, and 2195P).</p>	<p>Source and facility wide emissions are calculated on a semi-annual basis and compared to the limits listed in the referenced table. No emission limits have been exceeded during this certification period. Actual emissions can be viewed in the emission inventory reports submitted to the NMED Air Quality Bureau.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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Table 106.A: Facility: Allowable Emissions per Source Category

Source Category (Section No.)	¹ NO _x tpy	CO tpy	VOC tpy	SO ₂ tpy	TSP tpy	PM ₁₀ tpy	PM _{2.5} tpy
Asphalt Production (A600)	95.0	95.0	95.0	50.0	95.0	- ²	-
Beryllium Activities (A700)	-	-	-	-	-	-	-
External Combustion (A800)	80.0	80.0	50.0	50.0	50.0	50.0	1.6 ³
Chemical Usage (A900)	-	-	* ⁴	-	-	-	-
Degreasers (A1000)	-	-	*	-	-	-	-
Internal Combustion (A1100)	20.85	16.8	0.5	2.66	-	-	-
Data Disintegrator (A1200)	-	-	-	-	9.9	9.9	-
Power Plant (A1300)	90.8	93.7	4.3	9.1	9.4	9.2	9.0
Open Burning (A1400)	-	-	-	-	-	-	-

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO₂

2 “-” indicates the application represented that emissions of this pollutant are not expected *or* that allowable emission limits have not been previously established for this pollutant and source category.

3 This PM_{2.5} total represents the CMRR boilers only; PM_{2.5} emission limits have not been established for any other external combustion sources.

4 “*” indicates the application represented that emissions of this pollutant are expected and are included in the facility-wide allowable emissions limit established in Condition A106.B. Annual VOC emission limits for these individual source categories have not been established.

B. Facility-wide emissions for criteria pollutants, VOC, and HAPs from all emission units, combined, shall not exceed the limits in Table 106.B.	Source and facility wide emissions are calculated on a semi-annual basis and compared to the limits listed in the referenced table. No emission limits have been exceeded during this certification period. Actual emissions can be viewed in the emission inventory reports submitted to the NMED Air Quality Bureau.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?					
Table 106.B: Facility-Wide Allowable Emissions									
Facility-Wide	¹NO_x tpy	CO tpy	VOC tpy	SO₂ tpy	TSP tpy	PM₁₀ tpy	PM_{2.5} tpy	Any Individual HAP	Total HAPs
Sum of emissions from all sources	245.0	225.0	200.0	150.0	120.0	120.0	120.0	8.0	24.0
1Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO ₂									
C. The permittee shall maintain records of the Facility-Wide annual emissions totals for each pollutant listed in Table 106.B. The record shall include estimated actual emissions from all sources on a semiannual and calendar year basis.	Source and facility wide emissions are calculated on a semi-annual and calendar year basis and compared to the limits listed in the referenced table. No emission limits have been exceeded during this certification period. Actual emissions can be viewed in the emission inventory reports submitted to the NMED Air Quality Bureau.		<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
A107 Facility: Allowable Startup, Shutdown, & Maintenance and Malfunction Emissions A. Allowable SSM emission limits are not imposed at this time. The permittee shall maintain records in accordance with Condition B109.E.	Emissions from SSM are not expected to be significantly different from normal operating emissions. No malfunctions occurred during this certification period.		<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
A108 Facility: Hours of Operation A. The operating hours for this facility are established under each source category in sections A604 through A1404 under the Equipment Specific Requirements part of this permit. As applicable, monitoring, recordkeeping, and reporting provisions are specified to demonstrate compliance with allowable hours of operation that are also established under each source category in sections A604 through A1404.	Compliance with hours of operation for each source is covered under each source category. A tracking mechanism is in place for each source with an operating hour limit. No operating hour limits have been exceeded during this certification period.		<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
A109 Facility: Reporting Schedules A. A Semi-Annual Report of monitoring activities is due within 45 days following the end of every 6-month reporting period. The six month reporting periods start on January 1st and July 1st of each year.	The semi-annual monitoring reports submitted during this certification period were submitted within the allowed 45 days. These reports were for the periods of July through December 2011 (submitted on February 9, 2012) and January through June 2012 (submitted on August 8, 2012). The July through December 2012 report will be submitted within the allowed 45 days, which is after the submission deadline of this compliance certification report.		<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
B. A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at	The semi-annual emissions reports submitted during this certification period were submitted within the allowed 90 days. These reports were for the periods of July through December 2011 (submitted on March 28, 2012) and January through June 2012 (submitted on September 21, 2012). The		<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Condition A109.A. Emission estimates of criteria pollutants NO _x , CO, SO ₂ , VOC, TSP, PM ₁₀ , and PM _{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.	July through December 2012 report will be submitted within the allowed 90 days, which is after the submission deadline of this compliance certification report. The reports included a comparison of actual emissions with the allowable emission limits.			
C. The Annual Compliance Certification Report is due within 30 days of the end of every 12-month reporting period. The 12-month reporting period starts on January 1 st of each year.	The 2011 Annual Compliance Certification Report was submitted to NMED-AQB and EPA within 30 days of the end of the 12-month reporting period. The report was submitted to NMED and EPA on January 26, 2012.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A110 Facility: Fuel Sulfur Requirements A.Sulfur requirements are defined by source category, as applicable, in sections A605 through A1405 under the Equipment Specific Requirements part of this permit.				
A111 Facility: 20.2.61 NMAC Opacity A.Opacity requirements are defined by source category, as applicable, in sections A606 through A1406 under the Equipment Specific Requirements part of this permit.				
A115 Radionuclide NESHAP A. The permittee shall comply with the requirements of 40 CFR 61, Subpart H – NESHAP for Radionuclides other than Radon from DOE Facilities.	LANL has a radionuclide NESHAP team that is devoted to compliance with 40 CFR Part 61, Subpart H (Emissions of radionuclides other than radon from DOE facilities). The EPA limit for radionuclide emissions, corresponding to a maximum off-site dose, is 10 millirem per year. The projected emissions for this certification period are below the 10 millirem off-site limit. The annual report summarizing 2012 radionuclide emissions will be available in June 2013. A copy of this report will be made available to the Department upon request.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. The permittee shall comply with the requirements of 40 CFR 61, Subpart Q – NESHAP for Radon Emissions from DOE Facilities	LANL has a radionuclide NESHAP team that is devoted to compliance with 40 CFR Part 61, which includes Subpart Q (emissions of radon from DOE facilities), as applicable. LANL performed evaluations on the sources applicable under this subpart and has determined that radon emission levels are below applicable thresholds. This information was provided to EPA, who in turn provided LANL with a memorandum of understanding in agreement with LANL's findings.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A117 <u>Stratospheric Ozone</u> A. The permittee shall comply with the standards for servicing of motor vehicle air conditioners pursuant to 40 CFR 82, Subpart B.	Motor vehicle air conditioners (MVAC) are serviced by certified LANL refrigeration technicians pursuant to 40 CFR part 82, Subpart B. These technicians comply with EPA standards for servicing motor vehicle air conditioners.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. The permittee shall comply with the standards for servicing and maintaining and disposing equipment containing refrigerants pursuant to 40 CFR, Subpart F.	A stratospheric ozone protection program is in place at LANL. LANL, through our internal maintenance group, as well as other outside contractors, use appropriately certified technicians and certified recycling and recovery equipment. LANL refrigeration technicians, as well as other outside contractors, are trained and follow LANL procedures to ensure that required service practices found in 40 CFR 82, Subpart F, are followed.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C. The permittee shall comply with the standards for servicing and maintaining equipment that contains halons pursuant to 40 CFR 82, Subpart H.	Certified LANL refrigeration technicians maintain the halon systems. These technicians comply with the standards for servicing and maintaining equipment containing halons pursuant to 40 CFR Part 82, Subpart H.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
D. The permittee shall comply with the standards on the ban on refrigeration and air-conditioning appliances containing HCFCs pursuant to 40 CFR 82, Subpart I.	LANL has a process in place to ensure that the standards on the ban of refrigeration and air-conditioning appliances containing HCFCs pursuant to 40 CFR 82, Subpart I, are met.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
ASPHALT PRODUCTION A600 <u>Regulated Sources – Asphalt Production</u> A. Table 600.A lists all of the process equipment authorized for this source category. Emission units that were identified as insignificant or trivial activities (as defined in 20.2.70.7 NMAC) and equipment not regulated pursuant to the Act are not included.	No new equipment has been added, or changes made, to the listed equipment in this source category during this certification period (excluding those identified as insignificant, trivial and not regulated pursuant to the Act).	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 600.A: Regulated Sources List

Unit No.	Source Description/Location	Make Model	Serial No.	Capacity	Manufacture Date	Other
TA-60-BDM	Hot Mix Asphalt Plant, TA-60	BDM Engineering TM2000	unknown	60 tph	unknown	

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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A601 Control Equipment – Asphalt Production A. Table 601.A lists all of the pollution control equipment required for the applicable regulated equipment in this source category. Each emission point is identified by the same number that was assigned to it in the permit application.	No new equipment has been added, or changes made, to the listed equipment in this source category during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 601.A: Control Equipment List

Control Equipment Unit No.	Control Description	Pollutant being controlled	Control for Unit No. ¹
TA-60-BDM	Cyclone Baghouse 99.97% efficiency	TSP	TA-60-BDM

¹ Control for unit number refers to a unit number from the Regulated Sources List

A602.A Emission Limits – Asphalt Production A. Table 602.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 20.2.11 NMAC; 40 CFR 60, Subpart I; NSR Permit GCP-3-2195G)	LANL Asphalt Plant operations meet requirements of 20.2.11 NMAC; 40 CFR Part 60, Subpart I; and NSR Permit No. GCP-3-2195G, Rev 1. Emissions are calculated and reported to NMED on a 6-month basis in accordance with permit condition A109.B. Emissions are compared to allowable emission limits in each semi-annual report and were not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 602.A: Allowable Emissions

Unit No.	NOx tpy	SO2 tpy	PM	CO tpy	VOC tpy
TA-60-BDM	95.0	50.0	0.04 gr/dscf 33.8 lb/hr 95.0 tpy	95.0 tpy	95.0 tpy

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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<p>A603 <u>Applicable Requirements – Asphalt Production</u></p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 603.A.</p>	<p>LANL Asphalt Plant operations complies with the applicable requirements listed in Table 603.A.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 603.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permit GCP-3-2195G	X	TA-60-BDM
20.2.11 NMAC Asphalt Process Equipment	X	TA-60-BDM
40 CFR 60, Subpart A	X	TA-60-BDM
40 CFR 60, Subpart I	X	TA-60-BDM

<p>A604 <u>Operational Limitations – Asphalt Production</u></p> <p>A. The equipment in this source category is authorized to operate during those daylight hours occurring between one-half hour after sunrise and through one-half hour before sunset each day of the year. Annual hours of operation are limited to 4380 hrs/y. This limitation on operating hours does not apply to the use of the hot oil heater or the loading and/or hauling of asphalt products or materials. Monitoring, recordkeeping, and reporting for operational hours shall be conducted according to NSR Permit GCP-3-2195G.</p>	<p>The asphalt plant operates within the specified hours-of-operation. To aid operators, a sunrise/sunset chart is maintained at the plant. A log of start up and shut down times is kept as required by the permit.</p> <p>The Asphalt Plant did not exceed 4,380 hours of operation during this certification period. A log of operating hours is maintained as required by this permit.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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<p>A605 <u>Fuel Requirements – Asphalt Production</u></p> <p>A. Asphalt Plant Combustion Sources</p> <p>Requirement: Combustion sources located at the asphalt plant shall only use propane as fuel.</p> <p>Monitoring: N/A</p>	<p>Propane was the only fuel used at the Asphalt Plant during this certification period. No other fuel is currently available at this location.</p>	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Records of propane deliveries are maintained on site.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A607 Asphalt Production – Other A. Asphalt Plant Baghouse – Differential Pressure Requirement: The baghouse shall be equipped with a device to continually measure the pressure drop across the baghouse.	The baghouse is equipped with a data logger to continually monitor the differential pressure across the filters and operating frequency of the rotary dryer. The data is used to confirm proper operation of the unit.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor the differential pressure (inches of water) across the filters by the use of a differential pressure gauge. Pressure gauge readings and the time period the rotary dryer drum operates shall be recorded by a datalogger each time the rotary dryer drum is operating. The pressure data shall confirm whether the filter(s) are operating within the unit's specifications.	A data logger is in place and monitors the differential pressure across the filters and rotary dryer drum operation. The data is used to confirm proper operation of the unit.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records of all baghouse differential pressure readings in accordance with Section B109.	Recordkeeping conditions are met using a data logger that records the differential pressure across the filters and rotary dryer drum operation. These records are used to confirm proper operation and are available on site.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B.. Asphalt Plant Baghouse - Stack Height (Unit TA-60-BDM) Requirement: The rotary dryer/baghouse exhaust stack shall be no less than 10 meters in height. Monitoring: N/A	The height of the asphalt plant stack is no less than 10 meters.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Measurements of stack height have been made to verify compliance.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C. Asphalt Plant Baghouse – Opacity Requirement: Visible emissions from the rotary dryer/baghouse exhaust stack shall not exhibit an opacity of 20% or greater averaged over a (6) minute period.	LANL has certified visible emission (opacity) readers on-site who perform readings using 40 CFR Part 60, Appendix A, Reference Method 9 to determine compliance with the opacity limitation. Visible emission reports are provided to NMED in the semi-annual monitoring reports. No visible emissions exhibited an opacity of 20% or greater during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall perform six (6) minute opacity readings on the rotary dryer/baghouse stack at least once per month. The observations shall be conducted according to 40 CFR 60, Appendix A, Method 9.	LANL has certified visible emission readers on-site who perform monthly six minute opacity readings using 40 CFR Part 60, Appendix A, Reference Method 9 to determine compliance with the opacity limit. Opacity reports are provided to NMED in the Semi-Annual Monitoring Reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records of all opacity observations and in accordance with Section B109.	Opacity records are provided to NMED in the Semi-Annual Monitoring Reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
D. Asphalt Plant Baghouse – Fines Cleanout Requirement: The permittee shall sequester or remove particulates collected by the control equipment to prevent wind-blown particulate emissions. Recycled baghouse fines shall be recycled into the drum mixer via a closed-loop system. Monitoring: N/A	Baghouse fines are removed from the baghouse and cyclone by use of a screw conveyor. The removed fines are recycled into the asphalt production process via a closed loop system. Visible emissions from this system were not observed during this certification period.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records in accordance with Section B109.	Opacity records are provided to NMED in the Semi-Annual Monitoring Reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
E. Asphalt Plant Production Rate (Unit TA-60-BDM) Requirement: Production shall not exceed 13,000	The asphalt plant did not exceed the 13,000 tons per year, weekly rolling 12-month total, during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
tons per year.				
Monitoring: The permittee shall monitor the total daily production rate.	Daily data on asphalt production is monitored on a monthly basis. The weekly rolling 12-month total is calculated and compared against the production limit set in this permit condition.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall calculate a weekly rolling, 12-month total production rate and maintain records in accordance with Section B109.	Data on asphalt production is recorded daily on a production log. The weekly rolling 12-month total is calculated and recorded.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>F. Asphalt Plant Operations – General</p> <p>Requirement: The permittee shall:</p> <ol style="list-style-type: none"> 1) Install, operate, and maintain equipment in accordance with standard operating procedures, and 2) Equip and operate the asphalt processing equipment such as screens, conveyor belts, and conveyor transfer points with dust control systems to control particulate matter emissions, and 3) Operate the Plant in accordance with NSR Permit GCP-3-2195G, Section III, A, B, C, D, E, F, and H. 4) Ensure that no visible emissions from the facility are observed crossing the perimeter of the restricted area for no more than 5 minutes during any 2 consecutive hours during facility operations. 	<ol style="list-style-type: none"> 1) No new equipment has been installed. Operation and maintenance requirements are contained in internal plant procedures that are followed by plant operation staff. 2) Dust collection and control systems are in place on screens, conveyor belts, and transfer points to control particulate matter emissions. 3) The Asphalt Plant is operated in accordances with these listed permit conditions. 4) Both EPA reference methods 9 and 22 are used at the plant to determine the extent of visible emissions. The asphalt plant did not emit fugitive dust that exceeded the 5 minutes of visible emissions during any 2 consecutive hours of operation. 	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall perform all monitoring required under NSR Permit GCP-3-2195G.	All monitoring required under NSR Permit GCP-3-2195G was performed during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records of all standard operating procedures, records of all maintenance and/or replacement of dust control systems, and all records required under NSR Permit GCP-3-2195G, Section IV.B, and including records of actual hours of operation, records of all required	Recordkeeping conditions are met using the following methods: Copies of standard operating procedures and maintenance records are available on site. The plant operation log contains the start time, stop time and total hours of operation; production amounts summed daily, weekly, and rolling 12 month total; and number of truck trips. Records located at the facility include fuel delivery tickets, frequency	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>monitoring, daily and weekly total asphalt production and the weekly rolling 12 month total production, number of haul truck trips daily including materials delivery and product, frequency of haul road sweeping, and copies of the applicant's proposed maintenance requirements and records demonstrating conformance with said requirements. The permittee shall maintain records of all compliance test results for total suspended particulates (TSP), particulate matter (PM10), nitrogen oxides, carbon monoxide, and records of all opacity/visible emissions observations performed.</p>	<p>of road sweeping, and a procedure that outlines required maintenance. Data logger charts that record the differential pressure and rotary dryer drum operation are also kept at the asphalt plant.</p>			
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>G. Asphalt Plant Fugitive Dust</p> <p>Requirement: Fugitive dust emissions from asphalt processing equipment, including the system used to recycle fabric filter fines, shall exhibit no more than five (5) minutes of visible emissions during any two consecutive hours. This condition does not apply to fugitive dust emissions from other support operations such as storage piles, front end loaders, or materials handling around the asphalt process equipment.</p>	<p>Both EPA reference methods 9 and 22 are used at the plant to determine the extent of visible emissions. During this certification period, the asphalt plant did not emit fugitive dust that exceeded 5 minutes of visible emissions during any 2 consecutive hours.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Monitoring: The permittee shall perform a Method 22 test at least once per month on all screens, conveyor drop points, and hoppers. The duration of the test shall be a minimum of ten (10) minutes. If visible emissions are observed for more than two (2) minutes, the Method 22 test shall continue for two (2) hours or until scheduled operation of the plant ends.</p>	<p>Both EPA reference methods 9 and 22 are used at the plant to determine the extent of visible emissions. Method 22 readings are taken at least once per month. These readings are provided to NMED in the Semi-Annual Monitoring Reports. No visible emissions were observed for more than two minutes during any Method 22 test during this certification period.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall maintain records of all equipment standard operating procedures, records of all maintenance and/or replacement of dust control systems, results of all visible emissions observations, and all records required under NSR Permit GCP-3-2195G.</p>	<p>The plant standard operating procedure, maintenance and repair records, and visible emission observations are maintained on site. All other records required under the NSR permit are also available on site.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<u>BERYLLIUM ACTIVITIES</u> A700 <u>Regulated Sources – Beryllium Activities</u> A. Table 700.A lists all of the process equipment authorized for this source category. Emission units that were identified as insignificant or trivial activities (as defined in 20.2.70.7 NMAC) and equipment not regulated pursuant to the Act are not included.	No new equipment has been added to this source category during this certification period (excluding those identified as insignificant, trivial and not regulated pursuant to the Act).	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 700.A: Regulated Sources List

