

**Statement of Basis - Narrative**  
**Title V Permit**

**Type of Permit Action:** TV Renewal

**Facility:** Los Alamos National Laboratory

**Company:** U.S. Department of Energy National Nuclear Security Administration

**Permit No(s):** Title V: P100-R3; NSR Permits: 632, 634-M2, 1081-M1, 1081-M1R1, 1081-M1R3, 1081-M1R5, 1081-M1R6, 2195B-M3, 2195F-R4, GCP-3-2195G, 2195H, 2195N-R2 and 2195P-R4

**Tempo/IDEA ID No.:** 856 - PRT20190004

**Permit Writer:** James E. Nellessen

**Fee Tracking (not required for Title V)**

<b>Permit Review</b>	<b>Date to Enforcement:</b> N/A	<b>Date of Enforcement Reply:</b> N/A
	<b>Date to Applicant:</b> TBD	<b>Date of Applicant Reply:</b> TBD
	<b>Date to EPA:</b> TBD	<b>Date of EPA Reply:</b> TBD
	<b>Date to Supervisor:</b> July 9, 2020	

**1.0 Plant Process Description:**

The Laboratory is a Research & Development (R&D) institution owned by the Department of Energy/National Nuclear Security Administration (DOE/NNSA) and operated by Los Alamos National Security, LLC. It falls under the Standard Industrial Classification (SIC) 8733 - Noncommercial Research Organization. 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;
- Wastewater treatment, for which the AQB permits evaporative sprayers;
- Asphalt production for road repair; and
- Electroplating, chemical milling, metallographic, machining and/or casting using beryllium in some of these processes.

**Air Quality Permit Category and Purpose of Laboratory-Wide Emissions Caps:**

- **The Laboratory is a Title V Major Source** because its potential to emit of stack emissions of NOx, CO, VOC, SOx, TSP, PM10, and PM2.5 is greater than 100 tons per year (tpy) (see Table 102.A of the permit). It is subject to a Title V Operating Permit per regulation 20.2.70 NMAC.

- **The Laboratory is a minor source for Hazardous Air Pollutants (HAPs)** since its potential to emit is less than 25 tpy for all HAPs combined and less than 10 tpy of any single HAP (e.g., formaldehyde, benzene). Both fugitive and stack emissions are included in the total HAPs. A minor HAP source is also called an area source.
- **Table 106.B – Facility-Wide Allowable Emissions** of the permit includes HAP emissions caps to ensure that the Laboratory remains a minor HAP source. If major, it would be subject to different or additional requirements in federal National Emission Standards for Hazardous Air Pollutants (40 CFR 63).
- See definition of Major Source in 20.2.70.7.R NMAC in the Title V Permit Regulation <http://164.64.110.239/nmac/parts/title20/20.002.0070.htm>
- **The Laboratory is a minor source for the Prevention of Significant Deterioration (PSD)** Preconstruction Permit Regulation 20.2.74 NMAC because its total potential to emit of stack emissions of regulated air pollutants, other than HAPs, are less than 250 tons per year per pollutant. Table 106.B requires facility-wide emissions caps for each pollutant to ensure that the Laboratory remains a PSD minor source.
- **The Laboratory is still subject to minor source pre-construction permits** in regulation 20.2.72 NMAC. However, the criteria used to determine when a minor source construction permit is required is based on the emissions from a particular functional area, responsible LANL operating group, and/or by source type, and not from the entire Laboratory. See Section 3-Source Determination of this Statement of Basis for more details.

#### **Actual Laboratory Emissions Are Less than Potential to Emit:**

Based on emissions inventories submitted by the Laboratory, its actual emissions of regulated air pollutants, including HAPs, have been consistently less than its Potential to Emit allowed by the Title V permit. However, LANL has requested that the Title V permit still require enforceable emissions caps for the laboratory to ensure that it is designated as PSD and HAP minor.

#### 2.0 **Description of this TV action:**

This action will renew LANL's existing Title V permit. The previous renewal was P100-R2 issued February 27, 2015, but the most recent complete TV permit was a minor modification, P100-R2M1 issued February 3, 2017. Hence, this renewal will reflect, update, and incorporate all applicable NSR (new source review) and TV actions that have happened since February 3, 2017. Those permit actions can be seen in the history table in Section 5.

The primary NSR permit action since the last TV renewal was the power plant upgrade NSR 2195B-M3 (issued July 26, 2018). That plan involved a phased transition from the existing older boilers and turbine to a couple of new boilers and turbine upgrade to include a heat recovery steam generator (HRSG). The HRSG would be installed on the emissions stack of the existing turbine to create a combined cycle unit that will power a steam turbine generator (STG). The STG produces power by converting steam heat energy to mechanical energy and produces no emissions. NOx emissions from the combined cycle unit will be controlled with selective catalytic reduction (SCR) using ammonia injection. CO and VOC emissions will be controlled with an oxidation catalyst. A recent TV Minor Modification (P100-R2M4 issued July 18, 2019) added one evaporative sprayer to the existing five evaporative sprayers located at the Sanitary Effluent Reclamation Facility (SERF).

### 3.0 **Source Determination:**

#### 1. Emission source evaluation:

##### Title V, PSD, NNSR Sources:

The individual stationary air emission sources that are grouped to determine the Laboratory's air emissions for the Title V (20.2.70 NMAC), Prevention of Significant Deterioration (PSD) (20.2.74 NMAC), or Nonattainment (NNSR) 20.2.79 NMAC permit regulations includes all individual stationary sources of regulated air pollutants within the entire set of complexes and Technical Areas that, in total, comprise the Los Alamos National Laboratory (LANL).

##### Minor Construction Sources:

The minor source construction permit regulation at 20.2.72.7.EE NMAC defines the entire stationary source differently than the Title V, PSD, and NNSR permit regulations. The minor source regulation requires approval from the Secretary to consider the entire laboratory as one single stationary source. Therefore, for the minor source regulation, sources are grouped by each functional area (e.g., Sanitary Effluent Reclamation Facility), responsible LANL operating group (Utilities and Institutional Facilities Operations), and/or source type (asphalt plant), and not by the entire laboratory. Here is the source definition from the minor source construction permit regulation: 20.2.72.7.EE "Stationary source" or "source" means any building, structure, equipment, facility, installation (including temporary installations), operation or portable stationary source which emits or may emit any air contaminant. Any research facility may group its sources for the purpose of this part at the discretion of the secretary.

#### 2. Single Source Analysis:

- A. **SIC Code:** Do the facilities belong to the same industrial grouping (i.e., same two-digit SIC code grouping, or support activity)? **Yes, the entire laboratory falls under one SIC code which is 8733 Noncommercial Research Organizations.**
- B. **Common Ownership or Control:** Are the facilities under common ownership or control? **Yes, the LANL operator is Los Alamos National Security, LLC and LANL's owner is US DOE NNSA and therefore it is under common ownership and control.**
- C. **Contiguous or Adjacent:** Are the facilities located on one or more contiguous or adjacent properties? **All laboratory operations subject to air quality permitting are located on contiguous and/or adjacent properties.**

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes? **The entire Los Alamos National Laboratory (LANL) is considered the entire, single source for purposes of Title V 20.2.70, PSD 20.2.74, and Nonattainment 20.2.79 NMAC air permit regulations. However, pursuant to 20.2.72.7.EE NMAC, the source is defined as all stationary sources of regulated air emissions that currently have minor source permits under 20.2.72 NMAC.**

4.0 **PSD Applicability:**

Title V action does not determine PSD applicability; however, LANL is a Prevention of Significant Deterioration (PSD) minor source. See the History Table (Section 5 below) for a summary of previous PSD applicability determinations.

Hazardous Air Pollutants (HAPs) are not regulated under the PSD permit regulation. HAPs are regulated by source specific National Emission Standards for Hazardous Air Pollutants (NESHAP) promulgated by EPA with all applicable requirements incorporated into a Title V Operating Permit.