Unit No.	Location/Building	Process Description
TA-3-66	TA-3-66	Sigma Facility Polishing/Electroplating/Chemical Milling
TA-3-141	TA-3-141	Sigma Facility Machining/Arc Melting/Casting
TA-35-213	TA-35-213	Beryllium Technology Facility
TA-55-PF4	TA-55-PF4	Plutonium Facility

A701 <u>Control Equipment – Beryllium Activities</u> A. Table 701.A lists all of the pollution control equipment required for the applicable regulated equipment in this source category. Each emission point is identified by the same number that was assigned to it in the permit application.	No new equipment has been added to this source category during this certification period.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 701.A: Control Equipment List

Control Equipment Unit	Location/Building	Process Description	Pollutant being controlled	Type of Control
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1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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No. ¹				
TA-3-66	TA-3-66	Sigma Facility Polishing/Electroplating/Chemical Milling	Beryllium Particulate Matter	Aqueous Solution or Lubricant Bath
		Sigma Facility Machining/Arc Melting/Casting	Beryllium Particulate Matter	HEPA Filter 99.95% Efficiency
TA-3-141	TA-3-141	Beryllium Technology Facility	Beryllium Particulate Matter	Lubricating Bath/Cartridge Filtration System/HEPA Filter 99.95% Efficiency
TA-35-213	TA-35-213	Target Fabrication Facility	Beryllium Particulate Matter	Pre-Filter 48% Efficiency, HEPA Filter 99.95% Efficiency
TA-55-PF4	TA-55-PF4	Plutonium Facility	Beryllium and Aluminum Particulate Matter	4-Stage HEPA Filter 99.95% Efficiency

¹ Control for unit number refers to a unit number from the Regulated Sources List

<p>A702 Emission Limits – Beryllium Activities A. Table 702.A lists the emission units, and their allowable emission limits. (40 CFR 61, Subpart C; NSR Permits 632; 634-M1 and 634-M2; 1081-M1, 1081M1-R1, 1081-M1-R3, 1081-M1-R5, and 1081-M1-R6)</p>	Emissions are calculated and reported to NMED on a 6-month basis in accordance with permit condition A109.B. Emissions are compared to allowable emission limits in each semi-annual report. Allowable emission limits were not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 702.A: Allowable Emissions

Source	Beryllium Particulate Matter	Aluminum Particulate Matter
Sigma Facility TA-3-66	10 gm ¹ /24 hr	N/A
Beryllium Technology Facility TA-3-141	0.35 gm/24 hr 3.5 gm/yr	N/A
Target Fabrication Facility TA-35-213	1.8 x 10 ⁻⁰⁴ gm/hr 0.36 gm/yr	N/A
Plutonium Facility TA-55-PF-4 Machining Operation	0.12 gm/24 hr 2.99 gm/yr	0.12 gm/24 hr 2.99 gm/y

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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Plutonium Facility TA-55-PF-4 Foundry Operation	3.49 x 10 ⁻⁰⁵ gm/24 hr 8.73 x 10 ⁻⁰⁴ gm/yr	3.49 x 10 ⁻⁰⁵ gm/24 hr	8.73 x 10 ⁻⁰⁴ gm/y
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1 gm = gram

A703 <u>Applicable Requirements – Beryllium Activities</u> A. The permittee shall comply with all applicable sections of the requirements listed in Table 703.A.	LANL beryllium operations meet requirements of 40 CFR Part 61, Subpart C, and NSR Permit Numbers 632, 634 and 1081.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 703.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permits 632; 634-M1 and 634-M2; 1081-M1, 1081M1-R1, 1081-M1-R3, 1081-M1-R5, and 1081-M1-R6	X	All Beryllium Sources Listed in Table 700.A per applicable permit
40 CFR 61, Subpart C	X	All Beryllium Sources Listed in Table 700.A

A704 <u>Operational Limitations – Beryllium Activities</u> A. The equipment/operations in this source category are authorized to operate any time during the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with its hours of operation.
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A707 <u>Other – Beryllium Activities</u> A. Operational Requirements – Beryllium Activities	TA-3-66 - Emissions from machining and arc melt/casting operations are exhausted through a HEPA filtration system prior to entering the atmosphere. Polishing and electroplating/chemical milling operations are conducted in aqueous solution or lubricant bath. TA-3-141 - The continuous emission monitor is maintained in accordance with the Laboratory's quality program. No process limits were exceeded during this certification period. All processes are exhausted through a HEPA filtration system prior to entering the atmosphere. Powder operations, other than closed glovebox operations, and machining operations, other than metallographic preparation, are exhausted through a	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
	<p>cartridge filtration system then through HEPA filtration. Metallographic preparation activities are conducted in lubricating baths or equivalent.</p> <p>TA-35-213 - All processes are exhausted through a HEPA filtration system prior to entering the atmosphere.</p> <p>TA-55-PF4 - All beryllium activities are ducted through the facility's pollution control equipment and out the north or south stack of PF-4. Weld cutting, weld dressing, and metallography operations are controlled using 4 HEPA filters with a control efficiency of 99.95% each. The non-accessible filter is replaced when the pressure differential across the filter indicates breakthrough or excessive loading. No process limits were exceeded during this certification period.</p> <p>The electric furnace did not operate during this certification period.</p>			

Source	Operating Requirements	Process Limits	Control Equipment Requirements
Sigma Facility TA-3-66	Beryllium operations will consist of registered polishing, electroplating /chemical milling, and relocated machining, and arc melting/casting sources.	None	<p>Polishing and electroplating /chemical milling operations shall be conducted in aqueous solution or lubricant bath.</p> <p>Emissions from machining and arc melting/casting operations shall be exhausted through a HEPA filtration system prior to entering the atmosphere.</p>
Beryllium Technology Facility TA-3-141	The continuous emission monitor will be maintained in accordance with the Laboratory's quality program.	<p>Beryllium processed by the facility will not exceed 10,000 pounds per calendar year.</p> <p>Beryllium processed by the facility will not exceed 1000 pounds per day.</p>	<p>All processes shall be exhausted through a HEPA filtration system prior to entering the atmosphere.</p> <p>Powder operations, other than closed glovebox operations, and machining operations, other than the processes used in metallographic preparation shall be exhausted through a cartridge filtration system then through the HEPA filtration system.</p> <p>Metallographic preparation activities shall be conducted in lubricating baths or equivalent.</p>
Target Fabrication Facility TA-35-213	Beryllium operations will consist of only beryllium machining and associated cleanup activities.	None	All processes shall be exhausted through a HEPA filtration system prior to entering the atmosphere.
Plutonium Facility	Regulated beryllium	44 pounds of beryllium	Weld cutting, weld dressing, metallography, and

1. Permit Condition # and Permit Condition:		2. Method(s) or other information or other facts used to determine the compliance status:		3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
TA-55-PF4	<p>activities will be ducted through the pollution control equipment and out the north or south stack of PF-4.</p> <p>(NSR Permit 1081-M1-R3, Specific Condition 1.b., partial, revised)</p> <p>The electric furnace shall be enclosed in a glove box, have a maximum operating temperature of 1600 degrees centigrade, and an inside volume space less than 1.1 cubic feet.</p> <p>(NSR Permit 1081-M1-R6, Specific Condition 1.d., partial, revised)</p>	<p>(20 kg) in any 24 hour period;</p> <p>1100 pounds/year (500 kg/year) using a rolling total.</p> <p>(NSR Permit 1081-M1-R3, Specific Condition 1.c.)</p>	<p>electric furnace operations shall be controlled with 4 HEPA filters with a control efficiency of 99.95% each.</p> <p>(NSR Permit 1081-M1-R1, Condition 3, partial, revised)</p> <p>The non-accessible filters shall be replaced when the pressure drop across the filter either falls to levels indicating filter breakthrough or increases to levels indicative of excessive loading.</p> <p>(NSR Permit 1081-M1-R1, Condition 3, partial, revised)</p>			
B. Emissions Monitoring Requirements – Beryllium Activities		<p>TA-3-66 – Log books are maintained for monitoring the number of metallographic specimens used in the polishing operation and the weight or volume of samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations.</p> <p>TA-3-141 – The exhaust stack has a built-in sampling system used to continuously sample beryllium emissions. Cartridge and HEPA filters are equipped with differential pressure gauges that measure differential pressure when exhaust fans are in operation.</p> <p>TA-35-213 – A copy of stack emission test results as well as other data needed to determine total emissions are retained at the source and are available for inspection.</p> <p>TA-55-PF4 – The HEPA filtration system contains a differential pressure gauge that measures differential pressure across the HEPA filters while the exhaust fans are in operation. The control efficiency is verified by daily HEPA</p>		<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
	filter pressure drop tests. Annual HEPA filter challenge tests have been performed during this certification period and results are submitted in the Semi-annual Monitoring Report. The electric furnace did not operate during this certification period.			

Source	Monitoring Requirements
Sigma Facility TA-3-66	A log shall be maintained during operations, which shows the number of metallographic specimens used in the polishing operation and the weight or volume of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations.
Beryllium Technology Facility TA-3-141	Facility exhaust stack will be equipped with a continuous emission monitor used to measure beryllium emissions. Cartridge and HEPA filters shall be equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.
Target Fabrication Facility TA-35-213	Records of the stack emission test results (see Condition 2 of NSR Permit No. 632) and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Department.
Plutonium Facility TA-55-PF4	The HEPA filtration systems shall be equipped with a differential pressure gauge that measures the differential pressure (inches of water) across the HEPA filters while the exhaust fans are in operation. (NSR Permit 1081-M1-R3, Condition 11) Control efficiency shall be verified by daily HEPA filter pressure drop tests and annual HEPA filter challenge tests of accessible filters. (NSR Permit 1081-M1-R1, Condition 3, partial, revised) The furnace temperature shall be continuously monitored and the flow rate from the glove box containing the furnace shall be measured once during each metal melt operation. (NSR Permit 1081-M1-R6, Condition 11, revised)

C. Recordkeeping Requirements – Beryllium Activities	TA-3-66 – Recordkeeping for this source is specified in condition A707.B. TA-3-141– Inventory records are maintained to demonstrate compliance with beryllium process limits. Records of pressure drop across the cartridge and HEPA filters are performed daily	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
	<p>when the exhaust fans are in operation and the facility is occupied. Control equipment maintenance and repair activities are recorded.</p> <p>TA-35-213 – Recordkeeping for this source is specified in condition A707.B.</p> <p>TA-55-PF4 – A copy of the stack emission test results are retained at the source and available for inspection. The annual HEPA filter test reports and daily differential pressure readings are provided in the Semi-Annual Monitoring Report and are available on site for inspection. Filter replacement and control equipment maintenance and repair records are kept and available on site for inspection. Process records are available that contain the number and weight of classified parts processed during a 24-hour period and annual rolling total.</p> <p>The electric furnace did not operate during this certification period.</p>			

Source	Recordkeeping Requirements
Sigma Facility TA-3-66	Recordkeeping for this source is specified in Condition A707.B.
Beryllium Technology Facility TA-3-141	<p>Keep and maintain beryllium inventory records to demonstrate compliance with the 10,000 pounds of beryllium per calendar year and the 1000 pounds of beryllium per day processing limit.</p> <p>Record the daily differential pressure drop across the cartridge and HEPA filters once per day that the exhaust fans are in operation and the facility is occupied.</p> <p>Record control equipment maintenance and repair activities.</p>
Target Fabrication Facility TA-35-213	Recordkeeping for this source is specified in Condition A707.B.
Plutonium Facility TA-55-PF4	<p>Stack emission test results and facility operating parameters including a daily record of the pressure drop measured across each appropriate HEPA plenum filtration stage, when the exhaust fans are operating.</p> <p>(NSR Permit 1081-M1-R3, Condition 9, partial, revised)</p> <p>A copy of the annual HEPA test, a log of the daily pressure drop readings and a control equipment maintenance log shall be kept. This documentation shall be provided upon request.</p> <p>(NSR Permit 1081-M1-R1, Condition 3, partial, revised)</p> <p>A log of the filter replacement shall be kept and shall be made available to the Department personnel upon request.</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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(NSR Permit 1081-M1-R1, Condition 3, partial, revised)

The permittee shall keep records of the number and weight of classified parts processed during a 24-hour period and year using a rolling total. Records shall be made available to properly cleared Department personnel upon request.

(NSR Permit 1081-M1-R3, Condition 9, partial, revised)

The permittee shall for each use of the furnace record the following operating parameters: metal type, theoretical melting point of the metal, metal melt duration once melting is commenced, maximum furnace temperature and glove box flow rate.

(NSR Permit 1081-M1-R6, Condition 9, partial, revised)

A record of the furnace's internal volume shall be maintained at the facility.

(NSR Permit 1081-M1-R6, Condition 9, partial, revised)

D. Reporting Requirements – Beryllium Activities	<p>All Beryllium Sources - Emission and monitoring reports are submitted on a 6-month basis in accordance with permit conditions A109. For more information, see the methods used to determine compliance for condition A109 in this report.</p> <p>Quarterly beryllium reports, containing continuous monitoring system data from the Beryllium Technology Facility, are also submitted to NMED. Reports during this certification period were submitted within 60 days following each calendar quarter. The reports were submitted on August 3, 2012 and November 7, 2012 for this certification period (June 15, 2012 to December 31, 2012).</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Source	Reporting Requirements
Sigma Facility TA-3-66	The permittee shall report in accordance with Conditions A109.A, A109.C, and Section B110.
Beryllium Technology Facility TA-3-141	<p>Anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date.</p> <p>Actual date of initial startup of each new or modified source within fifteen (15) days after the startup date.</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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	<p>Provide the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.</p> <p>Notify the Department within 60 days after each calendar quarter of the facility's compliance status with the permitted emission rate from the continuous monitoring system.</p> <p>Provide any data generated by activities described in the Quality Assurance Project Plan (QAPP) that will assist the Air Quality Bureau's Enforcement Section in determining the reliability of the methodology used for demonstrating compliance with the permitted emission rate within 45 days of such a request.</p> <p>The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>
Target Fabrication Facility TA-35-213	The permittee shall submit reports described in Section A109 and in accordance with Section B110.
Plutonium Facility TA-55-PF4	<p>Stack emission test results and facility operating parameters will be made available to Department personnel upon request.</p> <p>Reports may be required to be submitted to the Department if inspections of the source indicate noncompliance with this permit or as a means of determining compliance.</p> <p>The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>

<p>EXTERNAL COMBUSTION A800 Regulated Sources – External Combustion A. Table 800.A lists all of the process equipment authorized for this source category.</p>	<p>New high efficiency boilers replaced permitted boilers in a couple of Laboratory locations during this certification period. Emission units TA-48-1-BS-2, TA-48-1-BS-6, TA-59-1-BHW-1, and TA-59-1-BHW-2, were all removed from service and are no longer at LANL. All boilers were replaced with smaller (insignificant), more efficient units.</p>	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 800.A: Regulated Sources List

Emission Unit	Location/ Building	Manufacturer/ Model/Serial Number	Date of Construction, Modification, or Reconstruction ¹	Maximum Heat Input (nameplate) ² MMBtu/hr
TA-16-1484-BS-1	TA-16-1484	Sellers 183H.P.-SH-LN390 S/N 100848-B	1995	7.47
TA-16-1484-BS-2	TA-16-1484	Sellers 183H.P.-SH-LN390 S/N 100848-A	1995	7.47
TA-48-1-BS-2	TA-48-1	Cleaver Brooks CB-700-150 S/N L-62569	1976	6.28

1. Permit Condition # and Permit Condition:		2. Method(s) or other information or other facts used to determine the compliance status:		3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
TA-48-1-BS-6	TA-48-1	Cleaver Brooks CB-700-200 S/N L-093412		1994	8.40	
TA-53-365-BHW-1	TA-53-365	Sellers 15 Seniors-2-200-w S/N 99031-1		1988	8.37	
TA-53-365-BHW-2	TA-53-365	Sellers 15 Seniors-2-200-w S/N 99031-2		1988	8.37	
TA-55-6-BHW-1	TA-55-6	Sellers 350 H.P. W-LN490 S/N 101319-B		2001	14.6	
TA-55-6-BHW-2	TA-55-6	Sellers 350 H.P. W-LN490 S/N 101319-A		1998	14.6	
TA-59-1-BHW-1	TA-59-1	Cleaver Brooks CB-700-150 S/N L-64591		1978	6.28	
TA-59-1-BHW-2	TA-59-1	Cleaver Brooks CB-700-150 S/N L-92957		1994	6.28	
CMRR-BHW-1	TA-55-440	Unilux ZF1100W SN A1874		2009	11.0	
CMRR-BHW-2	TA-55-440	Unilux ZF1100W SN A1875		2009	11.0	
CMRR-BHW-3	TA-55-440	Unilux ZF1100W SN A1876		2009	11.0	
CMRR-BHW-4	TA-55-440	TBD		TBD	11.0	

1 Construction, Modification, or Reconstruction as defined according to 40 CFR 60.

2 Emission estimates from these units shall be based on the maximum heat input rating, derated for altitude.

A801 Control Equipment – External Combustion A. Table 801.A lists all of the pollution control equipment required for the applicable regulated equipment in this source category. Each emission point	New high efficiency boilers replaced permitted boilers in a couple of Laboratory locations during this certification period. Emission units TA-48-1-BS-2, TA-48-1-BS-6, TA-59-1-BHW-1, and TA-59-1-BHW-2, were all removed from service and are no longer at LANL. All boilers were replaced with smaller (insignificant), more efficient units. Unit CMRR-	<input checked="" type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes
		<input type="checkbox"/> Intermittent	<input type="checkbox"/> No	<input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
is identified by the same number that was assigned to it in the permit application.	BHW-4 has not been installed.			