5.0 **History (In descending chronological order, showing NSR and TV):** \*The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
*P100-R3	TBD (due by 10/25/2020)	TV Renewal	To incorporate all applicable requirements since the most recent complete TV permit, P100-R2M1, issued Feb. 3, 2017.
*2195-R81	5/12/2020	NSR NPR	Add a Caterpillar 173 hp (100 kW) portable diesel generator (Unit GS-GEN-1). The unit is to be used for research in remote areas without power, such as Technical Area 68 and will be moved around various LANL facilities. The unit is certified to US EPA Tier 4 emission standards as a non-road engine per 40 CFR 1039.
*2195-R80	12/5/2019	NSR NOE	To add a paint booth unit at TA-3-66. The unit includes a two-stage HEPA filtration providing 95% filtration efficiency.
P100-R2M4	7/18/2019	TV Minor Mod	To add one evaporative sprayer at the SERF facility.
*2195-R79	5/10/2019	NSR NOE	Add an electric powered thermal evaporator.
*2195-R78	4/23/2019	NSR NOE	For exempt heaters for personal comfort (each < 5 MMBtu/hr).
*2195-R77	11/20/2018	NPR	To add one thermal evaporator for the RLWTF.
*2195-R76	11/21/2018	NSR NOE	Exempt cooling tower, PM PER = 0.11 tpy.
P100-R2M3	10/17/2018	TV Admin	Update operator name to Triad National Security, LLC.
*2195-R75	10/11/2018	NPR	Add 4 Kubota diesel engines (all ≤ 10.5 hp) to TA-46.
*2195-R74	9/28/2018	NSR Admin	Triad National Security reported as operator of LANL.
*2195B-M3	7/26/2018	Significant Permit Revision	Three phased TA-3 Power Plant Replacement: During Phase I the power plant will consist of three boilers, one combustion turbine, and minor NSR exempt equipment. In Phase 1 two new auxiliary boilers are authorized for construction (Units TA-3-22-4 and TA-3-22-5); two of the existing boilers (TA-3-22-1 and TA-3-22-2) will be permanently shut down. Phase 1 also includes installation of the exempt comfort heaters and makeup air heaters. Phase 2 is the piping upgrade and has no air emission sources. During Phase 3, the power plant will consist of two boilers and a combustion turbine fitted with a heat recovery steam generator (HRSG) with a natural gas fueled duct burner, and minor NSR exempt equipment
*2195-R73	7/18/2018	NSR NOE	Add three emergency generators at TA-50-184, TA-55-474 and TA-55-475.
P100-R2M2	5/7/2018	TV Admin	Update operator name to Los Alamos National Security, LLC, and Newport News Nuclear BWXT-Los Alamos, LLC.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
*2195-R72	5/8/2018	NSR NOE	For 16 exempt gas-fired heaters (each < 5 MMBtu/hr) and change a solvent degreaser in permit to exempt status.
*2195-R71	6/12/2017	NSR NOE	For an emergency standby generator (Cummins) for TA-54-375.
*2195-R70	2/28/2017	NSR NOE	For 15 exempt gas-fired heaters (each < 5 MMBtu/hr).
*P100-R2M1	2/3/2017	Title V Minor Permit Modification	<p><b>TA 54 SVE:</b> This permit revision removed the conditions in Section A113 of the Title V Operating permit for the TA 54 MDL Soil Vapor Extraction (SVE) unit. This is because the requirement was completed to verify that the SVE air emissions are Title V Insignificant, activity number 1.a and 1.b. The condition required that the permittee, using data from the SVE stack, calculate and report the emission rates of HAPs and New Mexico TAPs. The SVE system is a Title V Insignificant Activity emissions of which must be included in the facility-wide HAPs emissions cap. The requirements of this condition were satisfied and no longer applied as of March 9, 2016.</p> <p><b>Water Evaporator Sprayers TA-60:</b> Add 5 floating evaporative sprayers to the Title V permit (units TA-60-EVAP-1 to -EVAP-5) for the LANL Sanitary Effluent Treatment Facility (SERF).</p> <p>Existing sprayer unit TA-60-EVAP, model number 420, is not authorized to operate and was shut down as of June 28, 2016 and then decommissioned as per Voluntary Disclosure and Corrective Action received on 7-18-16.</p> <p>The TSP NMAAQs is not an applicable requirement in title V, however, TSP is a regulated air pollutant subject to Title V permitting (see 20.2.70.7.AC(a)). Also per 20.2.70.302.A(8) NMAC fugitive emissions, as well as stack emissions, from a source are also subject to regulation in the operating permit.</p> <p>Hazardous Air Pollutants (HAPs) from the evaporative sprayers are verified in Condition A1507.A by calculating the tons per year emission rates using hours of operation and the most recent water analysis. Although New Mexico TAP (NM TAP) emission rates are too low to regulate for this source, the permit still requires verification of these emission rates and reporting to the Air Quality Bureau.</p> <p>Numerical air emission limits from the evaporative sprayers are not appropriate because the emission rates are minimal; they are fugitive and cannot be directly measured; TSP and PM10 pollutants from this source do not require air dispersion modeling; and hazardous air pollutants (HAPs), including those from the evaporative sprayers, must be inventoried and reported from the entire Laboratory every 6 months.</p> <p><b>Air emission rates estimated from ground water samples and reported in the application from the evaporative sprayers are:</b> 1.40 pph/6.12 tpy TSP; 0.07 pph/0.29 tpy PM10; ton per year</p>

Permit Number	Issue Date	Action Type	Description of Action (Changes)
			(tpy) emissions of the following HAPs are: 0.0000000138 PCBs, 0.00000633 chloroform, 0.0000434 chloromethane, 0.000056 bromoform, 0.000129 cyanide, 0.000465 manganese, 0.00022 antimony, and 0.001 total HAPs. NM Toxic Air Pollutants (NMTAPs) are not subject to permit requirements since each TAP is below the regulatory threshold that requires a permit.
*2195-R69	8/5/2016	No Permit Required (NPR)	Addition of a minor NSR exempt vacuum plasma spraying chamber in Building 66 of Technical Area 3 consisting of a Medicoat AG spray chamber and a GPC Cyclone dust collector.
*2195-R68	3/31/2016	NSR NOE	For 1 exempt stand-by diesel generator at TA-63.
*2195-R67	3/31/2016	NSR NOE	For 7 exempt gas-fired heaters (each < 5 MMBtu/hr).
*2195-R66	7/22/2015	NSR NOE	A research project lasting three to six months regarding the February 2014 waste drum incident at the Waste Isolation Pilot Plant (WIPP). The project scope involved applying heat to four (4) drums containing surrogate non-radiological materials similar to the incident drum. Ignition may or may not occur. The drums are heated within steel transportation containers equipped with HEPA filtration.
*2195-R65	3/27/2015	NSR NOE	For 10 exempt gas-fired heaters (each < 5 MMBtu/hr).
P100-R2	2/27/2015	Title V Renewal	<p>Renewal of Title V permit. Incorporates changes since P100R1M3 issued 4/26/13.</p> <p>Petitioners petitioned title V Permit No. P100-R2 to the Environmental Improvement Board and a hearing was completed. See hearing record under EIB 15-02(A). A copy of the final decision is in the permit file.</p> <p><b>See statement of for P100R2 for information regarding fire fighter training and asbestos as it applies to the open burning regulation at 20.2.60 NMAC.</b></p>
*2195-R64	6/27/2014	NSR NOE	For 10 exempt gas-fired heaters (each < 5 MMBtu/hr).
*2195X	6/20/2014	NPR	spray evaporation system (TA-60-EVAP). This unit was decommissioned June 28, 2016.
*2195LR1	5/29/2014	NPR	Two soil vapor extraction units (TA-54-SVE, East and West).
*2195-R63	4/4/2014	NSR NOE	For 2 exempt stand-by generators at TA-55.
*2195-R62	1/15/2014	NSR NOE	For 1 exempt cooling tower for LANL Super Computing Complex (TA-3-2327).
*2195PR4	1/3/2014	Pre-Construction (NSR) Admin Rev	Temporary relocation of all diesel generators permitted under NSR permit 2195P.
*2195-R61	12/15/2013	NSR NOE	For 1 exempt gas-fired heater (< 5 MMBtu/hr).
*2195-R60	12/15/2013	NSR NOE	For 1 exempt gas-fired heater (< 5 MMBtu/hr).
*2195FR4	12/12/2013	Pre-Construction (NSR) Tech Rev	Replacement of stationary TA-33-G-1 with a portable unit named TA-33-G-1P. Eliminates 40 CFR Subpart ZZZZ applicability, engine must meet non-road requirements at 40 CFR 89 and 40 CFR 1068.30.
2195PR2 and 2195PR3	8/27/2013	Admin Rev	Temporary relocation of 2 20KW gensets from TA-33 to TA-39.
*2195-R59	5/14/2013	NSR NOE	For emergency stand-by diesel generator at TA-50-69.
*2195-R58	5/14/2013	NSR NOE	For 1 exempt gas-fired heater (< 5 MMBtu/hr).

Permit Number	Issue Date	Action Type	Description of Action (Changes)
P100R1M3	4/26/2013	Admin Rev	Removal of four retired boilers (TA-48-1-BS-2 & 6 and TA-59-1-BHW-1 & 2) from list of regulated sources.
*2195-R57	3/18/2013	NSR NOE	For emergency stand-by diesel generator at TA-48-1.
P100R1M2	12/26/2012	Admin Rev	Retirement of four boilers (TA-48-1-BS-2 & 6 and TA-59-1-BHW-1 & 2) from list of regulated sources.
*2195-R56	12/26/2012	NSR NOE	For 4 exempt gas-fired heaters (each < 5 MMBtu/hr).
*2195-R55	11/8/2012	NSR NOE	For 4 exempt gas-fired heaters (each < 5 MMBtu/hr).
*2195PR1	11/20/2012	Admin Rev	NOE for two (2) process related, Honda gasoline-fired portable generators, and the capacity of 2.8 hp (2.1 KW) each for Technical Area No.33.
*2195-R54	10/5/2012	NSR NOE	For 10 exempt gas-fired heaters (each < 5 MMBtu/hr).
*2195-R53	10/5/2012	NSR NOE	For 1 exempt cooling tower at TA-53-2.
*2195NR2	9/25/2012	Tech Rev	Remove initial compliance testing on backup fuel oil.
P100R1M1	6/15/2012	Title V Significant Modification	Incorporates NSR 2195B-M2.
*2195-R52	6/12/2012	NSR NOE	For 1 exempt gas-fired heater (< 5 MMBtu/hr).
*2195-R51	5/2/2012	NSR NOE	For 2 exempt gas-fired heaters (each < 5 MMBtu/hr).
*2195-R50	12/30/2011	NSR NOE	For 1 exempt gas-fired heater (< 5 MMBtu/hr).
*2195-R49	12/30/2011	NSR NOE	For 1 exempt standby generator at RLWTF.
2195V	12/9/2011	NPR	Construct and operate portable MSS generator.
2195B-M2	11/1/2011	Tech Rev	Increase allowable annual natural gas fuel consumption by the Combustion Turbine and reduce annual allowable fuel oil usage.
*2195-R47	8/30/2011	NSR NOE	For 5 exempt gas-fired heaters (each < 5 MMBtu/hr).
*2195-R46	8/2/2011	NSR NOE	For 1 exempt water evaporator.
*2195-R45	7/28/2011	NSR NOE	For 1 exempt cooling tower at TA-55-6.
*2195-R44	4/27/2011	NSR NOE	For 4 exempt gas-fired heaters (each < 5 MMBtu/hr).
*2195-R42	12/1/2010	NSR NOE	For 1 exempt stand-by generator at TA-55-371.
2195U	9/20/2010	NPR	RLWTF (TA-50) Thermal Evaporation Unit.
2195T	12/16/09	NPR	Emergency Operation Center Portable Generator.
P100-R1	8/7/09	Title V Renewal	Incorporates changes since P100R1: 2195NR1, 2195F-R2, P100M2, and 2195P. Also includes 1081-M1-R6, prior to P100M1. For specific changes see 2.0 Description of this Modification above.
2195B-M1R2	3/5/09	Technical Rev	Changed the method for monitoring emissions from the CT, from a calculation based on fuel usage to direct measurement of stack emissions using a portable analyzer. This permit supersedes all portions of Permit No. 2195B-M1-R1, except the portion requiring compliance tests.
2195B-M1R1	10/14/08	Admin Rev	This revision consists of establishing use and exempt status of the following two emergency generators: 1) 1100 kW Cummins Generator, Model KTA50-G2 Location: TA-16 Weapons Engineering Tritium Facility (WETF), Bldg. 980 2) 1250 kW Cummins Generator, Model DFLLC-5554001 Location: TA-3 Power Plant, Bldg. 1404.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
2195F-R3	5/28/08	Technical Rev	Modification to recordkeeping condition 4.a to record the kilowatt-hours produced on a daily basis instead of the hourly basis required by the current permit. This permit supersedes all portions of Air Quality Permit 2195F-R2, except the portion requiring compliance tests.
2195N-R1	12/20/07	Admin Rev - NOE	Processed exempt sources: (3) three 1500 kW Cummins diesel powered generators to be located at Technical Area 55, Chemistry and Metallurgy Research Replacement Facility (CMRR). Request received on Dec. 11, 2007. <i>(Note this letter should have been number 2195N-R2.)</i>
2195S	11/25/07	NPR	NPR for power generation in TA-49-G1. The portable generator shall consist of one 10 kW generator powered by a diesel engine rated at 20.2 kW (27 hp), Cummins Onan diesel fueled generator with a Kubota engine.
2195P	8/8/07	New NSR	Construction and operation of three electrical generator engines at Technical Area 33. The function of the generator engines is to provide electricity for experiments in support of classified research.
P100M2	7/16/07	Admin Amendment	Retired Beryllium operations at the Chemistry and Metallurgy Research Facility at TA-3-29.
2195Q	1/30/07	NPR	NPR for the construction and operation of two micro electric discharge machines used to create small holes in beryllium gaskets at LANL, TA-39-89. This application was submitted as a follow up to the Department's June 22, 2005 determination (See 2195-O) that the micro electric discharge machines required a permit.
*GCP-3- 2195G-R1	9/12/06	GCP-3	GCP-3-Rev.1 issued by NMED-AQB.
2195F-R2	6/26/06	Admin Rev	Corrected a typographical error on the generator serial number and model number.
P100-M1	6/15/06	Title V Modification	Removed the Paper Shredder located at TA-52-11 and replaced it with the Data Disintegrator; removed Boilers TA-16-1485-BS-1 and BS-2, and the portable rock crusher; and installed a new 25 MW simple cycle natural gas turbine at the Power Plant at TA-3. P100M1 supersedes permit P100.
*Various	6/14/06	Admin Rev	Changed the name of the facility operator from the University of California to Los Alamos National Security, LLC (LANS).  (632-R1, 634-M2-R1, 1081-M1-R7, NPR 2195A-R1, 2195B-M1R1, 2195F-R1, GCP-3-2195G-R1, 2195H-R1, NPR 2195L-R1, 2195N-R1, 2195R-24, NOI 2597-R1.)
*1081-M1R6	5/12/06	Technical Rev	Replaced permitted vacuum furnace (1081M1R3) with a CM Model 1712 electric furnace. Modifies 1081-M1.
2195K-R1	1/12/06	Admin Rev – Closed	Canceled permit 2195K due to LANL no longer needing to perform the types of testing and activities authorized by the permit.
2195J-R1	1/17/06	Admin Rev – Closed	Canceled permit 2195J due to LANL no longer needing to perform the types of testing and activities authorized by the permit. Request received on Jan. 12, 2006.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
2195N	9/16/05	New NSR	Authorized the construction and operation of phases A and B of the Chemistry and Metallurgy Research Building Replacement ("CMRR") facility. This facility consists of the Radiological Laboratory /Office Building ("RLOB") and the Utility Building ("UB"). Together, the two buildings are identified as the RLUOB. The function of the UB is to provide utility infrastructure and support to the CMRR facility.
2195O	6/22/05	Denial of NPR – Closed	The proposed research activity will use Electric Discharge Machines (EDM) to cause a static discharge and form a 50- $\mu$ m-diameter hole in a beryllium gasket submerged in dielectric fluid. The Micro EDM device meets the definition of a "Machine Shop" found at 40 CFR § 61.31(d) and therefore the proposed research activity is subject to 40 CFR Part 60, Subpart C, National Emission Standard (NESHAP) for Beryllium. Therefore, a construction permit is required.
2195K	3/29/05	New NSR – Closed	This permit application is in response to NMED's 8/19/03 request that LANL submit a permit application pursuant to 20.2.72 for existing open burning activities which would not be allowed under 20.2.60 <u>Open Burning</u> . Technical Area - 36 ("TA") Sled Track is part of LANL's Dynamic Experimentation ("DX") Division. Permit Closed with 2195K-R1.
2195J	3/29/05	New NSR – Closed	This permit application is in response to NMED's 8/19/03 request that LANL submit a permit application pursuant to 20.2.72 for existing open burning activities which would not be allowed under 20.2.60 <u>Open Burning</u> . TA-16 Flash Pad uses an open flame generated from propane burners on a concrete pad to ignite or burn residual HE material from equipment used at the LANL (e.g. piping, office furniture etc.). Permit Closed with 2195J-R1.
2195B-M1	7/30/04	Regular Sig. Rev	Authorizes the modification and operation of the Technical Area – 3 Power Plant (TA-3). This permit supersedes all portions of Air Quality Permit No. 2195B-R1
P100	4/30/04	New Title V	New operating permit issued for the facility.
*2195H	10/22/03	New NSR	Authorized the construction and operation of a 1200 lb/hr Data Disintegrator at TA-52.
2195I	08/28/03	NOI – Withdrawn	Withdrawn - NOI proposing to install a screening plant at LANL.
2195B-R2	5/15/03	Admin Rev - NOE	This revision consists of a change in the site support services subcontractor and operator of the TA 3-22 Power Plant. KSL Services will be the new subcontractor and operator effective February 2003. Request received on March 5, 2003.
741-R1	11/25/02	Admin Rev – Closed	Surrendered Air Quality Permit 741 for the facility. Request received on Oct. 25, 2002. The construction never took place; therefore, the permit is no longer needed.
635-R1	11/25/02	Admin Rev – Closed	Surrendered Air Quality Permit 635 for the facility. Request received on Oct. 25, 2002. The final beryllium activities were conducted in the facility in Jan. 2001; thus the machine shop will be decommissioned. No further beryllium activities will occur at the facility and the permit is no longer needed.
2195B-R1	11/21/02	Technical Rev	Revised/Replaced emission limits table 2.1 in Permit 2195B.
GCP-3-2195G	10/29/02	GCP-3	New General Construction Permit (GCP-3) for Hot Mix Asphalt Plants. An 80 tph asphalt plant

Permit Number	Issue Date	Action Type	Description of Action (Changes)
2195F	10/10/02	New NSR	Construction and operation of a diesel fired 1500 kW generator at TA-33.
2195E	7/17/02	NPR – Closed	NPR - Pug mill for soil remediation. The equipment was never installed and dropped from consideration. (Activity closed from Tempo on 6/7/06.)
*1081-M1-R5	02/21/02	Technical Rev	Modification of weld bead dress description.
2597	9/6/01	NOI	Replacement of two existing Keewanee 8.368 MMBTU/hr boilers with two Sellers 14.645 MMBTU/hr boilers at TA-55, PF6.
2195A	1/9/01	NOI – NPR	Construction and operation of a new woodshop as a separate facility. Results are too low to trigger 2.72 or 2.73. Second letter issued on Feb. 07, 2002 due to revised application, acknowledges NPR.
1081-M1R4	11/27/00	Admin Rev	Removed 77 HP standby generator that was added during revision 2 in Dec. 1998.
2195B	9/27/00	New NSR	Authorized the modification and operation of the Technical Area – 3 Power Plant.
*1081-M1R3	02/11/00	Technical Rev	Revision 1) limited Beryllium emissions based to throughput instead of cutting / machining time; 2) replaced the one hour emission limit with a 24 hour emission limit from 40 CFR 61, subpart C, section 61.32, i.e., 10 grams of Be per 24 hours; and 3) added a vacuum induction melt furnace operation for melting down classified shapes of machined Beryllium components. Supersedes many portions of 1081-M1 and 1081-M1-R1.
1081-M1R2	12/1/98	Admin Rev	Added 77 HP standby generator as an exempt source. Request received on Oct. 2, 1998.
*634-M2	11/2/98	Admin Rev	Revision consists of installing a 100 MBTU/hr evaporator for the purpose of reducing the volume of coolant waste generated. No revision number was assigned to this Admin Rev.
*634-M2	10/30/98	Modification	Modified permit for Be machining and foundry operations. Established maximum annual throughput of 10,000 lbs Be, facility-wide 24 hr and annual Be emission limits, Be control requirements, and continuous stack monitoring for Be. Application received on September 23, 1997. This permit supersedes all portions of Permit 634-M1.
*1081-M1-R1	3/11/98	Revision	Required that emissions generated from weld cutting, dressing, and metallography operations be routed through HPA filtration having 99.95% control efficiencies and specified the testing requirements based on accessibility to the HEPA filters.
*1081-M1	7/1/94	Modification	Allowed for the use of lubricant baths instead of kerosene baths in the cutting and grinding operations. The original permit only allowed for grinding to eliminate rough edges. Cutting will produce less fine particles, and therefore is both cleaner and easier to control. Supersedes all portions of 1081, except the portion requiring compliance testing.
1081	11/25/92	New NSR	Authorized beryllium machining operation in TA-55, Building 4.
741	4/26/89	New NSR	Permit to construct a beryllium processing facility within TA 3-35. Closed with 741-R1.
634-M1	9/8/87	Modification	Maximum process rate is limited to 2.0 pph of beryllium and not to exceed the estimated emission rate specified in section 5 of the permit application. Supersedes permit 634.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
636	3/19/86	New NSR – Closed	Construction and operation of a beryllium machine shop in TA-3, building 102. LANL surrendered permit 636 on Feb. 20, 2004. Final beryllium activities were conducted at the facility in CY 2000.
635	3/19/86	New NSR – Closed	Modification of beryllium machine shop in TA 3, building 39. Closed with 635-R1.
634	3/19/86	New NSR	Construction and operation of a beryllium machine shop in TA-3, building 141.
*632	12/26/85	New NSR	Construction and operation of a beryllium machine shop in TA-35, building 213.