Table 801.A: Control Equipment List

Control Equipment Unit No. ¹	Location/Building	Control Description	Pollutant being controlled
TA-16-1484-BS-1	TA-16-1484	Low-NOx Burner	NOx
TA-16-1484-BS-2	TA-16-1484	Low-NOx Burner	NOx
TA-48-1-BS-2	TA-48-1	none	none
TA-48-1-BS-6	TA-48-1	none	none
TA-53-365-BHW-1	TA-53-365	none	none
TA-53-365-BHW-2	TA-53-365	none	none
TA-55-6-BHW-1	TA-55-6	Low-NOx Burner	NOx
TA-55-6-BHW-2	TA-55-6	Low-NOx Burner	NOx
TA-59-1-BHW-1	TA-59-1	none	none
TA-59-1-BHW-2	TA-59-1	none	none
CMRR-BHW-1	TA-55-440	Low-NOx Burner ²	NOx
CMRR-BHW-2	TA-55-440	Low-NOx Burner	NOx
CMRR-BHW-3	TA-55-440	Low-NOx Burner	NOx
CMRR-BHW-4	TA-55-440	Low-NOx Burner	NOx

1 Control for unit number refers to a unit number from the Regulated Sources List

2 Low-NOx burners are required for Units CMRR-BHW-1 through -4 by NSR Permit 2195N, Specific Condition 1.d.

<p>A802 Emission Limits – External Combustion A. Table 802.A lists specific emission units and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 40 CFR 60, Subpart Dc).</p>	Emissions are calculated and reported to NMED on a 6-month basis in accordance with permit condition A109.B. Emissions are compared to the allowable emission limits in each semi-annual report. Allowable emission limits were not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 802.A: Allowable Emissions

Unit No.	¹ NO _x tpy	CO tpy	VOC tpy	SO ₂ tpy	TSP tpy	PM ₁₀ tpy
Combined annual emissions for all units listed in Table 800.A ²	80.0	80.0	50.0	50.0	50.0	50.0

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO₂

2 Excludes TA-3-22 Power Plant addressed in Section A1300.

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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B. Table 802.B lists specific emission units and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 40 CFR 60, Subpart Dc; NSR Permit 2195N)	Emissions are calculated and reported to NMED on a 6-month basis in accordance with permit condition A109.B. Emissions are compared to the allowable emission limits in each semi-annual report. Allowable emission limits were not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 802.B: Allowable Emissions

Unit No.	¹ NO _x pph	NO _x tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO ₂ pph	SO ₂ tpy	TSP pph	TSP tpy	PM ₁₀ pph	PM ₁₀ tpy	PM _{2.5} pph	PM _{2.5} tpy
CMRR-BHW-1 (GAS)	0.7	2.9	1.1	4.8	-- ²	--	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4
CMRR-BHW-1 (OIL)	1.6		0.5		--	--	5.8		0.3		0.2		0.2	
CMRR-BHW-2 (GAS)	0.7	2.9	1.1	4.8	--	--	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4
CMRR-BHW-2 (OIL)	1.6		0.5		--	--	5.8		0.3		0.2		0.2	
CMRR-BHW-3 (GAS)	0.7	2.9	1.1	4.8	--	--	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4
CMRR-BHW-3 (OIL)	1.6		0.5		--	--	5.8		0.3		0.2		0.2	
CMRR-BHW-4 (GAS)	0.7	2.9	1.1	4.8	--	--	0.1	0.3	0.1	0.4	0.1	0.4	0.1	0.4
CMRR-BHW-4 (OIL)	1.6		0.5		--	--	5.8		0.3		0.2		0.2	
All boilers - Oil ⁴	N/A	2.9	N/A	0.9	--	--	N/A	10.4	N/A	0.5	N/A	0.3	N/A	0.3

1. Permit Condition # and Permit Condition:				2. Method(s) or other information or other facts used to determine the compliance status:				3. What is the frequency of data collection used to determine compliance?		4. Was this facility in compliance with this requirement during the reporting period?		5. Were there any deviations associated with this requirement during the reporting period?							
Combined Total ³				14.5				20.1		--		11.6		2.1		1.9		1.9	

- 1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO₂
- 2 The "--" symbol indicates a value that was considered negligible and not permitted under NSR 2195N.
- 3 The annual tpy combined emission totals represent enforceable emission limit caps for all 4 boilers combined, fired with any combination of allowed fuel types.
- 4 Tpy emission cap for any combination of oil fired boilers.

C. Units CMRR-BHW-1 through - 4 shall not emit oxides of nitrogen in excess of 30 ppmvd, corrected to 15% oxygen on a dry basis. This emissions limitation applies to natural gas fuel only. (NSR Permit 2195N, Specific Condition 1.d., partial, revised)		Nitrogen oxide concentrations were analyzed during the initial compliance test for the CMRR boilers. All boilers were well under the ppmvd limit.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A803 <u>Applicable Requirements – External Combustion</u> A. The permittee shall comply with all applicable sections of the requirements listed in Table 803.A.		Emission units listed in the table meet the applicable requirements listed. Monthly fuel monitoring is performed on all listed emission units. The fuel monitoring records are collected monthly and maintained on-site.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 803.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permit 2195N	X	CMRR-BHW-1 through -4
20.2.61 NMAC Smoke and Visible Emissions	X	All combustion sources
40 CFR 60, Subpart Dc	X	TA-55-6-BHW-1, TA-55-BHW-2, CMRR-BHW-1 through -4

A804 Operational Limitations – External Combustion

A. All external combustion equipment except Units CMRR-BHW-1 through -4 when operating with fuel oil is authorized to operate any time during the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with its hours of operation.

B. Units CMRR-BHW-1 through -4 shall be operated on fuel oil for no more than 48 hours per year per boiler for non-emergency maintenance and		Hours of operation for each boiler is tracked by facility personnel. No fuel oil was used during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
readiness testing. This condition establishes exemption from 40 CFR 63, Subpart JJJJJ (final rule signed by the EPA Administrator on 2/21/11).				
C. Total annual fuel oil consumption for Units CMRR-BHW-1 through -4 shall not exceed 289,100 gallons on a rolling 365-day total basis.	Total annual fuel oil use is tracked using a 365 day rolling total and is compared to the fuel use limit. No fuel oil was used during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A805 Fuel Sulfur Requirements – External Combustion A. All Boilers and Heaters (except Units CMRR-BHW-1 through -4) Requirement: All boilers and heaters, except Units CMRR-BHW-1 through -4 and the Power Plant addressed in Section A1300 shall combust only natural gas containing no more than 2 grains of total sulfur per 100 dry standard cubic feet. Monitoring: None	A natural gas transportation contract is in place and states that gas provided to LANL will be pipeline quality and contain no more than 3/4 grains of total sulfur per 100 scf.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel gas analysis, specifying the allowable limit or less. If fuel gas analysis is used, the analysis shall not be older than one year .	A natural gas transportation contract is in place and states that gas provided to LANL will be pipeline quality and contain no more than 3/4 grains of total sulfur per 100 scf.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Units CMRR-BHW-1 through -4 Requirement: Units CMRR-BHW-1 through -4 shall combust either natural gas containing no more than 2.0 grains of total sulfur per 100 dry standard cubic feet or No. 2 fuel oil containing no more than 0.5 wt% total sulfur. (NSR Permit 2195N, Specific Condition 1.b., partial, revised, Specific Condition 1.h., and 40 CFR 60.42c(d))	A natural gas transportation contract is in place and states that gas provided to LANL will be pipeline quality and contain no more than 3/4 grains of total sulfur per 100 scf. A purchase contract is in place for fuel oil. The contract requires that all fuel oil have a sulfur content less than or equal to 0.05% sulfur by weight.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Monitoring: None.				
Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit and/or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the allowable limit or less. If a fuel analysis is used, the analysis shall not be older than one year . (NSR Permit 2195N, Specific Condition 3.b., revised; 40 CFR 60.48c(e)(11); and 40 CFR 60.48c(g)(2)). Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.	A natural gas transportation contract is in place and available at the site. A fuel oil purchase contract is in place and available at the site. Delivery receipts are also kept and identify the fuel oil as ultra low sulfur diesel.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A806 20.2.61 NMAC Opacity – External Combustion A. All Boilers and Heaters (except Units CMRR-BHW-1 through -4) Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.	LANL has certified visible emission readers on-site who perform observations using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation. Visible emissions did not equal or exceed 20% opacity during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.	The natural gas transportation contract states that gas provided to LANL will be pipeline quality and contain no more than 3/4 grains of total sulfur per 100 scf. Opacity did not meet or exceed 20% over a 10-minute period, and no visible emissions were observed during steady state operations during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.	A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Opacity measurements are included in the semi-annual monitoring reports. No opacity readings were needed during this certification period. Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Units CMRR-BHW-1 through -4: Natural Gas-Fired Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.	Opacity did not meet or exceed 20% over a 10-minute period, and no visible emissions were observed during steady state operations during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.	The natural gas transportation contract states that gas provided to LANL will be pipeline quality and contain no more than 3/4 grains of total sulfur per 100 scf. Opacity did not meet or exceed 20% over a 10-minute period, and no visible emissions were observed during steady state operations during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.	A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Opacity measurements are included in the semi-annual monitoring reports. No opacity readings were needed during this certification period. Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C. Units CMRR-BHW-1 through -4: Fuel Oil-Fired Requirement: Exhaust emissions from any external combustion source shall not exceed 20% opacity averaged over a 10-minute period.	LANL has certified visible emission readers on-site who perform observations using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation. Visible emissions did not equal or exceed 20% opacity during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>Monitoring: The permittee shall perform a least one (1) opacity observation each day that fuel oil is used to fire any of Units CMRR-BHW-1 through -4. Opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. (NSR Permit 2195N, Specific Condition 3.c., revised)</p>	<p>An opacity observations is taken each day fuel oil is used. No fuel oil was used during this certification period.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings. (NSR Permit 2195N, Specific Condition 4.b., revised)</p>	<p>A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>Opacity measurements are included in the semi-annual monitoring reports. No opacity readings were needed during this certification period because no fuel oil was combusted. Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>A807 Other – External Combustion</p> <p>A. Natural Gas Fuel Usage (Sources listed in Table 800.A except CMRR-BHW-1 through -4)</p> <p>Requirement: The combined natural gas fuel usage shall be limited to 870 MMscf/y. This limitation shall apply to all boilers and heaters listed in Table 800.A except Units CMRR-BHW-1 through -4, but including all other boilers and heaters at the Facility that qualify as Title V Insignificant Activities.</p>	<p>For units listed under this permit condition, a 12-month rolling total of natural gas used is calculated and recorded each month. The rolling total is compared to the fuel use limit each month and provided in the semi-annual monitoring report. Natural gas usage limits were not exceeded.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Monitoring: The permittee shall monitor the monthly total volumetric flow of natural gas to Units TA-55-6-BHW-1 and TA-55-6-BHW-2 through use of a totalizing flow meter.</p>	<p>These units have a volumetric flow meter is in place and is used to monitor monthly natural gas use. This information is maintained and available on-site. Natural gas usage for these units is provided in the semi-annual monitoring report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall:</p> <ol style="list-style-type: none"> 1) Calculate the monthly rolling 12-month total natural gas fuel usage for the emission units listed in Table 800.A except Units CMRR-BHW-1 through -4. 2) Calculate the actual emissions rate for the emission units listed in Table 800.A except Units 	<p>A 12-month rolling total of natural gas used is calculated and recorded each month. The rolling total is compared to the fuel use limit each month and provided in the semi-annual monitoring report. Natural gas usage limits were not exceeded.</p> <p>The actual emission rate is calculated for the units listed in Table 800.A. This calculation uses data from individual unit</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>CMRR-BHW-1 through -4. The calculation shall be based on the actual fuel usage of Units equipped with individual flow meters and the Facility-Wide metered or estimated natural gas usage.</p> <p>3) Calculate the semiannual and annual total emissions rate (tons/year) for this source category and compare them to the emission limits in Table 802.A. The permittee shall maintain records in accordance with Section B109.</p>	<p>flow meters and facility wide metered natural gas.</p> <p>The emission rate is calculated every 6 months and annually for this source category and compared to the limits.</p>			
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>B. Natural Gas and Fuel Oil Usage (Units CMRR-BHW-1 through -4)</p> <p>Requirement: The permittee shall comply with the emission limits in Table 802.B for each fuel type.</p>	<p>The initial compliance test was used to show compliance with the emission limits. All concentrations and emission rates were below permitted limits. Vendor data is also used to determine compliance with emission limits.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Monitoring: The permittee shall:</p> <p>1) Monitor the monthly total volumetric flow of natural gas to Units CMRR-BHW-1 through -4 using a totalizing flow meter. (NSR Permit 2195N, Specific Condition 3.a., partial, revised and 40 CFR 60.48c(g)(2))</p> <p>2) Monitor the daily fuel oil consumption during which any of the 4 CMRR boilers are fired with this fuel type. (NSR Permit 2195N, Specific Condition 3.a, partial, revised)</p> <p>3) Monitor the hours of operation for each boiler when fired on fuel oil and during non-emergency maintenance and readiness testing.</p>	<p>A totalizing flow meter is in place and measures natural gas used by the CMRR boilers.</p> <p>Daily fuel oil consumption is monitored using both tank readings and individual meter readings.</p> <p>The hours of operation of each boiler is recorded by facility personnel each time a boiler is run on fuel oil. The purpose for running the boiler is also monitored.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall:</p> <p>1) Calculate and record the annual fuel oil usage for Units CMRR-BHW-1 through -4 as a daily rolling 365-day total. (NSR Permit 2195N, Specific Condition 1.c., partial, revised)</p> <p>2) Calculate and record the semiannual and calendar year total emissions rate (tons/year) for each fuel type and for the combination of both fuels compare to the emission limits in Table</p>	<p>Annual fuel oil usage is recorded on a 365-day rolling total. No fuel oil was used during this certification period.</p> <p>The emissions rate is calculated on a 6-month and annual basis for each fuel type and for both fuels combined. Emissions are compared to limits.</p> <p>Annual hours of operation for each boiler are recorded when fired on fuel oil during non-emergency use. The total hours</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
802.B. 3) Record the annual hours of operation of each boiler when fired on fuel oil during non-emergency maintenance and readiness testing and compare to the limitation at Condition A804.B. 4) The permittee shall maintain records in accordance with Section B109.	are compared to the hour limit in condition A804.B. Records are maintained in accordance with condition B109.			
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C. 40 CFR 60, Subpart Dc (Units TA-55-6-BHW-1, TA-55-6-BHW-2, CMRR-BHW-1 through -4) Requirement: Units TA-55-6-BHW-1, TA-55-6-BHW-2, CMRR-BHW-1 through -4 are subject to 40 CFR 60, Subparts A and Dc, including the initial notification requirements of Subpart A and the specific requirements of Subpart Dc.	Units TA-55-6-BHW-1, TA-55-6-BHW-2, and CMRR-BHW-1 through -4 meet the requirements of 40 CFR Part 60, Subparts A and Dc. Notification requirements were met through source startup notifications and initial permit applications. Fuel sulfur requirements and tracking is covered in the monitoring report which is submitted every 6 months.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall perform all monitoring required by 40 CFR 60, Subparts A and Dc, including (but not limited to) 40 CFR 60.47c.	Fuel sulfur requirements and tracking is performed and covered in the monitoring report which is submitted every 6 months.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain all records required 40 CFR 60, Subparts A and Dc, including (but not limited to) those specified by 40 CFR 60.48c(f)(1), (g), and (i). (NSR Permit 2195N, Specific Condition 4.a., revised)	Fuel sulfur content and fuel use records are maintained on site for at least 5 years as required by the operating permit.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall: 1) Submit reports described in Section A109 and in accordance with Section B110. 2) Submit reports as required by 40 CFR 60, Subparts A and Dc, including (but not limited to) those required by 40 CFR 60.48c(a)(1) – (3) and 40 CFR 60.48c(d), (e)(11), (f)(1), and (j). (NSR Permit 2195N, Specific Condition 4.a., revised)	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
D. Initial Compliance Testing (Units CMRR-1 through -4) Requirement: Initial compliance tests are required for	The initial compliance tests for units CMRR-BHW-1 through -4 were conducted on January 18-19, 2012. These tests were conducted using natural gas only. A permit revision was made to the NSR permit to remove the requirement to test using each fuel type. Fuel oil is an emergency fuel and will rarely be used. The revised condition can be found in specific condition	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
each boiler, Units CMRR-BHW-1 through -4. The tests shall be conducted for NOx and CO for each fuel type. Tests shall be conducted for TSP, PM10, and PM2.5 for fuel oil use only. (NSR Permit 2195N, Specific Condition 6.a., partial, revised)	6.a of NSR permit 2195N-R2. This revised condition will be included in the upcoming operating permit renewal.			
Monitoring: Compliance testing shall be conducted in accordance with Section B111. The reference to initial startup of the source at B111.A(2) shall be defined as initial startup for each fuel type; compliance testing on fuel oil in accordance with B111 is not required until after the source has achieved startup on fuel oil.	The compliance tests performed as stated above, were conducted in accordance with Section B111 of the operating permit.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records in accordance with Section B109.	The compliance test records are in accordance with Section B109.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p><u>CHEMICAL USAGE</u></p> <p>A900 <u>Regulated Sources – Chemical Usage</u></p> <p>A. Table 900.A lists all of the process equipment authorized for this source category.</p>	No new process equipment has been added for this source category during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 900.A: Regulated Sources List

Unit No.	Source Description/Location	Emission Type
LANL-FW-CHEM	Chemical Usage, Facility-wide (except CMRR-RLUOB)	VOC, HAPs, TAPs
CMRR-CHEM	Chemical Usage, Bldg. TA-55-400 (the laboratory portion only of this CMRR-RLUOB building)	VOC, HAPs, TAPs

<p>A901 <u>Control Equipment – Chemical Usage – Not Required</u></p>	Facility wide emissions from chemical use are calculated and reported on a 6-month basis in accordance with permit condition A109.B. A comparison against the allowable emission limits is performed at each of these reporting periods. Facility wide emission limits were not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>A902 <u>Emission Limits – Chemical Usage</u></p> <p>B. Table 902.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC, NSR</p>	CMRR-RLUOB laboratory chemicals are tracked and emissions calculated on a monthly basis and compared to the			

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Permit 2195N).	allowable emission limits. The CMRR-RLUOB facility did not use chemicals in the laboratory portion during this certification period.			