6.0 **Public Response/Concerns:** Since April 16, 2020, a few phone calls and emails have been received from Joni Arends, Concerned Citizens for Nuclear Safety. She has mainly been inquiring on the status of this current TV renewal action for LANL and when the public comment period will begin. A couple of her questions involved possible ozone coming from LANL and about LANL’s planned tritium venting (AQB does not regulate radionuclides, that is under US EPA). The most recent email communication with Joni Arends was via email on June 22, 2020 again inquiring about the TV permit status. I informed her that we will let her know when the public comment period begins.

7.0 **Compliance Testing:** Table as provided by the applicant in Section 17 of the application.

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
TA-3-22-CT-1	CGTG annual compliance test for NOx and CO with portable analyzer as required by NSR Permit No. 2195B-M1-R2 and additional testing at 92% load.	1/10/2014
TA-3-22-CT-1	CGTG annual compliance test for NOx and CO with portable analyzer as required by NSR Permit No. 2195B-M1-R2 and additional testing at 90% load.	12/16/2014
RLUOB-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 <sub>x</sub> and CO to increase plant throughput.	5/18/2009
TA-33-G-4	Startup compliance test for NO <sub>x</sub> 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

**8.0 Startup and Shutdown:**

- A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? **Yes**
- B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? **Yes**
- C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan was developed and implemented in accordance with 20.2.7.14.A and B NMAC? **Yes**
- D. Does the facility have emissions due to routine or predictable startup, shutdown, and maintenance? **No**. If so, have all emissions from startup, shutdown, and scheduled maintenance operations been permitted?

**9.0 Compliance and Enforcement Status [Title V and NSR/PSD new or modification]:**

As of an email received on May 28, 2019, from Shannon Duran, AQB Enforcement Manager, there were no outstanding Notices of Violation (NOVs) or Settlement Agreements with LANL. As of an updated email received from Shannon Duran on April 20, 2020, there continue to be no outstanding NOVs or other enforcement actions.

**10.0 Modeling:** Not applicable for TV actions, but a brief summary of most recent NSR modeling is below:

NSR 2195B-M3 (issued July 26, 2018 for power plant revisions): Modeling was submitted for this application for NO<sub>2</sub>, SO<sub>2</sub>, CO, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub>. AQB modeling and review was conducted by David Heath (report 5/30/18) demonstrated that the facility neither caused nor contributed to any exceedances of applicable air quality standards.

11.0 State Regulatory Analysis (NMAC/AOCR):

<u>STATE REGU- LATIONS</u>  CITATION 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
2.1	GENERAL PROVISIONS	Yes, Always	Entire Facility	The facility is subject to Title 20 Environmental Protection Chapter 2 Air Quality of the New Mexico Administrative Code so is subject to Part 1 General Provisions, Update to Section 116 of regulation for Significant figures & rounding. Applicable with no permitting requirements.
2.3	Ambient Air Quality Standards	Yes, for NSR, No for TV	Entire Facility	<p><b>NSR:</b> 20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.</p> <p><b>Title V:</b> 20.2.3.9 NMAC, LIMITATION OF APPLICABILITY TO 20.2.70 NMAC. The requirements of NMAAQS are not applicable requirements under 20.2.70 NMAC, as defined by 20.2.3.9 NMAC, 20.2.3.9 NMAC does not limit the applicability of this part to sources required to obtain a permit under the minor NSR regulation, 20.2.72 NMAC, nor does it limit which terms and conditions of NSR permits issued pursuant to 20.2.72 NMAC are applicable requirements in a Title V permit.</p>
2.7	Excess Emissions	Yes, Always	Entire Facility	Applies to all of the facility's sources.
2.11	Asphalt Process Equipment	Yes	TA-60- BDM	<p>The objective of this Part is to establish particulate matter emission standards for asphalt process equipment.</p> <p>This rule applies to LANL's asphalt plant.</p>
2.33	Gas Burning Equipment - Nitrogen Dioxide	Yes	TA-3-22-1, TA-3-22-2, TA3-22-3	<p><b>This regulation does not apply to internal combustion equipment such as engines. It only applies to external combustion equipment such as heaters or boilers.</b></p> <p>This regulation applies to existing and new gas burning equipment (external combustion emission sources, such as gas and oil-fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units (BTU) per year per unit. At 8760 hours/year of operation the approximate threshold is 115 MMBtu/hr.</p> <p>Three boilers TA-3-22-1, TA-3-22-2, and TA3-22-3 are at 178.5 MMBtu/hr capacity and are subject to this rule.</p>

<u>STATE REGULATIONS</u> CITATION <b>20 NMAC</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Unit(s) or Facility</b>	<b>JUSTIFICATION:</b>
<b>2.34</b>	Oil Burning Equipment - Nitrogen Dioxide	No		<p><b>This regulation does not apply to internal combustion equipment such as engines. It only applies to external combustion equipment such as heaters or boilers.</b></p> <p>This regulation applies to oil burning equipment (external combustion emission sources, such as gas and oil-fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units (BTU) per year per unit. At 8760 hours/year of operation the approximate threshold is 115 MMBtu/hr.</p> <p>Although the three boilers TA-3-22-1, TA-3-22-2, and TA3-22-3 are at 178.5 MMBtu/hr capacity, they have been limited to 48 hours burning oil to be excluded from MACT JJJJJ and that limitation also excludes them from being subject to this rule as well.</p>
<b>2.38</b>	Hydrocarbon Storage Facilities	No		<p>This regulation could apply to storage tanks at petroleum production facilities, processing facilities, tanks batteries, or hydrocarbon storage facilities.</p> <p>LANL does not operate tank batteries or hydrocarbon storage facilities operated in conjunction with petroleum production facilities (20.2.38.111 NMAC).</p>
<b>2.60</b>	Open Burning	Yes	All open areas on the Lab property	<p>Per 20.2.60.113 NMAC open burning of RCRA hazardous waste is allowed at the TA-16 Burn Ground, which currently operates under RCRA interim status. The rule is applicable if LANL burns vegetative material under the provisions of 20.2.60.111 NMAC.</p>
<b>2.61</b>	Smoke and Visible Emissions	Yes	All stationary combustion sources (except TA-60-BDM and insignificant activities)	<p>This regulation that limits opacity to 20% applies to Stationary Combustion Equipment, such as engines, boilers, heaters, and flares unless your equipment is subject to another state regulation that limits particulate matter such as 20.2.19 NMAC (see 20.2.61.109 NMAC).</p> <p>Most of the stationary combustion equipment can be found in Permit Sections A800 (External Combustion), A1100 (Internal Combustion), and TA-3 Power Plant. Regarding the Power Plant (Units TA-3-22-1, TA-3-22-2, TA-3-22-3, TA-3-22-4, TA-3-22-5, TA-3-22-CT-1, and TA-3-22-CHP-1), since this is a multi-year phased construction project, after Phase 3, only units TA-3-22-4, TA-3-22-5, and TA-3-22-CHP-1 will be active (NSR Permit# 2195B-M3).</p>

<u>STATE REGULATIONS</u> CITATION <b>20 NMAC</b>	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
<b>2.65</b>	Smoke Management	Yes	All open areas on the Lab property	This regulation would apply if LANL conducted prescribed burning. To date, no prescribed burning has taken place since the rule became effective 12-31-2003.
<b>2.70</b>	Operating Permits	Yes	Entire Facility	The source is a Title V Major Source as defined at 20.2.70.7 NMAC. LANL is major for NO <sub>2</sub> , CO, VOC, SO <sub>2</sub> , TSP, PM <sub>10</sub> , PM <sub>2.5</sub> , and greenhouse gases.
<b>2.71</b>	Operating Permit Fees	Yes	Entire Facility	Source is subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
<b>2.72</b>	Construction Permits	Yes	Entire Facility	Per Section 200.A(1): PER > 10 pph or 25 tpy for a criteria pollutant, and per Section 400 Toxic Air Pollutants (TAPs) (Sections 400 through screening levels at Section 502).
<b>2.73</b>	NOI & Emissions Inventory Requirements	Yes, Always	Entire Facility	Applicable to all facilities that require a permit. PER > 10 tpy for a regulated air contaminant.
<b>2.74</b>	Permits-Prevention of Significant Deterioration	No		If subject, this would normally apply to the entire facility. <b>20.2.74.7.AG (1)</b> Any stationary source listed in Table 1 of this Part (20.2.74.501 NMAC) which emits, or has the potential to emit, emissions equal to or greater than one hundred (100) tons per year of any regulated air pollutant; <b>20.2.74.7.AG (2)</b> Any stationary source not listed in Table 1 of this Part (20.2.74.501 NMAC) and which emits, or has the potential to emit, emissions of two hundred fifty (250) tons per year or more of any regulated air pollutant; <b>20.2.74.7.AG(5)</b> The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the stationary source categories found in Table 1 (20.2.74.501 NMAC) or any other stationary source category which, as of August 7, 1980, is being regulated under Section 111 or 112 of the act.  Source is not one of the 28 listed in Table 1 (>100 tpy) and is also not > 250 tpy. LANL has facility-wide emission limits (Table 106.B) in the Title V operating permit that limit the potential to emit for PSD pollutants to below major source status for PSD purposes.
<b>2.75</b>	Construction Permit Fees	Yes	Entire Facility	This facility is subject to 20.2.72 NMAC.  TV: No, in accordance with 20.2.75.11.E an annual NSR enforcement and compliance fee shall not apply to sources subject to 20.2.71 NMAC.
<b>2.77</b>	New Source Performance	Yes	See Sources subject to 40 CFR 60	Applies to any stationary source constructing or modifying and which is subject to the requirements of 40 CFR Part 60.

<a href="#">STATE REGULATIONS</a> CITATION 20 NMAC	Title	Applies (Y/N)	Unit(s) or Facility	JUSTIFICATION:
2.78	Emissions Standards for HAPs	Yes	See Sources subject to 40 CFR 61	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61.
2.79	Permits – Nonattainment Areas	No		This facility is not located in, nor does it affect, a nonattainment area. Link to <a href="#">Non-attainment Link</a> areas.
2.82	MACT Standards for Source Categories of HAPs	Yes	See sources subject to 40 CFR 63	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63.

## 12.0 Federal Regulatory Analysis:

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Yes	Entire Facility	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.
NSPS Subpart A (40 CFR 60)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 60	Applies if any other subpart applies and Subparts Dc, I, GG, IIII, and KKKK apply.
40 CFR 60.40b, Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	No		<p>(a) The affected facility to which this subpart applies is 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 MW (100 million Btu/hour).</p> <p>The only boilers with capacities greater than 100 MMBtu/hr (or 29 MW) are located at the TA-3 Power Plant, Units TA-3-22-1 through -3, but these were constructed in 1950-1952, prior to the June 19, 1984 applicability date. Boilers TA-3-22-4 and TA-3-22-5 are 72.3 MMBtu/hr and below the threshold for this Subpart.</p> <p>The HRSG component of the more recently permitted turbine (TA-3-22-CHP-1) has a capacity of 47 MW-27 MW= 20</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				MW=68 MMBtu/hr which is below the threshold for this Subpart. Also, HRSGs associated with stationary turbines that are subject to 40 CFR 60 Subpart KKKK are exempt from this Subpart under 60.40b(i).
40 CFR 60.40c, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Yes	TA-55-6-BHW-1, TA-55-6-BHW-2, RLUOB-BHW-1 through RLUOB-BHW-4, and TA-3-22-4 and TA-3-22-5	<p>Applicable to: facilities with steam generating units for which construction, modification or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity of 29 MW (100 million Btu/hour) or less, but greater than or equal to 2.9 MW (10 million Btu/hour).</p> <p>Older boiler Units TA-55-6-BHW-1, TA-55-6-BHW-2, RLUOB-BHW-1 through RLUOB-BHW-4 are subject, as well as newer boilers TA-3-22-4 and TA-3-22-5. Numeric emission limits for SO<sub>2</sub> in this subpart do not apply to these boilers because of the restriction on sulfur in fuel [60.42c(d)]. Numeric emission limits for particulate matter in this subpart do not apply to these boilers because of the restriction on sulfur in fuel [60.42d(e)(4)]. This subpart does not apply to the HRSG because HRSGs associated with stationary turbines that are subject to 40 CFR 60 Subpart KKKK are exempt from this Subpart under 60.40c(e).</p>
40 CFR 60, Subpart I	Hot Mix Asphalt Facilities	Yes	TA-60-BDM	Asphalt Plant was constructed or modified after the June 11, 1973 applicability date (40 CFR 60.90). GCP-3 Permit issued 10/30/02.
40 CFR 60, Subpart Kb	Standards of Performance for Storage Vessels for Volatile Organic Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced <b>After</b> July 23, 1984	No		<p>Applies to storage vessels each with storage capacity greater than 75 m<sup>3</sup> (471 bbl) that are used to store volatile organic liquids and for which construction, reconstruction, or modification commenced after 7/23/84.</p> <p>All tanks at the facility are either below the applicable 75 m<sup>3</sup> capacity threshold or store liquids that are exempt due to low vapor pressures (e.g., diesel or fuel oil). For example, as stated by the permittee: one storage tank at the LANL Power Plant is larger than 75 m<sup>3</sup> but stores No.2 fuel oil which has a vapor pressure less than 0.2</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				kPa (which is less than the rule's low threshold of 3.5 kilopascals (kPa)).
40 CFR 60.330 Subpart GG	Stationary Gas Turbines	Yes	TA-3-22-CT-1	<p>Applies to units with a heat input which is greater than the 10 MMBtu/hour threshold and that were installed after the October 3, 1977 applicability date and before the applicability date of February 18, 2005, for Subpart KKKK.</p> <p>Unit TA-3-22-CT-1 (27 MW site / 32 MW max) has a heat input of 92.1 MMBtu/hr site / 109.2 MMBtu/hr max which is greater than the 10 MMBtu/hour threshold. This unit was manufactured in 2003 and installed in January 2005. Regarding TA-3-22-CHP-1, since it will be the same turbine, but is being modified due to increased emissions, it will be subject to NSPS KKKK once Phase 3 of the Power Plant construction project is reached, per NSR 2195B-M3 (see ahead).</p>
40 CFR Part 60 Subpart IIII (Quad-I)	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Yes	RLUOB-GEN-1, 2, and 3; TA-48-GEN-1; TA-55-GEN-1, 2, and 3; and TA-50-GEN-184; TA-55-GEN-474; TA-55-GEN-475; TA-63-GEN-TRU; and TA-3-1404-GEN	<p>(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (3) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.</p> <p><u>Permittee Statement from the application:</u> The diesel engines in the three RLUOB generators noted were manufactured in September 2006 and installed in September 2009. Besides the RLUOB generators listed, the other generators listed fall under this NSPS due to either the manufacturer date or the installation date. All other diesel stationary engines at LANL pre-date this NSPS subpart.</p>
<p><b><u>Units Previously Identified as Subject to IIII (TV Permit P100-R2M1, issued Feb. 3, 2017):</u></b> RLUOB-GEN-1 through RLUOB-GEN-3, TA-48-GEN-1, and TA-55-GEN-1 through TA-55-Gen-3. These units are subject to either Tier 1, Tier 2, Tier 3, or Tier 4 standards. Hence, there are multiple NSPS IIII conditions separating the units based on Tier standards applicability. Emergency CI RICE added since then and subject to IIII are: TA-50-GEN-184; TA-55-GEN-474; TA-55-GEN-475; TA-63-GEN-TRU.</p>				
<p><b><u>Detail Analysis for Emergency Diesel Generator TA-3-1404-GEN:</u></b> This unit was newly added to the facility in NSR 2195B-M3 (issued 7/26/2018) means it was "ordered by the owner or operator" after IIII applicability dates (2005 was a long time ago), but, because IIII also cites manufacture dates and this engine was</p>				

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
<p>manufactured prior to 2006/2007, means it may not be subject to III.</p> <p>But, at 60.4200(a)(4): “The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.” As stated above, this unit meets the definition of commencing construction after July 11, 2005, which would then lead us to:</p> <p>§60.4208(a) “After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.” Meaning this unit is subject to model year 2007 requirements, and paragraph (h) says all of paragraphs (a) to (g) are to be met: (h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.</p> <p>unless, the permittee can certify and state they relocated the unit per:</p> <p>§60.4208(i) “The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.”</p> <p>Hence, it is the permit writer’s interpretation that IIII applies to Unit TA-3-1404-GEN.</p> <p>Diesel generators (labeled in last TV as portable, but not that anymore, as are now stationary): TA-33-G-1P, TA-33-G-2, 3, and 4: 1P is too old for IIII, construction date is 2004 and pre-dates IIII applicable dates. G-2, 3, 4 meet the construction date (these are 8-1-2007) making them subject, but at 4200(a)(2)(i) the manufacture date is older (1999-2003) than the rule’s 4-1-2006 date. So then look at 4200 para (4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005. Go to 4208: (a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines. Meaning these 3 generators installed prior to that date, so G-2, 3,4 are not subject to IIII.</p>				
40 CFR Part 60 Subpart JJJJ (Quad J)	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No		<p>The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of section 60.4230. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.</p> <p>LANL does not have any affected units under this subpart.</p>
40 CFR Part 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines	Yes	Both HRSG portion of TA-3-22-CHP-1 and the turbine itself	<p>Applies to units that have a heat input which is greater than the 10 MMBtu/hour threshold which commenced construction, modification, or reconstruction after the applicability date of February 18, 2005.</p> <p>Turbine will be subject (once Phase 3 of NSR 2195B-M3 is attained) because it will meet the definition of a modification at §60.14 (a) “Except as provided under</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.”</p>
<p><u>KKKK continued review:</u> Turbine emissions (TA-3-22-CHP-1) as permitted in NSR 2195B-M3 will be going up (from Phase 1 to Phase 3) for NOx (tpy +3), VOC (tpy +11) and for each of PM10 and PM2.5 (tpy +25). In addition, the turbine alone is over the 10 MMBtu/hr threshold (27 MW or 92.1 MMBtu/hr) making it subject to KKKK at §60.4305(a) “Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine.” Meaning the turbine heat input alone is compared to the threshold, which is well over the threshold.</p> <p>The new HRSG (heat recovery steam generation) portion of unit TA-3-22-CHP-1 has a heat input equal to 20 MW (68.2 MMBtu/hour), which is greater than the 10 MMBtu/hour threshold. This is based on the total CHP (combined heat and power) heat input (47 MW, 160.4 MMBtu/hr) minus combustion turbine alone input (27 MW, 92.1 MMBtu/hr). The HRSG will be constructed/installed after the applicability date of February 18, 2005.</p>				
NESHAP Subpart A (40 CFR 61)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 61	Applies if any other subpart applies.
40 CFR 61 Subpart C	National Emission Standards for Beryllium	Yes	Units: TA-3-66, TA-3-141, TA-35-213, TA-55-PF4	<p>The provisions of this subpart are applicable to the following stationary sources:</p> <p>(a) Extraction plants, ceramic plants, foundries, incinerators, and propellant plants which process beryllium ore, beryllium, beryllium oxide, beryllium alloys, or beryllium-containing waste.</p> <p>(b) Machine shops which process beryllium, beryllium oxides, or any alloy when such alloy contains more than 5 percent beryllium by weight.</p> <p>LANL houses facilities that contain machine shops which process beryllium, beryllium oxides, or any alloy when such alloy contains more than 5 percent beryllium by weight. Applicable to</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				beryllium operations (§61.30).
40 CFR 61 Subpart H	National Emission Standards for Radionuclides other than Radon from DOE Facilities	Yes	Entire Facility	Certain operations at LANL facilities (owned or operated by the Department of Energy) emit radionuclides other than radon-222 and radon-220 into the air and are thus subject to the provisions of this subpart (§61.90). NMED does not regulate radionuclides (not adopted per 20.2.78.10.B NMAC).
40 CFR 61 Subpart M	National Emission Standard for Asbestos	Yes	Entire Facility	LANL participates in demolition and renovation activities involving asbestos and operates an active asbestos on-site disposal site (§61.145 Standard for demolition and renovation and §61.154 Standard for active waste disposal sites).
40 CFR 61 Subpart Q	National Emission Standards for Radon Emissions from DOE Facilities	Yes	Entire Facility	The provisions of this subpart apply to the design and operation of all storage and disposal facilities for radium-containing material (i.e., byproduct material as defined under section 11e(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 (§61.190). NMED does not regulate radionuclides (not adopted per 20.2.78.10.B NMAC).
MACT Subpart A (40 CFR 63)	General Provisions	Yes	See sources subject to a Subpart in 40 CFR 63	Applies if any other subpart applies.
40 CFR 63 Subpart T	National Emission Standards for Halogenated Solvent Cleaning	Yes	TA-55-DG-1	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 (CAS No. 75-09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1-trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. Wipe cleaning activities, such as using a rag containing halogenated solvent or a spray cleaner containing halogenated solvent are not