Table 902.A: Allowable Emissions

Unit No.	VOC/HAPs tpy
LANL-FW-CHEM	-- ¹
CMRR-CHEM	3.75 ¹

¹ The VOC emissions from this source category are included in the facility-wide allowable emissions limit established in Table 106.B: 200 tpy VOC, 8.0 tpy per individual HAP, and 24.0 tpy of combined total HAPs. Any VHAPs that are also defined as a VOC shall be included in the VOC total.

<p>A903 <u>Applicable Requirements – Chemical Usage</u></p> <p>A. The permittee shall comply with all applicable sections of the requirements listed in Table 903.A.</p>	<p>All applicable sections of NSR Permit 2195N are included in the operating permit. All sections are complied with.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 903.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permit 2195N	X	CMRR-CHEM

<p>A904 <u>Operational Limitations – Chemical Usage</u></p> <p>A. The Chemical Usage source category is authorized for continuous operation. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.</p>				
<p>B. For Unit CMRR-CHEM, the permittee shall obtain a NSR permit revision prior to the use of any TAP that is expected to be emitted in excess of the stack-height-corrected screening levels at 202.72.502 NMAC. (NSR Permit 2195N, Specific Condition 1.g, revised)</p>	<p>Chemical usage is tracked and emissions calculated monthly to determine TAP emissions. If TAP emissions are expected to exceed screening levels, a NSR permit revision would be requested.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A907 Other – Chemical Usage A. Emission calculations (Unit LANL-FW-CHEM) Requirement: The permittee shall comply with the facility-wide VOC and HAP emission limits at Table 106.B.	Facility wide emissions did not exceed the VOC or HAP emission limits listed in Table 106.B.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor facility-wide chemical purchasing and site location using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a semi-annual basis, and categorized as VOC, HAP, or a combination of these categories.	Facility wide chemical purchase records are collected in LANL's ChemLog database and used to calculate emissions. Chemical emission information is submitted to NMED every 6-months in accordance with permit condition A109.B.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record the quantity of total VOC emitted and the quantity of each individual and total HAPs on a semi-annual basis. These records shall be maintained in accordance with Section B109.	Facility wide VOC and HAP emissions are calculated, recorded, and reported on a 6-month basis in accordance with permit condition A109.B and B109.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109. For more information, see the methods used to determine compliance for condition A109 in this report. The semi-annual emission report includes individual HAPs emitted in a quantity greater than 0.5 tons per year.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Emission calculations (Unit CMRR-CHEM) Requirement: The permittee shall comply with the source-specific VOC emission limit at Table 902.A and the facility-wide VOC and HAP emission limits at Table 106.B. (NSR Permit 2195N, Specific Condition 2.a., revised)	CMRR-CHEM emissions did not exceed the VOC emission limit at Table 902.A or the VOC and HAP emission limits listed in Table 106.B. The CMRR-RLUOB facility did not use chemicals in the laboratory portion during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor chemical purchasing for the CMRR-CHEM facility using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a monthly basis, and categorized as VOC, HAP, TAP, or a combination of these categories. (NSR Permit 2195N, Specific Condition 4.c., revised)	Facility wide chemical purchase records are collected in LANL's ChemLog database and used to calculate emissions for unit CMRR-CHEM. Chemical emissions are estimated monthly and categorized as VOC, HAP, TAP, or a combination of these.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record the quantity of total VOC and TAP, each individual HAP, and the total HAPs emitted on a monthly rolling, 12-month total basis. These records shall be maintained in accordance with Section B109. (NSR	A monthly total VOC, TAP, and HAP emissions are recorded each month and in a 12-month rolling total. Records are maintained in accordance with Section B109.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Permit 2195N, Specific Condition 4.c., revised)				
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report. The semi-annual emission report includes individual HAPs emitted in a quantity greater than 0.5 tons per year.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<u>DEGREASERS</u> A1000 <u>Regulated Sources – Degreasers</u> A. Table 1000.A lists all of the process equipment authorized for this source category.	No new process equipment has been added for this source category during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 1000.A: Regulated Sources List

Unit No.	Source Description/Location	Emissions Type
TA-55-DG-1	Ultrasonic Cold Batch	VOCs, HAPs

A1002 <u>Emission Limits –Degreasers</u> A. Table 1002.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC).	Emissions are calculated and reported on a 6- month basis in accordance with permit condition A109.B. Comparison against the allowable emission limits is performed at each of these reporting periods. Allowable emission limits were not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 1002.A: Allowable Emissions

Unit No.	VOC/HAPs tpy
TA-55-DG-1	-- ¹

1 The VOC emissions from this source category are included in the facility-wide allowable emissions limit established in Table 106.B: 200 tpy VOC, 8.0 tpy per individual HAP, and 24.0 tpy of combined total HAPs. Any VHAPs that are also defined as a VOC shall be included in the VOC total.

A1003 <u>Applicable Requirements – Degreasers</u> A. The permittee shall comply with all applicable sections of the requirements listed in Table 1003.A.	LANL degreaser operation met all requirements of 40 CFR Part 63, Subpart T during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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Table 1003.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
40 CFR 63, Subpart T National Emission Standards for Halogenated Solvent Cleaning	X	TA-55-DG-1

A1004 Operational Limitations – Degreasers

A.The Degreasers source category is authorized for continuous operation. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.

A1007 Other – Degreasers		<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>A. Operational Requirements (Degreasers)</p> <p>Requirement: The permittee shall comply with the applicable requirements according to 40 CFR 63, Subpart T, including, but not limited to:</p> <ol style="list-style-type: none"> 1) Ensure the degreaser is closed with a tight fitting cover whenever not in use, and 2) Maintain a freeboard ratio of 0.75 or greater, and 3) Collect and store all waste solvent and wipe rags in closed containers, and 4) Perform flushing within the freeboard area only, and 5) Allow cleaned parts to drip for 15 seconds or until dripping stops, and 6) Do not exceed the fill line on the solvent level, and 7) Wipe up spills immediately, and 8) Do not create observable splashing with agitation device, and 9) Ensure that the degreaser is not exposed to drafts greater than 40 meters/min, and 10) Do not clean sponges, fabric, wood, or paper. 	<p>The degreaser is kept closed with a tight fitting cover when it is not being used.</p> <p>A freeboard ratio of 0.75 or greater is maintained.</p> <p>All waste solvent and solvent contaminated wipe rags are collected and stored in closed containers.</p> <p>Flushing operations are performed only within the freeboard area.</p> <p>Cleaned parts are allowed to drip for 15 seconds or until dripping stops.</p> <p>The fill line has not been exceeded.</p> <p>Spills are wiped up immediately.</p> <p>Administrative controls are in place to prevent observable splashing with an agitation device.</p> <p>The degreaser is located in a glove box with a set ventilation flow rate. Exhaust flows do not exceed 40 m/min.</p> <p>Sponges, fabric, wood, or paper are not cleaned in the degreaser.</p>			
<p>Monitoring: The permittee shall monitor and record the amount of solvent added to the degreaser.</p>	<p>A database is used to track the amount of degreaser solvent added, removed, and lost. This system is used to calculate emissions, which are reported on a 6-month basis in accordance with permit condition A109.B.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall:</p> <ol style="list-style-type: none"> 1) Calculate the actual emissions rate (pounds/month) of VOC and HAPs based on the quantity of solvent lost to evaporation on a 	<p>The actual emission rate (lb/month) of VOC and HAPs is automatically calculated by the database when data is entered.</p> <p>The semi-annual emissions (tpy) are also calculated by the</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>monthly basis.</p> <p>2) Calculate the semi-annual emissions rate (tons/year) for this source category and add to the facility-wide emission rates in Table 106.B.</p> <p>3) Maintain records of the degreaser solvent content and quantity added and work practice checklists.</p> <p>4) The permittee shall maintain records in accordance with Section B109.</p>	<p>database. These emissions are included in the facility wide totals.</p> <p>Checklists for work practice standards have been completed for this certification period. Records of solvent content and quantity added are maintained on site.</p> <p>Records for this source category are maintained in accordance with Section B109.</p>			
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p><u>INTERNAL COMBUSTION</u></p> <p>A1100 <u>Regulated Sources – Internal Combustion</u></p> <p>A. Table 1100.A lists all of the process equipment authorized for this source category.</p>	<p>The CMRR-GEN-1 through -3 were included in the operating permit revision issued in June, 2012. There was no other process equipment added to this source category during this certification period.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>

Table 1200.A: Regulated Sources List

Unit No.	Source Location	Source Type	Make/Model	Serial No.	Capacity	Manufacture Date
TA-33-G-1	TA-33	CI-RICE, Stationary Generator	Kohler/1600 ROZD71	375801	1600 kW (electrical output)	1996
TA-33-G-2	TA-33	CI-RICE, Portable Generator	Kohler/20EORZ	2025460	20 kW (electrical output)	2003
TA-33-G-3	TA-33	CI-RICE, Portable Generator	Kohler/20EORZ	2025461	20 kW (electrical output)	2003
TA-33-G-4	TA-33	CI-RICE, Portable Generator	Caterpillar/3306	6PK01065	225 kW (electrical output)	1999
Standby Generators	Facility-Wide	CI – and SI-RICE Generators: diesel, natural gas, and propane.	Various	Various	Various	Unknown

1. Permit Condition # and Permit Condition:		2. Method(s) or other information or other facts used to determine the compliance status:			3. What is the frequency of data collection used to determine compliance?		4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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CMRR-GEN-1	Near TA-55-0400 (CMRR-RULOB)	CI-RICE Stationary Generator	Cummins/DFLE-5754172	106970810	2220 hp (mechanical input)	9/06
CMRR-GEN-2	Near TA-55-0400 (CMRR-RULOB)	CI-RICE Stationary Generator	Cummins/DFLE-5754172	106970811	2220 hp (mechanical input)	9/06
CMRR-GEN-3	Near TA-55-0400 (CMRR-RULOB)	CI-RICE Stationary Generator	Cummins/DFLE-5754172	106970812	2220 hp (mechanical input)	9/06

A1102 Emission Limits – Internal Combustion		None of the allowable emission limits were exceeded during this certification period.	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes
A. Table 1102.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 40 CFR 60, Subparts A and IIII; 40 CFR 63, Subparts A and ZZZZ).			<input checked="" type="checkbox"/> Intermittent	<input type="checkbox"/> No	<input checked="" type="checkbox"/> No

Table 1102.A: Allowable Emissions

Unit No.	NO _x pph	NO _x tpy	CO pph	CO tpy	VOC pph	VOC tpy	SO ₂ pph	SO ₂ tpy	TSP pph	TSP tpy	PM ₁₀ pph	PM ₁₀ tpy
TA-33-G-1	40.3	18.1	33.7	15.2	0.7	0.3	5.5	2.5	1.4	0.6	1.4	0.6
TA-33-G-2	0.83	0.21	0.2	0.1	0.1	-- ¹	--	--	--	--	--	--
TA-33-G-3	0.83	0.21	0.2	0.1	0.1	-- ¹	--	--	--	--	--	--
TA-33-G-4	9.33	2.33	5.7	1.4	0.75	0.2	0.62	0.16	--	--	--	--

1 The VOC emissions from this source category are included in the facility-wide allowable emissions limit established in condition A106.B: 200 tpy VOC, 8.0 tpy per individual HAP, and 24.0 tpy of combined HAPs.

A1103 Applicable Requirements – Internal Combustion		Units listed in this section meet the requirements listed in Table 1103.A, as applicable.	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes
A. The permittee shall comply with all applicable sections of the requirements listed in Table			<input checked="" type="checkbox"/> Intermittent	<input type="checkbox"/> No	<input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
1103.A.				

Table 1103.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permit 2195F-R3	X	TA-33-G-1
NSR Permit 2195P	X	TA-33-G-2 through -4
NSR Permit 2195N-R1	X	CMRR-GEN-1 through -3
20.2.61 NMAC Smoke and Visible Emissions	X	All Internal Combustion Sources
20.2.77 New Source Performance Standards	X	Applicable to CMRR-GEN-1 through -3; potentially applicable to any RICE at the facility
40 CFR 60, Subpart A, General Provisions	X	Applicable to CMRR-GEN-1 through -3; potentially applicable to any CI-RICE at the facility
40 CFR 60 Subpart IIII, Stationary CI-RICE	X	
40 CFR 63, Subpart A, General Provisions	X	Applicable to CMRR-GEN-1 through -3; potentially applicable to any RICE at the facility
40 CFR 63 Subpart ZZZZ, HAPs from Stationary RICE	X	
40 CFR 89, Control of Emissions from New and In-Use Nonroad Compression Ignition Engines	X	TA-33-G-2 through -4