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>covered under the provisions of this subpart (§63.460(a)).</p> <p>LANL operates one cold solvent cleaning machine (degreaser) with regulated solvents (trichloroethylene) at Emission Unit TA-55-DG-1, the degreaser.</p>
40 CFR 63 Subpart ZZZZ (Quad-Z)	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	No per US EPA (RICE are subject to non-road engine rules)		<p>A facility is subject to this subpart if they own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.</p> <p><b><u>As Stated by Permittee in Application:</u></b> 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. This generator has been permanently shut down and is no longer on-site. All other stationary diesel engines at LANL are for emergency use only and fall under the exemption for emergency use engines at institutional facilities.</p>
<p><b><u>Permit Writer:</u></b> EPA letter of non-applicability also made it clear the engines need to meet the emergency stationary RICE definition at 40 CFR 63.6675. And EPA said if any information is found to reverse EPA’s determination, the EPA determination would become invalid, and a new determination would be required. Hence, the permit writer wishes to emphasize that LANL is bound to provide documentation that all RICE meet the emergency defined requirements and conditions in MACT ZZZZ. Any operation of emergency RICE other than as defined would be deemed non-compliance with ZZZZ. All RICE at LANL shall meet the exemption as an existing institutional emergency stationary RICE under §63.6585(f)(3).</p> <p>List of known numbered emergency RICE units: RLUOB-GEN-1, 2, and 3; TA-48-GEN-1; TA-55-GEN-1, 2, and 3; and TA-50-GEN-184; TA-55-GEN-474; TA-55-GEN-475; TA-63-GEN-TRU; and TA-3-1404-GEN, and TA-33-G-1P, TA-33-G-2, 3, and 4.</p> <p>MACT ZZZZ is a rather complex rule. The following are additional permit writer notes and observations:</p> <p><b><u>NSPS III relative to ZZZZ:</u></b> The following CI RICE (12 units) are identified as subject to NSPS III and shall meet ZZZZ by complying with NSPS III, per 63.6590(c) “Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart III, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part. (1) A new or reconstructed stationary RICE located at an area source” Applies to the following units: (12 units) RLUOB-GEN-1, 2, and 3; TA-48-GEN-1; TA-55-GEN-1, 2, and 3;</p>				

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
TA-50-GEN-184; TA-55-GEN-474; TA-55-GEN-475; TA-63-GEN-TRU; and TA-3-1404-GEN	TA-3-1404-GEN was recently added in NSR 2195B-M3 and also appears to be subject to NSPS IIII, but then would meet ZZZZ by meeting IIII).			
	<u>Some ZZZZ citations: §63.6585:</u>			
	(f) The emergency stationary RICE listed in paragraphs (f)(1) through (3) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in §63.6675, which includes operating according to the provisions specified in §63.6640(f).			
	(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii).			
	<u>Additional CI RICE not subject to IIII (older than applicability date), Units TA-33-G-1P, TA-33-G-2, 3, and 4:</u>			
	TA-33-G-1P would be defined as existing under ZZZZ, and TA-33-G-2, 3, and 4 would be defined as new under ZZZZ. But these engines are defined as portable and as non-road engines per 40 CFR 89 and 40 CFR 1068.30. Condition A1104.B for TA-33-G-2, 3, and 4 cites the applicability of 40 CFR 89 to these three engines, hence these engines shall meet all non-road engine requirements. Condition A1104.A needs to be corrected to similarly cite 40 CFR 89 non-road requirements. This unit was converted from a stationary engine to a non-road engine in NSR Tech Rev 2195F-R4 (12-12-2013) removing it from ZZZZ applicability and is now subject to 40 CFR 89 and non-road definition of 40 CFR 1068.30. Existing permit condition at A1104.A allows 8 hours/day for TA-33-G-1P and Condition A1104.B for 500 hours/year for TA-33-G-2, 3, and 4.			
	<u>From previous TV P100-R2M1:</u>			
	The facility removed the only remaining stationary RICE (TA-33-G-1) that was subject to the regulation. It was removed under NSR permit 2195F-R4. All other RICE engines at LANL are either non-road engines or emergency generators at an institution and are thus exempt at 63.6585(f)(3) from the regulation. Two emergency generators (Cummins KTA50-G2 at TA-16 and Cummins DFLLC-5554001 at TA-3) can connect to the local power grid to provide power during emergency power outages. These units still fit the definition of emergency generators under ZZZZ at 63.6585(f)(3) which states: Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate or are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) and that do not operate for the purpose specified in §63.6640(f)(4)(ii). 63.6640(f)(2)(ii) allows for emergency demand response for periods declared an Energy Emergency Alert Level 2; 63.6640(f)(2)(iii) allows for operation during voltage deviation; and 63.6640(f)(4)(ii) allows for non-emergency use for 50 hours to supply power as part of a financial arrangement with another entity. The two LANL generators operate only during a power supply failure according to the DOE/County of Los Alamos Electric Energy and Power Coordination Agreement and therefore still meet the definition of emergency generators not subject to this subpart.			
40 CFR 63 Subpart DDDDD (5-Ds)	National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	No		Facility is subject to this subpart if it owns or operates an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP as defined in §63.2 or §63.761 (40 CFR part 63, subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities), except as specified in

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>§63.7491.</p> <p>The LANL facility boilers/heaters are not subject to this rule, as LANL is an area source of HAP (it is not a major source).</p>
<p>40 CFR 63 Subpart CCCCCC (6-Cs)</p>	<p>National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities</p>	<p>Yes</p>	<p>LANL has GDF subject to this rule</p>	<p>§ 63.11111 Am I subject to the requirements in this subpart?  (a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.  <b>(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in §63.11116.</b>  (c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in §63.11117.  (d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in §63.11118.  (e) An affected source shall, upon request by the Administrator, demonstrate that their average monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable.  (f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).  (g) The loading of aviation gasoline storage tanks at airports is not subject to this subpart and the aviation gasoline is not included in the gasoline throughput specified in paragraphs (b) through (e) of this section.</p>
<p><b>Permit Writer Applicability Review:</b> This rule applies to area sources and there are no exemptions identified. In Section 1.6 of LANL’s application, listing and discussing TV insignificant activities, they indicate having fuel storage dispensing of less than 25,000 gallons. LANL also provided a 1-page document (dated 1-9-2018, reviewed 3-6-2019) showing they have trucks delivering gasoline to various tanks around LANL, and LANL further indicates they are below the 25,000-gallon TV Insignificant Activity List Item #8. But the permit writer would like to point out that the 25,000-gallon figure does not relate to any applicability threshold defined within this rule. <b><u>MACT CCCCCC applies to area sources with GDF (gasoline dispensing facilities), with no exemptions identified and LANL is an area source.</u></b> The rule applies to any GDF dispensing less than 10,000 gallons per month §63.11111(b). Hence, any GDF at LANL, even if less than 10,000 gallons per month throughput will be subject. <b><u>Such GDF shall meet the requirements at §63.11116</u></b> which includes basic care to prevent spills and to keep records available upon request. Hence, it is the permit writer’s conclusion that LANL is subject to this rule.</p>				
<p>40 CFR 63 Subpart JJJJJJ (6-Js)</p>	<p>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources</p>	<p>No (boiler oil use limits set to max of 48 hr)</p>		<p>You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in §63.2, except as specified in §63.11195.</p>