<p>A1104 Operational Limitations – Internal Combustion</p> <p>A. Hours of Operation for Gensets in the Standby Generator Pool</p> <p>Requirement: The facility Standby Generator Pool is limited to an average of 168 hrs per year per genset.</p>	<p>The limit of 168 hr/year average was not exceeded during this certification period.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Monitoring: The permittee shall monitor the hours of operation or each genset that is assigned to the Standby Generator Pool.</p>	<p>Hours of each stationary standby generator are collected and evaluated twice a year to verify that the average hours per year limit is not exceeded.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall maintain semi-annual records of the hours of operation in accordance with Section B109.</p>	<p>The semi-annual hours of operation are maintained in accordance with Section B109.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>B. Hours of Operation and Emission Limits for Unit</p>	<p>TA-33-G-1 did not exceed either the daily or annual kWh limit during this certification period.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>TA-33-G-1</p> <p>Requirements:</p> <p>1) Unit TA-33-G-1 is limited to 12,000 kWh/day and 1,350,000 kWh/y. (NSR Permit 2195F-R3, Specific Condition 1.b., partial)</p> <p>2) Unit TA-33-G-1 is limited to eight (8) hours of daily operation at full capacity. Operation shall occur between the hours of 7:00 AM and 5:00 PM. (NSR Permit 2195F-R3, Specific Condition 1.c.)</p>	<p>A run log is maintained at the generator that records start-up, shut-down, and run time. The generator did not run more than 8 hours in any one day and ran between 7am and 5pm.</p>	<input checked="" type="checkbox"/> Intermittent	<input type="checkbox"/> No	<input checked="" type="checkbox"/> No
<p>Monitoring: The permittee shall monitor the time(s) of operation each day, and the daily and monthly rolling 12-month total kilowatt-hours of operation for Unit TA-33-G-1 using a non-resettable kilowatt-hour meter. (NSR Permit 2195F-R3, Specific Condition 1.b., partial, revised)</p>	<p>TA-33-G-1 has a run log to track daily kWh totals and hours of operation, as well as the time operation begins and ends each day. The hour readings are collected monthly and a 12-month rolling total is calculated. The hour meter on the unit is non-resettable.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall maintain the following records and in accordance with Section B109:</p> <p>1) The permittee shall keep records of the time(s) of operation each day, and the daily, monthly, and the monthly rolling 12-month total kilowatt-hours of operation of the genset listed above, as indicated on the non-resettable kilowatt-hour meter. (NSR Permit 2195F-R3, Specific Condition 4.a. and 4.b., revised)</p> <p>2) The permittee shall calculate the annual emissions of all pollutants from Unit TA-33-G-1.</p>	<p>TA-33-G-1 has a run log to track daily kWh totals and hours of operation, as well as the time operation begins and ends each day. The hour readings are collected monthly and a 12-month rolling total is calculated. The hour meter on the unit is non-resettable.</p> <p>The emissions of regulated pollutants from Unit TA-33-G-1 are calculated at least annually.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C. Hours of Operation and Emission Limits for Units TA-33-G-2 through -4</p> <p>Requirements:</p> <p>1) Units TA-33-G-2 through -4 are authorized to operate 500 hours per generator per calendar year. (NSR Permit 2195P, Specific Condition 1.b.)</p> <p>2) Units TA-33-G-2 through -4 shall each be certified to be in compliance with applicable</p>	<p>The hour readings are collected twice a year to verify the hour limit is not being approached. The hour limits for these units were not exceeded during this certification period.</p> <p>Certificates of compliance with applicable non-road emission standards are maintained on site.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
non-road emission standards in 40 CFR 89. (NSR Permit 2195P, Specific Condition 1.c.)				
Monitoring: The permittee shall monitor the total hours of operation for each genset, Units TA-33-G-2 through -4, using a non-resettable hour meter.	The hour readings are collected twice a year to verify the hour limit is not being approached. The hour limits for these units were not exceeded during this certification period. The hour meter on the unit is non-resettable.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall: 1) Record the total hours operation of the gensets listed above, as indicated on the non-resettable hour meter. (NSR Permit 2195P, Specific Condition 4.a., revised) 2) Calculate and record the semi-annual emissions of all pollutants from each genset, Units TA-33-G-2 through -4. 3) Maintain a copy of the engine certification to the applicable non road emission standards in 40 CFR 89. (NSR Permit 2195P, Specific Condition 4.c.)	Records of operating hours are kept and used for calculating emissions and reporting. The emissions of regulated pollutants from Units TA-33-G-2 through -4 are calculated and recorded semi-annually. Certificates of compliance with applicable non-road emission standards are maintained on site.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
D. Hours of Operation and Emission Limits for Units CMRR-GEN-1 through -3 Requirements: Units CMRR-GEN-1 through -3 are authorized to operate 100 hours per generator per calendar year for maintenance checks and readiness testing.	The hour readings are collected twice a year to verify the hour limit is not being approached. The hour limits for these units were not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor the daily and calendar year total hours of operation for each genset, Units CMRR-GEN-1 through -3, using a non-resettable hour meter.	Daily and semi-annual hour readings are monitored using a non-resettable hour meter.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall: 1) Maintain records of the total hours of operation for the gensets listed above on a semi-annual basis, as indicated on the non-resettable hour meter. 2) Calculate and record the annual emissions of all pollutants listed in Tables 102.A and 102.B from each genset, Units CMRR-GEN-1 through -3.	Records of total operating hours for these gensets are maintained on a semi-annual basis. Emissions from these gensets are calculated and recorded at least annually.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A1105 Fuel Sulfur Requirements – Internal Combustion A. CI-RICE – Subject to RICE NESHAP Subpart ZZZZ and Non-emergency > 300 hp Requirement: CI-RICE used at the facility shall combust only diesel fuel containing no more than 500 ppmw total sulfur . Monitoring: None.	Only Ultra Low Sulfur Diesel (ULSD) is used in these units. A purchase contract is in place with the Laboratory to only purchase ULSD, which is 15 ppm sulfur.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year . Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.	Only Ultra Low Sulfur Diesel (ULSD) is used in these units. A purchase contract is in place with the Laboratory to only purchase ULSD, which is 15 ppm sulfur. A copy of the purchase contract is available on site. In addition, receipt and/or invoices from fuel suppliers are kept when deliveries are made.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A1106 20.2.61 NMAC Opacity – Internal Combustion A. CI-RICE Requirement: All combustion units shall not exceed 20% opacity.	No unit that falls under this section exceeded 20% opacity during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year as qualified by the	Section B108.D(2) of the permit allows reduced frequency of opacity monitoring if the unit operates less than 10% of the monitoring period (calendar quarter). The applicable CI-RICE units operated less than 10% of each monitoring period (less than 219 hours each quarter) during this certification period. If the unit operates greater than 10% of the monitoring period, the unit will have an opacity observation performed on it,	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Section B108.D monitoring provisions. This requirement excludes Insignificant and Trivial Activities.	otherwise an opacity observation will be performed within 5 years of the issuance date of the current operating permit P100-R1-M1. Any opacity observations performed on the unit will be included in the semi-annual monitoring reports.			
Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.	No Method 9 observations were performed during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Opacity measurements are included in the semi-annual monitoring reports. Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>1107 Other – Internal Combustion</p> <p>A. NSPS 40 CFR 60, Subpart IIII - General Requirements.</p> <p>Requirements: Any CI-RICE will be subject to 40 CFR 60, Subparts A and IIII if the source is constructed (ordered) and manufactured after the applicability dates in 40 CFR 60.4200 and is not otherwise exempt. Units CMRR-GEN-1 through -3 are subject to Subpart IIII according to 40 CFR 60.4200(a)(2). These engines shall comply with all requirements under Subpart IIII, including, but not limited to the following general requirements:</p> <ol style="list-style-type: none"> 1) The permittee shall install a non-resettable hour meter if one is not already installed (40 CFR 60.4209(a)). 2) The permittee shall operate and maintain the stationary CI RICE and control device according to the manufacturer’s written instructions or procedures developed by the permittee that are approved by the engine manufacturer. In addition, the permittee may change only those settings that are permitted by the manufacturer (40 CFR 60.4211(a)). 3) Stationary CI RICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel shall use diesel fuel that meets, at a minimum, the following standards of 40 CFR 80.510(b) for nonroad diesel fuel (40 CFR 60.4207(b)): <ul style="list-style-type: none"> (a) Sulfur content. <ul style="list-style-type: none"> (i) 15 ppm maximum for nonroad (NR) diesel fuel. 	<p>All units that fall under this section have a non-resettable hour meter in place.</p> <p>Units CMRR-GEN-1 through -3 are new sources under Subpart ZZZZ and are required to meet the requirements of this section (NSPS 40 CFR 60, Subpart IIII). No other requirements in Subpart ZZZZ apply.</p> <p>The units that fall under this section are maintained and operated according to instructions/procedures developed by the Laboratory generator maintenance staff. The maintenance instruction was developed using manufacturer data and recommendations. The institutional generator maintenance staff are experts at maintaining generators and this is the sole responsibility. Only those settings that are permitted by the manufacturer have been or will be changed.</p> <p>Only Ultra Low Sulfur Diesel (ULSD) is used in these units. A purchase contract is in place with the Laboratory to only purchase ULSD, which is 15 ppm sulfur. A copy of the purchase contract is available on site. In addition, receipt and/or invoices from fuel suppliers are kept when deliveries are made. Fuel purchased meets the minimum cetane requirement.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>(b) Cetane index or aromatic content, as follows:</p> <p>(i) A minimum cetane index of 40; or</p> <p>(ii) A maximum aromatic content of 35 volume percent.</p> <p>4) Notifications are not required for these units according to 40 CFR 60.4214(b)(5).</p> <p>Monitoring: None.</p>				
<p>Recordkeeping: The permittee shall maintain the following records as applicable, all records required by 40 CFR 60, Subparts A and IIII, and in accordance with Section B109:</p> <p>1) Compliance with Requirement 2 shall be demonstrated by maintaining records of the maintenance conducted on the affected stationary CI RICE.</p> <p>2) Compliance with Requirement 3 shall be demonstrated by maintaining the test records, certification, or specification sheet provided by the fuel supplier.</p>	<p>Maintenance is scheduled and performed using an internal maintenance tracking system. Records of maintenance conducted are available on site.</p> <p>A copy of this data has been provided by the supplier and is available on site.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p>Reporting: The permittee shall submit reports described in Section A109, report as required by 40 CFR 60, Subparts A and IIII, and in accordance with Section B110.</p>	<p>Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report. Reports required under 40 CFR 60, Subparts A and IIII, have been submitted.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p>B. NSPS 40 CFR 60 Subpart IIII - Emission Standards at 40 CFR 60.4205(a) and (c).</p> <p>Requirement: Units CMRR-GEN-1 through -3 are subject to the emission standards in 40 CFR 60.4205.</p> <p>Monitoring: None.</p>	<p>The engine on the units subject to this section are EPA Tier 1 certified. The certification is provided by the engine manufacturer indicating compliance with the standard.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p>Recordkeeping: The permittee shall maintain the following records as applicable, all records required by 40 CFR 60, Subparts A and IIII, and in accordance with Section B109:</p> <p>1) The permittee shall demonstrate compliance with the emission standard according to one of the</p>	<p>The engine on the units subject to this section are EPA Tier 1 certified. The certification is provided by the engine manufacturer indicating compliance with the standard.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>methods specified in 40 CFR 60.4211(b)(1) through (5) as follows:</p> <p>(a) The engine shall be certified according to 40 CFR part 89 or 40 CFR 94, as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's specifications, or</p> <p>(b) Maintain records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this Subpart, or</p> <p>(c) Maintain records of engine manufacturer data indicating compliance with the standards, or</p> <p>(d) Maintain records of control device vendor data indicating compliance with the standards, or</p> <p>(e) Conduct an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212, as applicable.</p>				
<p>Reporting: The permittee shall submit reports described in Section A109, report as required by 40 CFR 60, Subparts A and IIII and in accordance with Section B110.</p>	<p>Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report. Reports required under 40 CFR 60, Subparts A and IIII, have been submitted.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C. RICE MACT 40 CFR 63, Subpart ZZZZ</p> <p>Requirement: Any RICE at the facility will be subject to 40 CFR 63, Subparts A and ZZZZ if the source meets the applicability criteria in 40 CFR 63.6585 and 63.6590 and not otherwise exempt. The permittee shall comply with the notification requirements in Subpart A and the specific requirements of Subpart ZZZZ.</p>	<p>There is only one process generator at LANL that is subject to Subpart ZZZZ. This is the permitted 160kW generator located at TA-33, Unit No. TA-33-G-1. The compliance date for this subpart is May 3, 2013.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Monitoring: The permittee shall comply with all applicable monitoring requirements of 40 CFR 63, Subpart A and Subpart ZZZZ.</p>	<p>The compliance deadline for this subpart is May 3, 2013.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall comply with all applicable recordkeeping requirements of 40 CFR 63, Subpart A and Subpart ZZZZ, including but not</p>	<p>The compliance deadline for this subpart is May 3, 2013.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
limited to 63.6655 and 63.10.				
Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 63, Subpart A and ZZZZ, including but not limited to 63.6645, 63.6650, 63.9, and 63.10.	The compliance deadline for this subpart is May 3, 2013.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
DATA DISINTEGRATOR A1200 <u>Regulated Sources – Data Disintegrator</u> A. Table 1200.A lists all of the process equipment authorized for this source category.	No new process equipment has been added to this source category during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 1200.A: Regulated Sources List

Unit No.	Source Description	Manufacturer	Model No./ Serial No.	Manufacture Date	Capacity
TA-52-11	Data Disintegrator/ Industrial Shredder	Security Engineered Machinery	1424/11892	9/2002	1200 lb/hr

A1201 <u>Control Equipment – Data Disintegrator</u> A. Table 1201.A lists all of the pollution control equipment required for the applicable regulated equipment in this source category. Each emission point is identified by the same number that was assigned to it in the permit application.	No new pollution control equipment has been added to this source category during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 1201.A: Control Equipment List

Control Equipment Unit No./Location ¹	Control Description	Efficiency	Pollutant being controlled
TA-52-11	Cyclone and cloth tube filters	98.75%	TSP/PM10

¹ Control for unit number refers to a unit number from the Regulated Sources List

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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A1202 Emission Limits – Data Disintegrator A. Table 1202.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; NSR Permit 2195H).	Emissions are calculated and reported on a 6- month basis in accordance with permit condition A109.B. A comparison against the allowable emission limits is performed at each of these reporting periods. Allowable emission limits were not exceeded.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 1202.A: Allowable Emissions

Unit No.	TSP pph	TSP tpy	PM10 pph	PM10 tpy
TA-52-11	2.3	9.9	2.3	9.9

1 PM10 and TSP emissions limits are after controls.

A1203 Applicable Requirements – Data Disintegrator A. The permittee shall comply with all applicable sections of the requirements listed in Table 1203.A.	LANL Data Disintegrator operations meet requirements of NSR Permit No. 2195H.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 1203.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
NSR Permit No: 2195H	X	TA-52-11

A1204 Operational Limitations – Data Disintegrator A.The Data Disintegrator source category is authorized to operate at any time of the day or night on any day of the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A1207 Other – Data Disintegrator A. Emission calculations (Data Disintegrator) Requirement: The permittee shall calculate Data Disintegrator emissions based on the records of the number of boxes of media that are destroyed.	A log is kept to record the number of boxes of media destroyed monthly and is used to calculate emissions on a semi-annual basis. The number of boxes destroyed is provided to NMED in the Semi-Annual Monitoring Reports.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall monitor the quantity of media destroyed on a monthly basis. The total weight shall be based on a previously determined average box weight. This average weight determination shall be maintained as part of the records for this facility.	A log is kept to monitor the number of boxes of media that are destroyed each month. The average box weight has been determined and is maintained as part of the facility records.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall calculate the actual emissions rate (tons per reporting period) for the emission units listed in Table 1200.A on a semi-annual basis. The emission rate in tons per year shall be calculated by summing the emissions from the previous reporting period with the current period. Records shall be maintained in accordance with Section B109.	The actual emission rate is calculated for each semi-annual report and for the year. The emissions are compared to the allowable emissions for the unit. These records are maintained on site and provided in the emissions report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Cyclone/Cloth Tube Filters (Data Disintegrator) Requirement: The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer's recommendations. (NSR Permit 2195H, Specific Condition 1.d.) Monitoring: N/A	Preventative maintenance and repair is performed on the data disintegrator cyclone and cloth tube filters following manufacturer's recommendations.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain adequate records on site to demonstrate compliance with manufacturer's recommended repair and maintenance schedules for the cyclone and the cloth tube filter(s). (NSR Permit 2195H, Specific Condition 4.a.) Records shall be maintained in accordance with Section B109.	Records of maintenance performed on the unit are available on site. Manufacturer recommended repair and maintenance are also available on site.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C. Compliance Testing (Data Disintegrator) Requirement: If any compliance testing is required, it shall be conducted in accordance with EPA Reference Methods 1 through 4, Method 5 for TSP, and conducted in accordance with 450 CFR 60, Appendix A. For combined TSP and PM10, testing shall be in accordance with 40 CFR 51, Appendix M, Method 201. Alternative test method(s) may be used if the Department approves the change. (NSR Permit 2195H, Specific Condition 6.b., revised) Monitoring: N/A	No compliance test was required or performed during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records in accordance with Section B109.	No compliance test was required or performed during this certification period. No records have been generated.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
TA-3 POWER PLANT A1300 Regulated Sources – TA-3 Power Plant A. Table 1300.A lists all of the process equipment authorized for this source category.	No new process equipment has been added to this facility during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 1300.A: Regulated Sources List

Unit No.	Source Description	Manufacturer	Model No./ Serial No.	Year of Manufacture	Capacity
TA-3-22-1	Boiler	Edgemoor Iron Works	4008	1950	178.5 MMBtu/hr
TA-3-22-2	Boiler	Edgemoor Iron Works	4009	1950	178.5 MMBtu/hr
TA-3-22-3	Boiler	Union Iron Works	11804	1952	178.5 MMBtu/hr
TA-3-22-CT-1	Combustion Turbine	Rolls Royce	RB211-6761DLE/	2003	27 MW

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
A1301 Control Equipment – TA-3 Power Plant A. Table 1301.A lists all the pollution control equipment required for this source category. Each emission point is identified by the same number that was assigned to it in the permit application.	No new pollution control equipment has been added to this facility during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Table 1301.A: Control Equipment List:

Control Equipment Unit No.	Control Description	Manufacturer	Year of Manufacture	Pollutant being controlled	Control for Unit No. ¹
F-1	Flue Gas Recirculation Fan, 1800 rpm	Robinson Industries	2001	NOx	TA-3-22-1
F-2	Flue Gas Recirculation Fan, 1800 rpm	Robinson Industries	2001	NOx	TA-3-22-2
F-3	Flue Gas Recirculation Fan, 1800 rpm	Robinson Industries	2001	NOx	TA-3-22-3
TA-3-22-CT-1	Rolls-Royce DLE System	Rolls-Royce	2003	NOx	TA-3-22-CT-1

¹ Control for unit number refers to a unit number from the Regulated Equipment List

A1302 Emission Limits – TA-3 Power Plant A. Table 1302.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 40 CFR 60, Subparts A and GG; NSR Permit 2195B-M2).	Emissions are calculated and reported on a 6- month basis in accordance with permit condition A109.B. A comparison against the allowable emission limits is performed at each of these reporting periods. Allowable emission limits were not exceeded.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 1302.A: Allowable Emissions

Unit No.	NOx ¹		CO		VOC		SOx		TSP		PM10		PM2.5	
	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil
TA-3-22-1 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0
TA-3-22-2 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0

1. Permit Condition # and Permit Condition:			2. Method(s) or other information or other facts used to determine the compliance status:						3. What is the frequency of data collection used to determine compliance?		4. Was this facility in compliance with this requirement during the reporting period?		5. Were there any deviations associated with this requirement during the reporting period?	
TA-3-22-3 (lb/hr)	10.2	11.3	7.0	6.5	1.0	0.3	1.1	9.6	1.3	4.3	1.3	3.0	1.3	2.0
Boilers Combined (tpy)	31.5		21.5		2.8		4.9		4.7		4.4		4.2	
TA-3-22-CT-1 (lb/hr)	23.8		29.0		0.6		1.7		1.9		1.9		1.9	
TA-3-22-CT-1 (tpy)	59.4		72.3		1.5		4.2		4.8		4.8		4.8	
TA-3-22-CT-1 (ppm)	25 ppmvd @ 15% O ₂		N/A		N/A		N/A		N/A		N/A		N/A	

1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO₂.

<p>B. NOx emissions (all oxides of nitrogen expressed as NO₂) from the boilers (Units TA-3-22-1 through -3) shall not exceed 0.3 lb/MMBtu of heat input when burning natural gas or oil as required by 20.2.33 and 20.2.34 NMAC. (NSR Permit 2195B-M2, Specific Condition A106.B)</p>	<p>Results from source compliance tests performed on the boilers demonstrate that nitrogen dioxide emissions do not exceed 0.3 lbs per MMBtu of heat input.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C. For the Combustion Turbine (Unit TA-3-22-CT-1), the permittee shall comply with the NSPS Subpart GG NOx emissions limitation of 110.4 ppmv at 15% O₂, dry basis (40 CFR 63.332(a)(1) and NSR Permit 2195B-M2, Specific Condition A106.C)</p>	<p>The NOx and CO emission concentrations and rates are measured and compared to the allowable emission limit each year. NOx concentrations are well below this limit and below the allowable emissions in table 1302.A. A test report is available on site and is provided to NMED in the semi-annual monitoring report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>D. For the Combustion Turbine (Unit TA-3-22-CT-1), the permittee shall comply with the NSPS Subpart GG SO₂ emissions limitation of 0.015% by volume at 15% O₂ dry basis or through use of any fuel not exceeding 8000 ppmw total sulfur. (40 CFR 60.333 and NSR Permit 2195B-M2, Specific Condition A106.D)</p>	<p>The Combustion Turbine only uses natural gas. The natural gas transportation contract states that gas provided to LANL will be pipeline quality and contain no more than 3/4 grains of total sulfur per 100 scf, which is just under 26 ppmw.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>A1303 <u>Applicable Requirements – TA-3 Power Plant</u> A. The permittee shall comply with all</p>	<p>All units listed in this section comply with the requirements listed in the table.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
applicable sections of the requirements listed in Table 1303.A.				

Table 1303.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
20.2.33 NMAC Gas Burning Equipment – Nitrogen Dioxide	X	TA-3-22-1 through -3
20.2.34 NMAC Oil Burning Equipment – Nitrogen Dioxide	X	TA-3-22-1 through -3
20.2.61 Smoke and Visible Emissions	X	All combustion sources
40 CFR 60, Subpart A	X	TA-3-22-CT-1
40 CFR 60, Subpart GG	X	TA-3-22-CT-1
NSR Permit No: 2195B-M2	X	All Power Plant sources

A1304 Operational Limitations – TA-3 Power Plant

A.This source category is authorized to operate at any time of the day or night on any day of the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.

<p>A1305 Fuel Sulfur Requirements – TA-3 Power Plant</p> <p>A. Boilers (Units TA-3-22-1 through -3)</p> <p>Requirement: External combustion sources at the TA-3 Power Plant shall combust only natural gas containing no more than 2 gr/100 scf total sulfur or No. 2 fuel oil containing no more than 0.05 wt% total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.A)</p> <p>Monitoring: N/A</p>	<p>The natural gas transportation contract states that gas provided to LANL will be pipeline quality with a total sulfur content of no more than 3/4 grains of total sulfur per 100 scf.</p> <p>Fuel oil is under a purchase contract and only Ultra Low Sulfur Diesel (ULSD) is delivered to the facility. ULSD contains less than 0.0015 wt% total sulfur.</p> <p>A copy of the transportation contract and purchase contract are kept on site.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p>Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be</p>	<p>The natural gas transportation contract states that gas provided to LANL will be pipeline quality with a total sulfur content of no more than 3/4 grains of total sulfur per 100 scf.</p> <p>Fuel oil is under a purchase contract and only Ultra Low Sulfur Diesel (ULSD) is delivered to the facility. ULSD contains less than 0.0015 wt% total sulfur.</p> <p>A copy of the transportation contract and purchase contract are kept on site.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.				
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Combustion Turbine (Unit TA-3-22-CT-1) Requirement: The combustion turbine at the TA-3 Power Plant shall combust only natural gas containing no greater than 2 gr/100 scf total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.B) Monitoring: N/A	The natural gas transportation contract states that gas provided to LANL will be pipeline quality with a total sulfur content of no more than 3/4 grains of total sulfur per 100 scf.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year . (NSR Permit 2195B-M2, Specific Condition A110.B and 40 CFR 60.334(h))	The natural gas transportation contract states that gas provided to LANL will be pipeline quality with a total sulfur content of no more than 3/4 grains of total sulfur per 100 scf.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A1306 20.2.61 NMAC Opacity – TA-3 Power Plant A. Sources Combusting Natural Gas Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.A)	LANL has certified opacity readers on-site who perform opacity readings using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation. The opacity limit was not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: Use of natural gas fuel meeting the requirement at Condition A1305.A or B constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When	Natural gas fuel meets the requirement at Condition A1305.A and B. The opacity limit was not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.				
Recordkeeping: The permittee shall record dates of any opacity measures and the corresponding opacity readings.	A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report dates of any opacity measures and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Opacity measurements are included in the semi-annual monitoring reports. No opacity readings were needed during this certification period. Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
B. Boilers Combusting No. 2 Fuel Oil Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.B)	LANL has certified opacity readers on-site who perform opacity readings using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation. The opacity limit was not exceeded during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year whenever the boiler(s) are operational during the monitoring period. This requirement is subject to the monitoring provisions of Condition B108.D.	Opacity is read at least once a quarter when boilers are combusting fuel oil and when required by monitoring provisions in condition B108.D. Opacity readings are measured over a 10-minute period and in accordance with 40 CFR 60, Appendix A, Method 9. No fuel oil was combusted during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.	A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Opacity measurements are included in the semi-annual monitoring reports. No opacity readings were needed during this certification period. Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
A1307 Other – TA-3 Power Plant	All emission calculations required by this section are performed for the units listed. The units have not exceeded the	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes

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<p>A. Emission calculations (TA-3 Power Plant)</p> <p>Requirement: The permittee shall comply with the hourly and annual emission limits at Table1302.A. and Conditions A1302.B, C, and D for the combustion turbine and boilers. The boiler annual emission limit shall be expressed as the combined emissions from all 3 boilers. (NSR Permit 2195B-M2, Specific Condition A801.A)</p>	hourly and annual emission limits.	<input checked="" type="checkbox"/> Intermittent	<input type="checkbox"/> No	<input checked="" type="checkbox"/> No
<p>Monitoring: The permittee shall perform the following calculations on a monthly basis:</p> <ol style="list-style-type: none"> 1) Calculate the average hourly emissions rates (pph) for each emissions unit based on the monthly total fuel consumption and monthly actual hours of operation. 2) Calculate the actual annual emissions rates (tpy) for all emissions units based on the monthly rolling 12-month total fuel consumption and the monthly rolling 12-month total hours of operation. 3) All NOx emission rates for the boilers shall also be calculated in terms of lb/MMBtu heat input. <p>(NSR Permit 2195B-M2, Specific Condition A801.A)</p>	<p>Emission spreadsheets are in place for each of the units. These spreadsheets calculate all required emissions and are used for monitoring and reporting purposes.</p> <p>The average hourly emission rates are calculated for each unit.</p> <p>The actual annual emission rates are calculated for each unit.</p> <p>The boiler emission rates are calculated using lb/MMBtu as the units.</p> <p>No emission limits were exceeded during this certification period.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall maintain records in accordance with Section B109.</p>	Records are maintained in accordance with Section B109.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>B. Fuel Usage (Boilers, Units TA-3-22-1 through -3)</p> <p>Requirement: Combined boiler operation shall not consume more than 1000 MMscf of natural gas and no more than 500,000 gallons of No. 2 fuel oil in any 12-month period. Volumetric natural gas fuel flow shall be measured using gas flowmeters installed on the natural gas fuel inlet to each respective unit (3 separate gas flowmeters). Fuel oil usage shall be measured using a single inventory meter located at a storage tank that is dedicated for use by the TA-3 power plant</p>	<p>The combined boiler natural gas use did not exceed 1000MMscf or 500,000 gallons of fuel oil in any 12-month period. All fuel use data is tracked monthly in a spreadsheet used for emission calculations.</p> <p>Natural gas fuel meters are in place on each of the boilers. Fuel oil is measured using an inventory meter on the storage tank.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
boilers. (NSR Permit 2195B-M2, Specific Condition A803.A, revised)				
Monitoring: The liquid fuel flow rate shall be continuously monitored whenever liquid fuel is combusted. The natural gas fuel flow rate for each boiler shall be continuously monitored whenever natural gas is combusted. The hours of operation of each boiler shall be continuously monitored. (NSR Permit 2195B-M2, Specific Condition A803.A, revised)	Both natural gas and fuel oil are continuously monitored when being combusted. Hours of operation of each boiler are continuously monitored. This data is collected monthly from the power plant operations staff.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record the monthly total of liquid fuel (gallons) for all boilers combined and gaseous fuel (scf) for each boiler on a monthly basis, to include a monthly total. Annual fuel usage shall be calculated and recorded on a monthly rolling 12-month total basis. The permittee shall record the hours of operation of each boiler on a monthly basis, to include a monthly total. The record shall include the monthly rolling 12-month total hours of operation for all 3 boilers combined. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A803.A, revised)	<p>A monthly and 12 month rolling total of both natural gas and fuel oil use are recorded and reviewed monthly to verify usage does not exceed allowable limits. The 12 month rolling totals for each fuel are provided in LANL's Semi-Annual Monitoring Report.</p> <p>Total hours of operation of each boiler are recorded monthly and included in a monthly rolling 12-month total hours for all boilers combined.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C. Fuel Usage (Combustion Turbine, Unit TA-2-22-CT-1)</p> <p>Requirement: The combustion turbine shall not consume more than 1400 MMscf of natural gas in any 12-month period. Volumetric flow shall be measured using a gas fuel flowmeter installed on the fuel inlet of the combustion turbine. (NSR Permit 2195B-M2, Specific Condition A802.A)</p>	<p>A 12 month rolling total for natural gas use is maintained and reviewed to verify usage does not exceed 1400 MMscf. The rolling total is provided in LANL's Semi-Annual Monitoring Report.</p> <p>The natural gas flowmeter is installed on the turbine inlet.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The natural gas fuel flow rate for the combustion turbine shall be continuously monitored whenever natural gas is combusted. (NSR Permit 2195B-M2, Specific Condition A802.A)	The fuel flowmeter continuously measures natural gas being delivered to the combustion turbine.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record the daily total of gaseous fuel (scf) for the turbine on a monthly basis, to include a monthly total. Annual fuel usage shall be calculated and recorded on a monthly rolling	The daily and monthly total fuel use is collected and recorded monthly in a spreadsheet used for calculating emissions. This data is used to calculate the 12-month rolling total fuel use.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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12-month total basis. The permittee shall record the daily hours of operation of the combustion turbine on a monthly basis, to include a monthly total. The record shall include the monthly total hours and monthly rolling 12-month total hours of operation. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.A)	Daily hours are also collected monthly and entered into the spreadsheet. A 12-month rolling total hours of operation is calculated using this information.			
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
D. Load Requirement (Combustion Turbine, Unit TA-3-22-CT-1) Requirement: The combustion turbine shall be operated at no less than 80% and no greater than 100% load as determined by the manufacturer's supplied algorithm, except for minimal periods during startup and shutdown conditions. The permittee shall follow the manufacturer's recommended startup/shutdown procedures in order to minimize the duration of these events. (NSR Permit 2195B-M2, Specific Condition A802.B)	The combustion turbine load was maintained between 80% and 100% during this certification period. Load range is calculated by the turbine operating system and is manually recorded during each operation. Startup/shutdown procedures are in place and are followed by the unit operators.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The operating load of the combustion turbine shall be monitored once daily during normal operations of that unit. (NSR Permit 2195B-M2, Specific Condition A802.B)	The load is recorded at least once daily during normal operations. This data is collected in a record maintained on site.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record the daily monitored operating load for the combustion turbine. The permittee shall maintain a record of the manufacturer's recommended startup/shutdown procedure and the manufacturer's criteria for the determination of turbine load. The permittee shall maintain a record for each startup/shutdown or malfunction event for the combustion turbine. The record shall include the date, the start/end time and duration for each event, which is defined as the length of time the combustion turbine is operating at less than 80% or greater than 100% load. For any malfunction event, the record shall also include the nature of the malfunction and any corrective action taken. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific	The load is recorded at least once daily during normal operations. This data is collected in a record maintained on site. Startup/shutdown procedures are in place and are followed by the unit operators. Each time the unit is started or shut down the data is entered into a manual log which is maintained on site. The record includes the date, start/end times, and duration. The unit did not operate outside of the required load range during this certification period. No malfunctions occurred during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Condition A802.B)				
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
E. Control Device Operation (Boilers, Units TA-3-22-1 through -3) Requirement: Each boiler (Units TA-3-22-1 through -3) shall only be operated with a properly operating flue gas recirculation fan (Units F-1 through -3, respectively). Any malfunction of the flue gas recirculation system during boiler operation may be subject to the excess emissions requirements of 20.2.7 NMAC. (NSR Permit 2195B-M2, Specific Condition A803.B)	When a boiler is in operation, the associated FGR fan is on. A fan speed indicator is located on the control panel in operator control room. This fan speed is monitored and recorded during boiler operation. No malfunctions of the FGR systems have occurred during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The flue gas recirculating fans shall be inspected for proper operation and maintenance once during each calendar month that the unit was operating. (NSR Permit 2195B-M2, Specific Condition A803.B)	The FGR fans are inspected for proper operation and maintenance each month the unit is operating.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall record all inspections of the flue gas recirculating fans and any event during which a fan malfunctions. The record shall include the date, time, name of operator conducting the inspection, and any discrepancies noted. For malfunction events, the record shall also include the nature and duration of the malfunction, and any corrective action taken. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A803.B)	Records of inspection and maintenance of the FGR fans are completed monthly. No malfunctions occurred during this certification period. All inspection records contain the required data found in this section.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
F. Control Device Operation (Combustion Turbine, Unit TA-3-22-CT-1) Requirement: The combustion turbine shall be equipped with Rolls-Royce Dry Low Emissions (DLE) control technology (pre-mix, lean-burn series staged combustion system) to control NOx emissions. (NSR	The Dry Low Emissions (DLE) control technology is an integral part of the combustion turbine design. The DLE control was evaluated during unit start-up and determined to be working as designed.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
Permit 2195B-M2, Specific Condition A802.C) Monitoring: N/A				
Recordkeeping: The permittee shall maintain a record of the DLE system associated with the combustion turbine. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.C)	Manufacturer data is available on the DLE system.	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.	Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109 and B110. For more information, see the methods used to determine compliance for condition A109 in this report.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
G. 40 CFR 60, Subparts A and GG (Combustion Turbine, Unit TA-3-22-CT-1) Requirement: The combustion turbine is subject to 40 CFR 60, Subpart GG and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart GG. (NSR Permit 2195B-M2, Specific Condition A802.D)	The combustion turbine is in compliance with 40 CFR Part 60 Subpart A and 40 CFR Part 60 Subpart GG.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall comply with the monitoring and testing requirements of 40 CFR 60.334 and 60.335. (NSR Permit 2195B-M2, Specific Condition A802.D)	The combustion turbine is in compliance with the monitoring and test requirements of 40 CFR 60.334 and 60.335.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.334 and 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)	The combustion turbine is in compliance with the monitoring, notification, and record keeping requirements of 40 CFR 60.334 and 60.7.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)	The combustion turbine is in compliance with the notification and record keeping requirements of 40 CFR 60.7.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
H. Portable Analyzer Testing (Combustion Turbine, Unit TA-3-22-CT-1) Requirement: The permittee shall comply with the allowable emission limits at Table A1302.A, including the NOx ppmv limitation. (NSR Permit 2195B-M2, Specific Condition A802.E)	The annual test for this certification period was performed on December 11, 2012. The test was performed by an external testing company using their portable analyzer. The analyzer was setup and operated in accordance with the manufacturer's instructions. The test included NOx ppmv concentrations.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Monitoring: The permittee shall test using a portable analyzer subject to the requirements and limitations of Section B108, General Monitoring Requirements.	The test is performed as required following the monitoring requirements of Section B108.	<input type="checkbox"/> Continuous	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>Periodic testing for NO_x and CO shall be carried out as described below. Test results that demonstrate compliance with the NO_x and CO emission limits shall also be considered to demonstrate compliance with the VOC, SO₂, TSP, PM₁₀, and PM_{2.5} emission limits.</p> <ol style="list-style-type: none"> 1) The test period shall be annually. 2) All subsequent monitoring shall occur in each succeeding monitoring period. No two monitoring events shall occur closer together in time than 25% of a monitoring period. 3) Monitoring shall be conducted during each monitoring period notwithstanding the Condition B108.D requirements for periods of operation less than 25%. <p>Follow the General Testing Procedures of Section B111. (NSR Permit 2195B-M2, Specific Condition A802.E)</p>	<p>Test results from the test demonstrate compliance with NO_x and CO emission limits. No limits were exceeded.</p> <p>The tests are performed annually and are not conducted within a calendar quarter of each other.</p>	<input checked="" type="checkbox"/> Intermittent	<input type="checkbox"/> No	<input checked="" type="checkbox"/> No
<p>Recordkeeping: The permittee shall maintain records in accordance with Section B109. The permittee shall also record the results of the periodic emissions tests, including the turbine's fuel flow rate and load at the time of the test, and the type of fuel fired (natural gas with the heating value and sulfur content specified).</p> <p>If a combustion analyzer is used to measure NO_x, CO, and/or excess air in the exhaust gas, records shall be kept of the make and model of the instrument and instrument calibration data. If an ORSAT apparatus or other gas absorption analyzer is used, the permittee shall record all calibration results.</p> <p>The permittee shall also keep records of all raw data used to determine exhaust gas flow and of all calculations used to determine flow rates and mass emissions rates. (NSR Permit 2195B-M2, Specific Condition A802.E)</p>	<p>Records of the periodic emissions test include all data required by this section. All data is included in the final test report which is provided to NMED-AQB as part of the semi-annual monitoring report.</p> <p>A combustion analyser is used for this periodic emissions test. Instrument and calibration data is included in the final test report. An ORSAT or other similar gas absorption analyzer is not used.</p> <p>Raw data, and calculations used, are included in the final test report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p>	<p>Emission and monitoring reports are submitted on a 6-month basis in accordance with permit condition A109. For more information, see the methods used to determine compliance for condition A109 in this report.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>OPEN BURNING</p> <p>A1400 Regulated Sources – Open Burning</p> <p>A. Table 1400.A lists all of the process</p>	<p>No open burning occurred during this certification period.</p>	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

1. Permit Condition # and Permit Condition: equipment authorized for this source category.	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
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Table 1400.A: Regulated Sources List

Unit No./Location	Source Description
Facility-Wide Open Burning	All open lands within LANL property boundary

A1402 <u>Emission Limits – Open Burning</u> A. Table 1402.A lists the emission units, and their allowable emission limits. (40 CFR 50; Paragraphs 1, 7, and 8 of 20.2.70.302.A NMAC; 20.2.60 NMAC; 20.2.65 NMAC).	No open buring occurred during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 1402.A: Allowable Emissions

Unit No.	Individual HAP ¹ (tpy)	Total HAPs ¹ (tpy)
Facility-Wide Open Burning	8.0	24.0

¹ Individual and Total HAPs emitted by Open Burning are included in the facility-wide HAP emission limits at Table 106.B.