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>LANL is an area source of HAP (minor HAP source). Gas-fired boilers would not be subject. See 40 CFR 63.11195(e) and definitions at 40 CFR 63.11237: Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.</p>
<p><b>Boiler oil use limits:</b> Boiler units RLUOB-BHW-1 through 4, and all of the power plant boilers (TA-3-22-1 through 5) do have an oil-burning capability and the permit does allow oil as fuel. Condition A804.B (RLUOB-BHW-1 through 4) and Condition A1304.B (A108.B in NSR 2195B-M3) for TA-3-22-1 through 5) all set limits of operating for no more than 48 hours per calendar year using fuel oil. This limit meets the exemption requirements for the oil sub-category for boilers under MACT 6-J (sub-categories at §63.11200 and defined at §63.11237).</p> <p>§63.11237: <i>Oil subcategory</i> includes any boiler that burns any liquid fuel and is not in either the biomass or coal subcategories. Gas-fired boilers that burn liquid fuel only during periods of gas curtailment, gas supply interruptions, startups, or for periodic testing are not included in this definition. Periodic testing on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.</p>				
<p><b>Permit writer additional comments and observations:</b> Although the current permits (TV and NSR) set limits of 48 hours of operation using fuel oil for the RLUOB boilers (Condition A804.B) and the power plant boilers (Condition A1304.B [A108.B in NSR 2195B-M3]), several other conditions need to be corrected to address contradictions in the existing permits. Emission calculations for oil use for the boilers are based on the 48 hours limit.</p> <p>The contradicting conditions that need to be corrected are as follows: Conditions A804 and A807.B for boilers RLUOB-BHW-1 through 4 will be revised to monitor oil use to stay within 48-hour calendar year limit rather than the current 365-day rolling total. Condition 1307.B for power plant boilers that allows up to 500,000 gal/yr consumption of fuel oil will be revised. That limit is in direct contradiction to 48 hrs per MACT JJJJJ. Boiler units TA-3-22-1, 2, and 3 consume 1303 gal/hr x 48 hrs = 62,544 gal/yr maximum allowed each. The situation is similar with the newer power plant boilers TA-3-22-4 and 5. Since these are less than ½ capacity of units 1, 2, and 3, their hourly fuel consumption should be ½ or less, and at present, they show the same annual consumption figure of 500,000 gal/yr (see Conditions A803.A, A803.B, and A803.C in NSR 2195B-M3, and all three of these conditions will be corrected).</p>				
40 CFR 63 Subpart GGGGG (5-G)	National Emissions Standards for Hazardous Air Pollutants: Site Remediation	No		Remediation projects, such as the Soil Vapor Extraction Units in TA 54 of the Laboratory, are not subject to these requirements since the facility is an area source, and not a major source of HAPs. See 40 CFR 63.77881(a)(3).

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
40 CFR 64	Compliance Assurance Monitoring	No		<p>Applies to units equipped with a control device and the uncontrolled emissions for the unit are above the Title V major source threshold.</p> <p>LANL has taken federally enforceable production limits for the asphalt plant (TA-60-BDM) through the GCP permit (GCP-3-2195G) so that it is not subject to CAM (TV Condition A605.A). Similarly, the data disintegrator (TA-52-11) has an operational throughput limit (limit on tonnage burned) to limit PTE below the 100 tpy applicability limit for uncontrolled emission rates for particulate matter (see TV Condition A1204.A).</p> <p>Within the power plant facility, combustion turbine unit TA-3-22-CT-1 is not subject to CAM because NSPS GG applies to it per §64.2(b)(i). Similarly, for the upgrade turbine (TA-3-22-CHP-1) and its heat recovery steam generator (HRSG) will not be subject to CAM as NSPS KKKK applies to this equipment.</p>
40 CFR 68	Chemical Accident Prevention	No		<p>An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under §68.115 Threshold determination and 68.130 List of substances.</p> <p><u>As stated by LANL in the application:</u> 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.</p>
40 CFR 70	Title V- State Operating Permit Programs	No		Operating Permit Program – is not applicable – New Mexico State has full delegated authority and Title V is administered under 20.2.70 NMAC.
40 CFR 72	Title IV – Acid Rain	No		(a) Each of the following units shall be an affected unit, and any source that includes such a unit shall be an affected source, subject to the requirements of the Acid

Federal Regulation	Title	Applies (Y/N)	Unit(s) or Facility	Comments
				<p>Rain Program: (1) A unit listed in table 1 of §73.10(a) of this chapter.(2) A unit that is listed in table 2 or 3 of §73.10 of this chapter and any other existing utility unit, except a unit under paragraph (b) of this section.</p> <p>The cogeneration unit permitted in NSR 2195B-M3 (turbine and HRSG) is exempt under 72.6(b)(4)(ii) because it does not provide any power to any utility power distribution system for sale.</p>
Title VI – 40 CFR 82 Subparts B, F, H, and I	Protection of Stratospheric Ozone B: Servicing of Motor Vehicle Air Conditioners F: Recycling and Emission Reduction H: Halon Emissions Reduction I: Ban on Refrigeration and Air-Conditioning Appliances Containing HCFCs	Yes	Entire Facility	<p>40 CFR 82 may apply if you:</p> <p><b>(40 CFR 82.1 and 82.100)</b> produce, transform, destroy, import or export a controlled substance or import or export a controlled product;</p> <p><b>(40 CFR 82.30)</b> if you perform service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner;</p> <p><b>(40 CFR 82.80)</b> if you are a department, agency, and instrumentality of the United States subject to Federal procurement requirements;</p> <p>B- LANL maintains motor vehicle air conditioners and is subject to the rule.</p> <p>F - LANL maintains equipment with regulated refrigerants and is subject to the rule.</p> <p>H - LANL maintains equipment with regulated halons and is subject to the rule.</p> <p>I - LANL is subject to the prohibitions on sale or distribution of HCFC containing equipment as specified in the rule.</p>

**NSPS III Emissions Standards**

NSPS 40 CFR 60 Subpart III					
Source	40 CFR 60	NOx g/KW-hr (g/HP-hr)	HC g/KW-hr (g/HP-hr)	CO g/KW-hr (g/HP-hr)	PM g/KW-hr (g/HP-hr)
Emergency Generators	Subpart III Table 1	9.2 (6.9)	1.3 (1.0)	11.4 (8.5)	0.54 (0.4)

RLUOB-GEN-1 thru -3 and			
Emergency Generators TA-55-GEN-3	§4202(a)(2)	See Tier 2 Standards for Rated Power kW>560 in 40 CFR §89.112	
Emergency Generators TA-48-GEN-1	§4202(a)(2)	See Tier 3 Standards for Rated Power 130<kW<225 in 40 CFR §89.112	
Emergency Generators TA-55-GEN-1 and TA-55-GEN-2	§4202(a)(2)	See Tier 2 Standards for Rated Power 19<kW<37 in 40 CFR §89.112	

13.0 **Exempt and/or Insignificant Equipment that do not require monitoring:**

**Title V - INSIGNIFICANT ACTIVITIES** (Dated March 24, 2005) as defined by 20.2.70.7.Q NMAC:

Table as provided by the applicant in Section 1.6 of the application.

Permit writer statement: If any federal rule applies (such as NSPS or MACT), such activity is not TV Insignificant.

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. Emissions from this source category are limited with a voluntary permit limit on the total amount of natural gas use for all boilers and heaters site-wide. See Section 2.3 for more details.
Cooling Towers	1a	Each cooling tower has emission rates less than 1 ton per year (tpy).

Source Category	NMED List Citation	Basis for Designation
Degreasers	1a	LANL operates one permitted degreaser that is subject to 40 CFR 63, Subpart T. 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.

Fuel Storage and Dispensing*	8	Fuel storage and dispensing activities at LANL have a capacity of less than 25,000 gallons.*
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.
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 stationary standby generators and portable generators that meet the definition of insignificant emission units. See Section 2.7 for details.*
Storage Tanks	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, TA-52 and TA-54 do not generate emissions in excess of 1 tpy.
Welding	1a	Site-wide emission from annual welding usage is less than 1 tpy.

\*Permit writer notes: Fuel dispensing, it is the permit writer's interpretation that this activity is not insignificant, as it appears MACT CCCCCC applies (see regulatory section of this document). Activities are not TV Insignificant if any federal rule applies.

Internal combustion engines in table above: LANL had a typo and meant to refer to Section 2.6 of the application (not 2.7).

14.0 **New/Modified/Unique Conditions (Format: Condition#: Explanation):** Since the previous full TV Permit P100-R2M1 (issued February 3, 2017).

- A. Table 102.B, Potential Emissions Tables: Ammonia (a TAP) added as similarly shown in NSR 2195B-M3 permit.
- B. Table 103.A, Applicable Requirements: NSR Permits: 2195B-M3 for the power plant is the most recent NSR being incorporated in this TV renewal. 20.2.33 NMAC was accidentally

- removed in NSR action 2195B-M3 so is being placed back in this TV Renewal. 20.2.34 NMAC is being removed because the boilers are limited to 48 hours burning oil to be excluded from MACT JJJJJ and that limitation also excludes them from being subject to 20.2.34 NMAC. NSPS Dc: Units TA-3-22-4 and TA-3-22-5 have been added (Units were permitted in recent NSR 2195B-M3). NSPS IIII updated to include a few more of the CI engines. NSPS KKKK added for turbine upgrade and HSRG per NSR 2195B-M3. MACT CCCCC (6-C) added as applicable to gasoline dispensing facilities.
- C. Table 103.B, Non-Applicable Requirements: 20.2.3 NMAC and 20.2.34 NMAC added to this table.
  - D. Table 106.A, Facility Allowable Emissions per Source Category: External Combustion PM<sub>2.5</sub> tpy figure (1.9 tpy) corrected to match same figure in Table 802.B. Two rows added for Power Plant Phase 1 and Phase 3 (NSR 2195B-M3) implementation. TSP revised to PM and retained only for the asphalt plant. For the asphalt plant the permittee is intentionally lowering the tpy allowable emission figures (see Table 602.A and notes below for Table 602.A).
  - E. Table 106.B, Facility-Wide Allowable Emissions: TSP removed.
  - F. A107, Facility Allowable SSM: Revised to indicate SSM now permitted with the Power Plant Facility.
  - G. A109.B, Reporting Schedules: TSP changed to PM.
  - H. A114 Reducing Facility Emissions: Previously was a placeholder. New condition added to indicate the permittee shall submit an NSR permit revision to revise NSR 2195F-R4 to reduce the emissions for Unit TA-33-G-1P. The permittee has voluntarily requested to reduce the emissions for this unit in this TV renewal and has provided emissions calculations to demonstrate the reduced emissions. But, the NSR 2195F-R4 permit similarly needs to be revised. 2195F-R4 was issued in 2013 replacing the previous stationary unit with the current portable unit, but at that time the emissions were not revised (not lowered). Hence, the permittee needs to revise NSR 2195F-R4 as well to match their request in this TV renewal. An NSR permit application shall be submitted within 180 days of issuance of this TV Renewal to make the revisions.
  - I. A117.B, Stratospheric Ozone: Correct typo to properly reference 40 CFR 82.
  - J. Table 600.A, Asphalt Sources: Additional information added.
  - K. Table 601.A, Asphalt Controls: TSP changed to PM.
  - L. Table 602.A, Asphalt Emissions: Permittee is intentionally lowering the tpy allowable emission figures in this TV Renewal for the asphalt plant because the higher limits were not necessary.
  - M. A607.F, Asphalt Operations: Change TSP to PM.
  - N. Table 700.A, Beryllium Regulated Sources: Added construction dates. For TA-55-PF4 to properly identify this source covers both machining and foundry.
  - O. Table 800.A, External Combustion Regulated Sources: Table updated to current Department formatting. Information is the same.
  - P. A802.A and Table 802.A, Allowable Annual Emissions: Revised wording to clarify that the combined annual boiler emissions not only includes all units listed in Table 800.A, but all other boilers/heaters at LANL not listed in the permit, but excludes the Power Plant boilers regulated via Section A1300. This change was requested by the permittee. TSP removed and PM<sub>2.5</sub> allowable figure of 1.9 tpy for RLUOB boilers added to Table 802.A. PM<sub>2.5</sub> limits have previously only been established for the RLUOB boilers. PM includes all PM<sub>10</sub> and PM<sub>2.5</sub> which are successive subsets of PM.
  - Q. Table 802.B, Boiler Allowable Emissions: TSP figures removed from this unit specific table. Some figures corrected based on calculations in Section 6. SO<sub>2</sub> pph for oil of 5.8 pph was a typographical error and corrected to 0.58 pph (= 0.6 pph). VOC tpy figures of 1.5 tpy included and total for all boilers of 7.0 tpy VOC included, as from a numerical and scientific