A1403 <u>Applicable Requirements – Open Burning</u> A. The permittee shall comply with all applicable sections of the requirements listed in Table 1503.A.	No open buring occurred during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Table 1503.A: Applicable Requirements

Applicable Requirements	Federally Enforceable	Unit No.
20.2.60 NMAC Open Burning	X	Facility-Wide Open Burning
20.2.65 NMAC Smoke Management	X	Facility-Wide Open Burning

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
<p>A1404 Operational Limitations – Open Burning</p> <p>A.This source category is authorized to operate at any time of the day or night on any day of the year. No monitoring, recordkeeping, or reporting requirements are required to demonstrate compliance with continuous hours of operation.</p>				
<p>A1407 Other – Open Burning</p> <p>A. Operational</p> <p>Requirement: The permittee shall comply with the applicable requirements of 20.2.60 NMAC and 20.2.65 NMAC, including, but not limited to:</p> <ol style="list-style-type: none"> 1) Prior to initiating a burn consisting of vegetative material, the permittee shall submit to the Department a sampling and analysis plan and upon approval conduct representative sampling of the intended burn material and analyze samples for radionuclides, target analyte list (TAL) inorganic elements, polychlorinated biphenyls (PCBs), and high explosives (HE); and 2) The permittee shall submit to the Department a background concentration report for the contaminants listed in Condition A1407.A, Requirement (1). The report shall indicate locations where background concentrations were taken and compare sample results with background concentrations of the constituents; and 3) The permittee shall not burn vegetative material which includes any contaminant above the relevant background concentration; and 4) Upon receiving Department approval, the permittee shall conduct public notification in a display ad in at least four newspapers: Los Alamos Monitor, Rio Grande Sun, Santa Fe New Mexican, and the Albuquerque Journal, no less than 21 days in advance of a planned burn. 	<p>No open buring occurred during this certification period.</p>	<p><input type="checkbox"/> Continuous</p> <p><input checked="" type="checkbox"/> Intermittent</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p>
<p>Monitoring: The permittee shall monitor all open burning as required by Department regulation or burn</p>	<p>No open buring occurred during this certification period.</p>	<p><input type="checkbox"/> Continuous</p>	<p><input checked="" type="checkbox"/> Yes</p>	<p><input type="checkbox"/> Yes</p>

1. Permit Condition # and Permit Condition:	2. Method(s) or other information or other facts used to determine the compliance status:	3. What is the frequency of data collection used to determine compliance?	4. Was this facility in compliance with this requirement during the reporting period?	5. Were there any deviations associated with this requirement during the reporting period?
approval.		<input checked="" type="checkbox"/> Intermittent	<input type="checkbox"/> No	<input checked="" type="checkbox"/> No
Recordkeeping: The permittee shall maintain records of all sampling and analysis plans and any representative sampling conducted. Records shall be kept in accordance with Section B109.	No open buring occurred during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Reporting: The permittee shall submit reports as outlined in the Condition 1407.A Requirements, as described in Section A109, and in accordance with Section B110.	No open buring occurred during this certification period.	<input type="checkbox"/> Continuous <input checked="" type="checkbox"/> Intermittent	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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<p>1. Have these General Conditions been met during this reporting period.</p> <p><i><u>If the section Heading is marked as N/A no remarks are required.</u></i> <i><u>Check only one box per subject heading.</u></i> <i><u>Explain answers in remarks row under subject heading.</u></i></p>	<p>2. Was this facility in compliance with this requirement during the reporting period?</p>	<p>3. Does not apply</p>	
<p>B100 Introduction A. N/A</p>	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below
<p>REMARKS: No specific requirements.</p>			
<p>B101 Legal A. Permit Terms and Conditions (20.2.70 sections 7, 201.B, 300, 301.B, 302, 405 NMAC)</p> <p>(1) The permittee shall abide by all terms and conditions of this permit, except as allowed under Section 502(b)(10) of the federal Act, and 20.2.70.302.H.1 NMAC. Any permit noncompliance is grounds for enforcement action, and significant or repetitious noncompliance may result in termination of this permit. Additionally, noncompliance with federally enforceable conditions of this permit constitutes a violation of the federal Act. (20.2.70.302.A.2.a NMAC)</p> <p>(2) Emissions trading within a facility (20.2.70.302.H.2 NMAC)</p> <p style="margin-left: 20px;">(a) The department shall, if an applicant requests it, issue permits that contain terms and conditions allowing for the trading of emissions increases and decreases in the permitted facility solely for the purpose of complying with a federally enforceable emissions cap that is established in the permit in addition to any applicable requirements. Such terms and conditions shall include all terms and conditions required under 20.2.70.302 NMAC to determine compliance. If applicable requirements apply to the requested emissions trading, permit conditions shall be issued only to the extent that the applicable requirements provide for trading such increases and decreases without a case-by-case approval.</p> <p style="margin-left: 20px;">(b) The applicant shall include in the application proposed replicable procedures and permit terms that ensure the emissions trades are quantifiable and enforceable. The department shall not include in the emissions trading provisions any emissions units for which emissions are not quantifiable or for which there are no replicable procedures to enforce the emissions trades. The permit shall require compliance with all applicable requirements.</p> <p>(3) It shall not be a defense for the permittee in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (20.2.70.302.A.2.b NMAC)</p> <p>(4) If the Department determines that cause exists to modify, reopen and revise, revoke and reissue, or terminate this permit, this shall be done in accordance with 20.2.70.405 NMAC. (20.2.70.302.A.2.c NMAC)</p> <p>(5) The permittee shall furnish any information the Department requests in writing to determine if cause exists for reopening and revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. This information shall be furnished within the time period specified by the Department. Additionally, the permittee shall furnish, upon request by the Department, copies of records required by the permit to be maintained by the permittee. (20.2.70.302.A.2.f NMAC)</p> <p>(6) A request by the permittee that this permit be modified, revoked and reissued, or terminated, or a notification by the permittee of planned changes or anticipated noncompliance, shall not stay any conditions of this permit. (20.2.70.302.A.2.d NMAC)</p> <p>(7) This permit does not convey property rights of any sort, or any exclusive privilege. (20.2.70.302.A.2.e NMAC)</p> <p>(8) In the case where an applicant or permittee has submitted information to the Department under a claim of</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>confidentiality, the Department may also require the applicant or permittee to submit a copy of such information directly to the Administrator of the EPA. (20.2.70.301.B NMAC)</p> <p>(9) The issuance of this permit, or the filing or approval of a compliance plan, does not relieve the permittee from civil or criminal liability for failure to comply with the state or federal Acts, or any applicable state or federal regulation or law. (20.2.70.302.A.6 NMAC and the New Mexico Air Quality Control Act NMSA 1978, Chapter 74, Article 2)</p> <p>(10) If any part of this permit is challenged or held invalid, the remainder of the permit terms and conditions are not affected and the permittee shall continue to abide by them. (20.2.70.302.A.1.d NMAC)</p> <p>(11) A responsible official (as defined in 20.2.70.7.AD NMAC) shall certify the accuracy, truth and completeness of every report and compliance certification submitted to the Department as required by this permit. These certifications shall be part of each document. (20.2.70.300.E NMAC)</p> <p>(12) Revocation or termination of this permit by the Department terminates the permittee's right to operate this facility. (20.2.70.201.B NMAC)</p> <p>(13) The permittee shall continue to comply with all applicable requirements. For applicable requirements that will become effective during the term of the permit, the permittee shall meet such requirements on a timely basis. (Sections 300.D.10.c and 302.G.3 of 20.2.70 NMAC)</p> <p>B. Permit Shield (20.2.70.302.J NMAC)</p> <p>(1) Compliance with the conditions of this permit shall be deemed to be compliance with any applicable requirements existing as of the date of permit issuance and identified in Table 103.A. The requirements in Table 103.A are applicable to this facility with specific requirements identified for individual emission units.</p> <p>(2) The Department has determined that the requirements in Table 103.B as identified in the permit application are not applicable to this source, or they do not impose any conditions in this permit.</p> <p>(3) This permit shield does not extend to administrative amendments, to minor permit modifications, to changes made under Section 502(b)(10) of the federal Act, or to permit terms for which notice has been given to reopen or revoke all or part.</p> <p>(4) This permit shall, for purposes of the permit shield, identify any requirement specifically identified in the permit application or significant permit modification that the department has determined is not applicable to the source, and state the basis for any such determination. (20.2.70.302.A.1.f NMAC)</p>			
<p>REMARKS: LANL operations were in compliance with all terms and conditions of the permit during this certification period. There was no emissions trading at this facility during this certification period. A compliance inspection by NMED-Air Quality Bureau was conducted on September 25, 2012. Information was requested by the inspector to verify compliance. Requested information and documentation was provided. No additional requests for information were made by the Department during this certification period. All required reports and compliance certifications were certified by the Responsible Official.</p>			
<p>B102 Authority</p> <p>A. This permit is issued pursuant to the federal Clean Air Act ("federal Act"), the New Mexico Air Quality Control Act ("state Act") and regulations adopted pursuant to the state and federal Acts, including Title 20, New Mexico Administrative Code, Chapter 2, Part 70 (20.2.70 NMAC) - Operating Permits.</p> <p>B. This permit authorizes the operation of this facility. This permit is valid only for the named permittee, owner, and operator. A permit modification is required to change any of those entities.</p> <p>C. The Department specifies with this permit, terms and conditions upon the operation of this facility to assure</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>compliance with all applicable requirements, as defined in 20.2.70 NMAC at the time this permit is issued. (20.2.70.302.A.1 NMAC)</p> <p>D. Pursuant to the New Mexico Air Quality Control Act NMSA 1978, Chapter 74, Article 2, all terms and conditions in this permit, including any provisions designed to limit this facility's potential to emit, are enforceable by the Department. All terms and conditions are enforceable by the Administrator of the United States Environmental Protection Agency ("EPA") and citizens under the federal Act, unless the term or condition is specifically designated in this permit as not being enforceable under the federal Act. (20.2.70.302.A.5 NMAC).</p> <p>E. The Department is the Administrator for 40 CFR Parts 60, 61, and 63 pursuant to the delegation and exceptions of section 10 of 20.2.77 NMAC (NSPS), 20.2.78 NMAC (NESHAP), and 20.2.82 NMAC (MACT).</p>			
<p>REMARKS: LANL operations were in compliance with all terms and conditions of the permit during this certification period.</p>			
<p>B103 Annual Fee A. The permittee shall pay Title V fees to the Department consistent with the fee schedule in 20.2.71 NMAC - Operating Permit Emission Fees. The fees will be assessed and invoiced separately from this permit. (20.2.70.302.A.1.e NMAC)</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
<p>REMARKS: Title V fees were submitted to NMED on March 26, 2012 (Reference Letter ENV-ES-12-0055).</p>			
<p>B104 Appeal Procedures (20.2.70.403.A NMAC) A. Any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a petition for a hearing before the Environmental Improvement Board ("board"). The petition shall be made in writing to the board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered, and attach a copy of the permitting action for which review is sought. Unless a timely request for a hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a hearing shall be sent to:</p> <p style="text-align: center; margin-left: 40px;">Secretary, New Mexico Environmental Improvement Board</p> <p style="text-align: center; margin-left: 40px;">1190 St. Francis Drive, Runnels Bldg. Rm N2153 P.O. Box 5469 Santa Fe, New Mexico 87502</p>	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below
<p>REMARKS: No petitions regarding LANL Permit P100R1M1 were filed during this certification period.</p>			

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<p>B105 Submittal of Reports and Certifications</p> <p>A. Stack Test Protocols and Stack Test Reports shall be submitted electronically to Stacktest.AQB@state.nm.us.</p> <p>B. Excess Emission Reports shall be submitted electronically to eereports.aqb@state.nm.us. (20.2.7.110 NMAC)</p> <p>C. Compliance Certification Reports, Semi-Annual monitoring reports, compliance schedule progress reports, and any other compliance status information required by this permit shall be certified by the responsible official and submitted to:</p> <p style="margin-left: 40px;">Manager, Compliance and Enforcement Section New Mexico Environment Department Air Quality Bureau 1301 Siler Road, Building B Santa Fe, NM 87507-3113</p> <p>D. Compliance Certification Reports shall also be submitted to the Administrator at the address below (20.2.70.302.E.3 NMAC):</p> <p style="margin-left: 40px;">Chief, Air Enforcement Section US EPA Region-6, 6EN-AA 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
<p>REMARKS:</p> <p>A. Stack testing on the TA-3 combustion turbine was completed in January 2012 and December 2012. Stack testing of the CMRR boilers was completed in January 2012. All stack test protocols and reports were submitted as specified.</p> <p>B. There were no excess emissions during this certification period.</p> <p>C and D. All required compliance certifications and semi-annual emissions and monitoring reports were submitted to NMED and EPA on time as required.</p>			
<p>B106 NSPS and/or MACT Startup, Shutdown, and Malfunction Operations</p> <p>A. If a facility is subject to a NSPS standard in 40 CFR 60, each owner or operator that installs and operates a continuous monitoring device required by a NSPS regulation shall comply with the excess emissions reporting requirements in accordance with 40 CFR 60.7(c).</p> <p>B. If a facility is subject to a NSPS standard in 40 CFR 60, then in accordance with 40 CFR 60.8(c), emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.</p> <p>C. If a facility is subject to a MACT standard in 40 CFR 63, then the facility is subject to the requirement for a Startup, Shutdown and Malfunction Plan (SSM) under 40 CFR 63.6(e)(3). (20.2.70.302.A.1 and A.4 NMAC)</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below
<p>REMARKS:</p> <p>A. LANL operates equipment subject to 40 CFR 60, however no continuous monitoring is required.</p> <p>B. There were no excess emissions during SSM during this certification period.</p>			

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C. LANL operates equipment subject to 40 CFR 63, however SSM plans are not required. (Halogenated solvent cleaner, Subpart T overrides the requirement in 40 CFR 63.6(e)(3)).			
B107 Startup, Shutdown, and Maintenance Operations A. The permittee shall operate in accordance with the procedures set forth in the plan to minimize emissions during routine or predictable start up, shut down, and scheduled maintenance (SSM work practice plan), except for operations or equipment subject to condition B106 above. (20.2.7.14.A NMAC)	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below
REMARKS: Per Permit Condition A107 - Allowable SSM emissions limits are not imposed at this time. All SSM emissions are within or less than standard operating emission levels. LANL sources do not have increased emissions during routine or predictable startup, shutdown, or maintenance, which require a plan under 20.2.7.14.A. No permit limit or applicable threshold was exceeded during this certification period. Operating procedures are in place to minimize emissions during SSM events.			
B108 General Monitoring Requirements (20.2.70. 302.A and C NMAC) A. These requirements do not supersede or relax requirements of federal regulations. B. The following monitoring and/or testing requirements shall be used to determine compliance with applicable requirements and emission limits. Any sampling, whether by portable analyzer or EPA reference method, that measures an emission rate over the applicable averaging period greater than an emission limit in this permit constitutes noncompliance with this permit. The Department may require, at its discretion, additional tests pursuant to EPA Reference Methods at any time, including when sampling by portable analyzer measures an emission rate greater than an emission limit in this permit; but such requirement shall not be construed as a determination that the sampling by portable analyzer does not establish noncompliance with this permit and shall not stay enforcement of such noncompliance based on the sampling by portable analyzer. C. If the emission unit is shutdown at the time when periodic monitoring is due to be accomplished, the permittee is not required to restart the unit for the sole purpose of performing the monitoring. Using electronic or written mail, the permittee shall notify the Department's Enforcement Section of a delay in emission tests prior to the deadline for accomplishing the tests. Upon recommencing operation, the permittee shall submit any pertinent pre-test notification requirements set forth in the current version of the Department's Standard Operating Procedures For Use Of Portable Analyzers in Performance Test, and shall accomplish the monitoring. D. The requirement for monitoring during any monitoring period is based on the percentage of time that the unit has operated. However, to invoke monitoring exemptions at B108.D(2), hours of operation shall be monitored and recorded. (1) If the emission unit has operated for more than 25% of a monitoring period, then the permittee shall conduct monitoring during that period. (2) If the emission unit has operated for 25% or less of a monitoring period then the monitoring is not required. After two successive periods without monitoring, the permittee shall conduct monitoring during the next period regardless of the time operated during that period, except that for any monitoring period in which a unit has operated for less than 10% of the monitoring period, the period will not be considered as one of the two successive periods. (3) A minimum of one of each type of monitoring activity shall be conducted during the five year term of this permit. E. The permittee is not required to report a deviation for any monitoring or testing in a Specific Condition if the deviation was authorized in this General Condition B108. F. For all periodic monitoring events, except when a federal or state regulation is more stringent, three test runs shall be	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>conducted at 90% or greater of the unit’s capacity as stated in this permit, or in the permit application if not in the permit, and at additional loads when requested by the Department. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable load under prevailing operating conditions except when a federal or state regulation requires more restrictive test conditions. The load and the parameters used to calculate it shall be recorded to document operating conditions and shall be included with the monitoring report.</p> <p>G. When requested by the Department, the permittee shall provide schedules of testing and monitoring activities. Compliance tests from previous NSR and Title V permits may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions.</p> <p>H. Monitoring shall become effective 120 days after the date of permit issuance if the monitoring is new or in addition to monitoring imposed by an existing applicable requirement. Any pre-existing monitoring requirements incorporated in this permit shall continue to be in force from the date of permit issuance.</p>			
<p>REMARKS: Stack testing on the TA-3 combustion turbine was completed in January 2012 and December 2012. Stack testing of the CMRR boilers was completed in January 2012. Opacity readings were taken at the asphalt plant monthly. All testing and monitoring was completed in compliance with all requirements. Section B108.D(2) of the permit allows reduced frequency of opacity monitoring if the unit operates less than 10% of the monitoring period (calendar quarter). The applicable CI-RICE units operated less than 10% of each monitoring period (less than 219 hours each quarter) during this certification period. If the unit operates greater than 10% of the monitoring period, the unit will have an opacity observation performed on it, otherwise an opacity observation will be performed within 5 years of the issuance date of the current operating permit P100-R1-M1. Any opacity observations performed on the unit will be included in the semi-annual monitoring reports.</p>			
<p>B109 General Recordkeeping Requirements (20.2.70.302.D.1 NMAC)</p> <p>A. All sampling and measured data required by this permit for the emissions units in this facility shall be recorded. The minimum information to be included in these records is:</p> <ol style="list-style-type: none"> (1) equipment identification (include make, model and serial number for all tested equipment and emission controls); (2) date(s) and time(s) of sampling or measurements; (3) date(s) analyses were performed; (4) the company or entity or qualified individual that performed the analyses; (5) analytical or test methods used; (6) results of analyses or tests; and (7) operating conditions existing at the time of sampling or measurement. <p>B. The permittee shall keep copies of all records of monitoring and measurement data, equipment calibration and maintenance, Data Acquisition and Handling System (DAHS) if used, other supporting information, and reports required by this permit for at least five (5) years from the time the data was gathered or the reports written. Each record shall show clearly to which emissions unit and/or piece of monitoring equipment it applies, and the date the data was gathered. (20.2.70.302.D.2 NMAC)</p> <p>C. If the permittee has applied and received approval for an alternative operating scenario, then the permittee shall maintain a log at the facility, which documents, contemporaneously with any change from one operating scenario to another, the scenario under which the facility is operating. (20.2.70.302.A.3 NMAC)</p> <p>D. The permittee shall keep a record describing off permit changes made at this source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes. (20.2.70.302.I.2 NMAC)</p> <p>E. Routine and predictable emissions during startup, shutdown, and scheduled maintenance (SSM):</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>(1) The permittee shall keep records of all events subject to the plan to minimize emissions during routine or predictable SSM. (20.2.7.14.A NMAC)</p> <p>(2) If the facility has allowable SSM emission limits in this permit, the permittee shall record all SSM events, including the date, the start time, the end time, and a description of the event. This record also shall include a copy of the manufacturer's, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source.</p>			
<p>REMARKS:</p> <p>A and B. Records are maintained for all required sampling activities and measured data. These records are available on site. The primary measuring activities applicable to this section are the visible emissions evaluations and emissions stack testing.</p> <p>C and D. No alternative operating scenarios, or off permit changes occurred at this facility during this certification period.</p> <p>E. Per Permit Condition A 107 - Allowable SSM emission limits are not imposed at this time. All SSM emissions are at or below standard operating emission limits. LANL sources do not have increased emissions during routine or predictable startup, shutdown, or maintenance, which require a plan under 20.2.7.14.A. No permit limit or applicable threshold was exceeded during this certification period. Operating procedures are in place to minimize emissions during SSM events.</p>			
<p>B110 General Reporting Requirements (20.2.70.302.E NMAC)</p> <p>A. Reports of all required monitoring activities for this facility shall be submitted to the Department on the schedule in section A109.</p> <p>B. Reports shall clearly identify the subject equipment showing the emission unit ID number according to this operating permit. In addition, all instances of deviations from permit requirements, including those that occur during emergencies, shall be clearly identified in the reports required by section A109. (20.2.70.302.E.1 NMAC)</p> <p>C. The permittee shall submit reports of all deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. These reports shall be contained in the semi-annual reports required in section A109. (20.2.70.302.E.2 NMAC)</p> <p>D. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.</p> <p>E. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. Reported numerical values shall not be truncated or rounded, and shall be recorded and reported to the number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data. Upon request by the Department, CEMS and other tabular data shall be submitted in editable, MS Excel format.</p> <p>F. At such time as new units are installed as authorized by the applicable NSR Permit, the permittee shall fulfill the notification requirements in the NSR permit.</p> <p>G. Periodic Emissions Test Reporting: The permittee shall report semi-annually a summary of the test results.</p> <p>H. The permittee shall submit an emissions inventory for this facility annually. The emissions inventory shall be submitted by the later of April 1 or within 90 days after the Department makes such request. (20.2.73 NMAC and 20.2.70.302.A.1 NMAC)</p> <p>I. Emissions trading within a facility (20.2.70.302.H.2 NMAC)</p> <p>(1) For each such change, the permittee shall provide written notification to the department and the administrator at least seven (7) days in advance of the proposed changes. Such notification shall state when the change will occur and shall</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>describe the changes in emissions that will result and how these increases and decreases in emissions will comply with the terms and conditions of the permit.</p> <p>(2) The permittee and department shall attach each such notice to their copy of the relevant permit.</p> <p>J. Non-NSPS or non-MACT monitoring and recordkeeping requirements shall be maintained on-site and summarized in the semi-annual reports, unless alternative reporting requirements are specified in the equipment specific requirements section of this permit.</p>			
<p>REMARKS:</p> <p>A and B. Monitoring reports are submitted on a 6-month basis. LANL submitted monitoring reports to NMED on February 9, 2012 and August 8, 2012.</p> <p>C and D. No deviations and no excess emissions occurred during this certification period.</p> <p>E. Emission tests and monitoring results are reported in pounds per hour and tons per year. Opacity readings are reported in percent.</p> <p>F. All notification requirements under NSR permits have been met.</p> <p>G. A summary of emission stack test results is included in the semi-annual monitoring reports.</p> <p>H. The annual emission inventory required under 20.2.73 NMAC was submitted electronically via NMED’s online reporting tool, AEIR, on March 27, 2012.</p> <p>I. There was no emissions trading during this certification period.</p> <p>J. All non-NSPS and non-MACT monitoring and recordkeeping is maintained on-site and is summarized in the semi-annual monitoring reports.</p>			
<p>B111 General Testing Requirements</p> <p>A. EPA Reference Method Tests</p> <p>(1) All compliance tests required by this permit, unless otherwise specified by Specific Conditions of this permit, shall be conducted in accordance with the requirements of 40 CFR 60, Subpart A, General Provisions, and the following EPA Reference Methods as specified by 40 CFR 60, Appendix A:</p> <p>(a) Methods 1 through 4 for stack gas flowrate</p> <p>(b) Method 5 for TSP</p> <p>(c) Method 6C and 19 for SO₂</p> <p>(d) Method 7E for NO_x (test results shall be expressed as nitrogen dioxide (NO₂) using a molecular weight of 46 lb/lb-mol in all calculations (each ppm of NO/NO₂ is equivalent to 1.194 x 10⁻⁷ lb/SCF)</p> <p>(e) Method 9 for opacity</p> <p>(f) Method 10 for CO</p> <p>(g) Method 19 may be used in lieu of Methods 1-4 for stack gas flowrate upon approval of the Department. A justification for this proposal must be provided along with a contemporaneous fuel gas analysis (preferably on the day of the test) and a recent fuel flow meter calibration certificate (within the most recent quarter).</p> <p>(h) Method 7E or 20 for Turbines per 60.335 or 60.4400</p> <p>(i) Method 29 for Metals</p> <p>(j) Method 201 for filterable PM₁₀</p> <p>(k) Method 202 for condensable PM</p> <p>(l) Method 320 for organic Hazardous Air Pollutants (HAPs)</p> <p>(m) Method 25A for VOC reduction efficiency</p> <p>(2) Alternative test method(s) may be used if the Department approves the change.</p> <p>B. Portable Analyzer Requirements</p> <p>(1) The permittee shall follow the SOP for Use of Portable Analyzers in Performance Tests posted to NMED’s Air Quality web site under Compliance and Enforcement/Testing.</p> <p>(2) A portable analyzer that is used for periodic emissions tests must meet the requirements of ASTM D 6522 – 00. However, if a facility has met a previously approved Department criterion for portable analyzers, the analyzer may be</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>used until it is replaced.</p> <p>(3) The portable emissions analyzer shall be setup and operated in accordance with the manufacturer's instructions, with the requirements of ASTM D-6522-00, or with the criterion of an analyzer previously approved by the Department.</p> <p>(4) During emissions tests, pollutant, O₂ concentration and fuel flow rate shall be monitored and recorded. This information shall be included with the test report furnished to the Department.</p> <p>(5) Pollutant emission rate shall be calculated in accordance with 40 CFR 60, Appendix A, Method 19 utilizing fuel flow rate (scf) and fuel heating value (Btu/scf) obtained during the test.</p> <p>C. Test Procedures:</p> <p>(1) The permittee shall notify the Department's Program Manager, Compliance and Enforcement Section at least thirty (30) days prior to the test date and allow a representative of the Department to be present at the test.</p> <p>(2) Equipment shall be tested in the "as found" condition. Equipment may not be adjusted or tuned prior to any test for the purpose of lowering emissions, and then returned to previous settings or operating conditions after the test is complete.</p> <p>(3) Contents of test notifications, protocols and test reports shall conform to the format specified by the Department's Universal Test Notification, Protocol and Report Form and Instructions. Current forms and instructions are posted to NMED's Air Quality web site under Compliance and Enforcement Testing.</p> <p>(4) The permittee shall provide (a) sampling ports adequate for the test methods applicable to the facility, (b) safe sampling platforms, (c) safe access to sampling platforms and (d) utilities for sampling and testing equipment. Sample ports of a size compatible with the test methods shall be located on the stack with the provisions of EPA Method 1 of 40 CFR 60, Appendix A. The stack shall be of sufficient height and diameter so that a representative test of the emissions can be performed in accordance with EPA Method 1.</p> <p>(5) Where necessary to prevent cyclonic flow in the stack, flow straighteners shall be installed.</p>			
<p>REMARKS:</p> <p>A. EPA reference methods are used during all required compliance testing/sampling.</p> <p>B. A portable analyzer was used to perform an annual emissions test on the combustion turbine located at the TA-3 Power Plant. No measurements were greater than emission limits listed in the LANL Operating Permit, P100-R1-M1.</p> <p>C. All test procedures were followed as specified.</p> <p>EPA reference methods were used to observe visible emissions from various sources at LANL. Emissions stack testing was conducted in January and December 2012 for the TA-3 combustion turbine, and in January 2012 for the CMRR boilers. All testing was done following applicable EPA Methods and NMED Test Procedures.</p>			
<p>B112 Compliance</p> <p>A. Required records shall be organized by date and subject matter and shall at all times be readily available for inspection. The permittee, upon either a verbal or written request from an authorized representative of the Department, shall produce any records or information necessary to establish that the terms and conditions of this permit are being met. The company shall provide these records to the Department within 24 hours of notification, unless the Department allows additional time. (NMSA 1978, Section 74-2-13)</p> <p>B. A copy of the most recent permit(s) issued by the Department shall be kept at the permitted facility or (for unmanned sites) at the nearest company office and shall be made available to Department personnel for inspection upon request. (20.2.70.302.G.3 NMAC)</p> <p>C. Emissions limits associated with the energy input of a Unit, i.e. lb/MMBtu, shall apply at all times unless stated otherwise in a Specific Condition of this permit. The averaging time for each emissions limit, including those based on energy input of a Unit (i.e. lb/MMBtu) is one (1) hour unless stated otherwise in a Specific Condition of this permit or in the applicable requirement that establishes the limit. (20.2.70.302.A.1 and G.3 NMAC)</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>D. The permittee shall submit compliance certification reports certifying the compliance status of this facility with respect to all permit terms and conditions, including applicable requirements. These reports shall be made on the pre-populated Compliance Certification Report Form that is provided to the permittee by the Department, and shall be submitted to the Department and to EPA at least every 12 months. For the most current form, please contact the Compliance Reports Group at email:reportsgroup.aqb@state.nm.us. For additional reporting guidance see http://www.nmenv.state.nm.us/aqb/enforce_compliance/TitleVReporting.htm. (20.2.70.302.E.3 NMAC)</p> <p>E. For sources that have submitted air dispersion modeling that demonstrates compliance with federal ambient air quality standards, compliance with the terms and conditions of this permit regarding source emissions and operation shall be deemed to be compliance with federal ambient air quality standards specified at 40 CFR 50 NAAQS.</p> <p>F. The permittee shall allow representatives of the Department, upon presentation of credentials and other documents as may be required by law, to do the following (20.2.70.302.G.1 NMAC):</p> <ol style="list-style-type: none"> (1) enter the permittee's premises where a source or emission unit is located, or where records that are required by this permit to be maintained are kept; (2) have access to and copy, at reasonable times, any records that are required by this permit to be maintained; (3) inspect any facilities, equipment (including monitoring and air pollution control equipment), work practices or operations regulated or required under this permit; and (4) sample or monitor any substances or parameters for the purpose of assuring compliance with this permit or applicable requirements or as otherwise authorized by the federal Act. 			
<p>REMARKS:</p> <p>A. All required records are maintained on site and available for review upon request. LANL cooperates with all Department inspections and provides access to facilities and copies of records as requested. The most recent NMED inspection was conducted in September 2012.</p> <p>B. Copies of the most recent permit are kept at the facility.</p> <p>C. Emissions are monitored, or calculated using the energy input of the unit with one hour averaging times, as specified.</p> <p>D. Compliance certification reports are completed and submitted as required. This compliance certification report meets this requirement.</p> <p>E. For sources listed in the permit, required air dispersion modeling was submitted.</p> <p>F. A compliance inspection by NMED - Air Quality Bureau was conducted on September 25, 2012. Information was requested by the inspector to verify compliance. Requested information and documentation was provided. LANL makes every effort to assist NMED with any reasonable request to verify compliance with this permit.</p>			
<p>B113 Permit Reopening and Revocation (20.2.70.405.A.1 NMAC)</p> <p>A. This permit will be reopened and revised when any one of the following conditions occurs, and may be revoked and reissued when A.3 or A.4 occurs.</p> <ol style="list-style-type: none"> (1) Additional requirements under the federal Act become applicable to this source three (3) or more years before the expiration date of this permit. If the effective date of the requirement is later than the expiration date of this permit, then the permit is not required to be reopened unless the original permit or any of its terms and conditions has been extended due to the Department's failure to take timely action on a request by the permittee to renew this permit. (2) Additional requirements, including excess emissions requirements, become applicable to this source under Title IV of the federal Act (the acid rain program). Upon approval by the Administrator, excess emissions offset plans will be incorporated into this permit. (3) The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the terms and conditions of the permit. (4) The Department or the Administrator determines that the permit must be revised or revoked and reissued to assure 	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>compliance with an applicable requirement.</p> <p>B. Proceedings to reopen or revoke this permit shall affect only those parts of this permit for which cause to reopen or revoke exists. Emissions units for which permit conditions have been revoked shall not be operated until new permit conditions have been issued for them. (20.2.70.405.A.2 NMAC)</p>			
<p>REMARKS: A revision to this permit was issued in June 2012 (P100-R1-M1) to incorporate equipment and requirements related to the CMRR RLUOB building at TA-55 including 4 new boilers, 3 new emergency generators, and chemical usage activities; removal of the carpenter shops as a source category; and reduced allowable annual fuel consumption for the TA-3 boilers and increased allowable annual fuel consumption for the TA-3 turbine.</p> <p>A need to reopen, revise, revoke, or reissue the permit has not been identified by the Department.</p>			
<p>B114 Emergencies (20.2.70.304 NMAC)</p> <p>A. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the permittee, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, or careless or improper operation.</p> <p>B. An emergency constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations contained in this permit if the permittee has demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:</p> <p>(1) An emergency occurred and that the permittee can identify the cause(s) of the emergency;</p> <p>(2) This facility was at the time being properly operated;</p> <p>(3) During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit; and</p> <p>(4) The permittee submitted notice of the emergency to the Department within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of 20.2.70.302.E.2 NMAC. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.</p> <p>C. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.</p> <p>D. This provision is in addition to any emergency or upset provision contained in any applicable requirement.</p>	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below
<p>REMARKS: No emergency situations occurred during this certification period that caused any impact to air emission sources under this permit.</p>			
<p>B115 Stratospheric Ozone (20.2.70.302.A.1 NMAC)</p> <p>A. If this facility is subject to 40 CFR 82, Subpart F, the permittee shall comply with the following standards for recycling and emissions reductions:</p> <p>(1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices.</p>	<input checked="" type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input type="checkbox"/> N/A Explain Below

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<p>(subsection 82.156)</p> <p>(2) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment. (subsection 82.158)</p> <p>(3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program. (subsection 82.161)</p>			
<p>REMARKS: A stratospheric ozone protection program is in place at LANL. LANL, through our internal maintenance group, as well as other outside contractors, use appropriately certified technicians and certified recycling and recovery equipment. LANL refrigeration technicians, as well as other outside contractors, are trained and follow LANL procedures to ensure that required service practices found in 40 CFR 82, Subpart F, are followed.</p>			
<p>B116 Acid Rain Sources (20.2.70.302.A.9 NMAC)</p> <p>A. If this facility is subject to the federal acid rain program under 40 CFR 72, this section applies.</p> <p>B. Where an applicable requirement of the federal Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal Act, both provisions are incorporated into this permit and are federally enforceable.</p> <p>C. Emissions exceeding any allowances held by the permittee under Title IV of the federal Act or the regulations promulgated thereunder are prohibited.</p> <p>D. No modification of this permit is required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit modification under any other applicable requirement.</p> <p>E. The permittee may not use allowances as a defense to noncompliance with any other applicable requirement.</p> <p>F. No limit is placed on the number of allowances held by the acid rain source. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the federal Act.</p> <p>G. The acid rain permit is an enclosure of this operating permit.</p>	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below
<p>REMARKS: This facility is not subject to 40 CFR 72.</p>			
<p>B117 Risk Management Plan (20.2.70.302.A.1 NMAC)</p> <p>A. If this facility is subject to the federal risk management program under 40 CFR 68, this section applies.</p> <p>B. The owner or operator shall certify annually that they have developed and implemented a RMP and are in compliance with 40 CFR 68.</p> <p>C. If the owner or operator of the facility has not developed and submitted a risk management plan according to 40 CFR 68.150, the owner or operator shall provide a compliance schedule for the development and implementation of the plan. The plan shall describe, in detail, procedures for assessing the accidental release hazard, preventing accidental releases, and developing an emergency response plan to an accidental release. The plan shall be submitted in a method and format to a central point as specified by EPA prior to the date specified in 40 CFR 68.150.b.</p>	<input type="checkbox"/> Yes Explain Below	<input type="checkbox"/> No Explain Below	<input checked="" type="checkbox"/> N/A Explain Below
<p>REMARKS: This facility is not subject to 40 CFR 68. The volume of chemicals on-site at LANL is tracked through a centralized chemical management system and specific queries are done monthly on the</p>			

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list of chemicals subject to Section 112r of 40 CFR 68 to ensure LANL does not come near, or exceed threshold quantities that could trigger the requirement for a Risk Management Plan. An NMED annual inspection was done on September 25, 2012 and focused on review and inspection of the LANL chemical tracking process. The inspector determined that all chemical tracking was in compliance with permit terms and conditions.

Part 2

ACC Deviation Summary Report for Permit P100R1M1

1. Are there any deviations identified in Part 1, Column 5. If NO, no further information is required on Part 2 of this form. If YES, answer question 2 below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Have all deviations identified in Part 1, Column 5 been reported to the NMED as required by 20.2.7 NMAC or in a Semi-Annual Monitoring Report (20.2.70.302.E.1 NMAC)? If Yes, no further information is required on Part 2 of this form. If No, answer question 3 below and enter the required information in the Deviation Summary Table for each deviation not yet reported to the NMED.	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. Did any of the deviations result in excess emissions? For excess emissions deviations that have not previously been reported per requirements of 20.2.7 NMAC, a completed Excess Emission Form for each deviation must be attached to this report.	<input type="checkbox"/> Yes <input type="checkbox"/> No

Deviation Summary Table for deviations not yet reported.

No.	Applicable Requirement (Include Rule Citation)	Emission Unit ID(s)	Cause of Deviation	Corrective Action Taken
1				
2				
3				
4				
5				

Deviation Summary Table (cont.)

Deviation Started		Deviation Ended		Pollutant	Monitoring Method	Amount of Emissions	Did you attach an excess emission form?
No.	Date	Time	Date				
1							<input type="checkbox"/> Yes <input type="checkbox"/> No
2							<input type="checkbox"/> Yes <input type="checkbox"/> No
3							<input type="checkbox"/> Yes <input type="checkbox"/> No
4							<input type="checkbox"/> Yes <input type="checkbox"/> No
5							<input type="checkbox"/> Yes <input type="checkbox"/> No