- air quality basis 1.5 tpy and 7.0 tpy cannot be considered negligible figures relative to the other allowable pollutant limits already set for the boilers.
- R. A804, Boiler Operational Limits: Paragraph A slight wording tweak. Paragraph C needed revision to match fuel consumption with the 48-hour limit exemption per MACT 6-J (the previous annual fuel oil consumption figure exceeded the 48-hour limit).
  - S. A805.A, Fuel Sulfur: Added one paragraph to bring the condition up to standard protocol.
  - T. A806.A, B and C, Opacity Conditions: Updated to current Department monitoring protocol language. Same requirements as before. Condition C revised based on consideration that the units can only burn fuel oil for 48 hours per calendar year.
  - U. A807.B, RLUOB Boiler Fuel Oil Use: A revision to clarify 48-hour calendar year limit on fuel oil use. Also make it clear to record pph calculations.
  - V. A807.E, Initial Compliance Test: Condition retained because boiler Unit RLUOB-BHW-4 was still listed as a TBD (to be determined) unit. Clarify/correct this during draft permit review with LANL.
  - W. A807.F, Operational Inspections: Protocol updated to current Department monitoring language.
  - X. Table 1100.A, Internal Combustion Regulated Sources: Updated to include construction dates, to add 4 generator units, and correct a few serial numbers.
  - Y. Table 1102.A, Internal Combustion Allowable Emissions: TSP removed as there are no ambient standards. PM<sub>2.5</sub> was added (inadvertently not included before). PM<sub>2.5</sub> limits were set for TA-33-G-1P in NSR 2195F-R4. Emissions for TA-33-G-1P were reduced (by about 50%) at the request of LANL. This generator is smaller than the previous one that it has replaced so has less emissions. But, emissions in NSR 2195F-R4 need to be revised so a Reducing Facility Emissions Condition A114 was added to this TV renewal.
  - Z. Table 1103.A, Internal Combustion Applicable Requirements: 4 CI generators added to NSPS IIII applicability.
  - AA. A1104.A, Hours of Operation for TA-33-G-1P: Added requirement this unit must be certified to be in compliance with non-road standards in 40 CFR 89.
  - BB. A1104.C, Hours of Operation for Non-NSPS standby generators: New condition to monitor and limit operating hours for all the non-NSPS subject standby generators at LANL to ensure facility-wide internal combustion allowable limits are being met. Have LANL provide a comprehensive list of these units (during permit review).
  - CC. A1106, Opacity: Updated the opacity condition for all the CI RICE to current Department monitoring protocol language used for CI RICE units.
  - DD. A1107, NSPS IIII Requirements: Clarified distinction in IIII conditions according to EPA Tier emissions standards requirements (Tiers I, II, III, or IV) as defined by EPA that the manufacturers are required to meet/certify their engines. Updated some of the language to current Department monitoring protocol. Added new IIII condition for the newly added Tier II subject engines.
  - EE. Table 1200.A, Data Disintegrator Regulated Sources: Added construction date.
  - FF. Table 1201.A, Data Disintegrator Control Equipment: TSP removed.
  - GG. Table 1202.A, Data Disintegrator Emission Limits: TSP removed.
  - HH. A1207.A, Data Disintegrator: Added phrase that mass quantity (not just number of boxes)
  - II. A1207.C, Data Disintegrator: Correct typo from 450 CFR 60 to 40 CFR 60, and change TSP to PM.
  - JJ. Sections 1300 for Power Plant renumbered from previous TV and follow existing NSR 2195B-M3 section arrangement (this is intended for making an easier to comparison of the TV permit to the NSR permit for the Power Plant).
  - KK. Table 1300.A, Applicable Requirements: NSPS IIII added for the new CI emergency RICE.

- LL. Tables 1301.A and 1301.B, Regulated Sources for Phases 1 and 3 with some updated information. LANL provided some updated information on boilers TA-3-22-4 and -5; as they will not be Cleaver Brooks make but now will be Victory Energy make. Capacity and emissions will remain the same.
- MM. Tables 1303.A and 1303.B, Allowable Emissions: Reformatted to fit standard Department table format. TSP removed as no ambient air standards.
- NN. A1303.B to F: B Condition NO<sub>x</sub> limits per 20.2.33 NMAC retained from previous TV but reference to 20.2.34 removed. C to F Conditions for NSPS GG and KKKK specific conditions corrected and revised. Previous permit was confounding GG with KKKK for the turbine. And GG and KKKK citations corrected due to typos in previous permit.
- OO. A1304 and Table 1304.A, SSM Emissions: Are new to the TV and carried over from NSR 2195B-M3. Minor wording updates to A1304.B and C.
- PP. A1305.B, MACT JJJJJ: Word “calendar” added before “year” to meet MACT rule.
- QQ. A1307.A, Opacity, Natural Gas: Revised to current Department monitoring protocol.
- RR. A1307.B, Opacity, Fuel Oil: Condition revised to current Department protocol. This condition was accidentally deleted from NSR 2195B-M3, is now being retained from NSR 2195B-M2 and retained from previous TV permit as the boiler units still burn oil.
- SS. A1308, Source Construction Scenarios: Some wording updates for clarity.
- TT. A1309.F, NSPS GG: Revised slightly to remove reference to TA-2-22-CHP-1, because by the time the turbine is upgraded from CT to CHP, CHP will be subject to NSPS KKKK.
- UU. A1309.M, NSPS KKKK: Clarified to state the turbine itself, TA-3-22-CHP-1 is also subject to the rule and the sections containing the standards are cited.
- VV. A1310.A, B, and C, Fuel Usage Boilers: Revised to state the boilers shall not operate more than 48 hours per calendar year on fuel oil. This requirement is to meet the MACT JJJJJ exemption.
- WW. A1311.A, NSPS IIII: New condition to address new emergency generator Unit TA-3-1404-GEN that has been added to the Power Plant source category.
- XX. Section 1400 on Open Burning updated to state “Open and Prescribed Burning.” This is make it clear that 20.2.65 NMAC that covers prescribed burning is also applicable.
- YY. A1500, Evaporative Sprayers Regulated Sources: Updated to include new sprayer TA-60-EVAP-6 from TV Minor Modification P100-R2M4. Plus, some other informational updates on other sprayers.
- ZZ. A1502, Evaporative Sprayers Emission Limits: Updated per TV Minor Modification P100-R2M4.
- AAA. A1507.A and B, Evaporative Sprayers Operations: Updated per TV Minor Modification P100-R2M4.
- BBB. A1600.A, MACT CCCCC, Gasoline Dispensing Facilities: New condition to address the gasoline dispensing tanks at LANL. Applies to area sources of HAP such as LANL. (see about getting a unit list from LANL during permit review).
- CCC.

**15.0 For Title V action: Cross Reference Table (as is appropriate) between NSR Permit(s): NSR 2195B-M3 is the primary NSR action that has occurred since the last TV Renewal, but all of LANL’s NSR permits are: 632, 634-M2, 1081-M1, 1081-M1R1, 1081-M1R3, 1081-M1R5, 1081-M1R6, 2195B-M3, 2195F-R4, GCP-3-2195G, 2195H, 2195N-R2 and 2195P-R2; and TV Permit P100-R3. NSR permit conditions cross referenced to the TV permit are federally enforceable conditions, and therefore brought forward into the TV permit:**

See Section 14 above for details on revisions. This is a basic summary table only.

<b>Changed by TV*</b>	<b>TV Condition #</b>	<b>NSR Section #</b>
	A100 Introduction	A100 Introduction
	A101 Permit Duration	A101 Permit Duration
	A102 Facility Description	A102 Facility Description
	Table 102.A Total Potential Emissions	Table 102.A Total Potential Emissions
X	A103 Facility: Applicable Regulations	A103 Facility: Applicable Regulations
	A104 Facility: Regulated Sources	A104 Facility: Regulated Sources
	A105 Facility: Control Equipment	A105 Facility: Control Equipment
X	A106 Facility: Allowable Emissions	A106 Facility: Allowable Emissions
	A107 Facility: Allowable SSM	A107 Facility: Allowable SSM
	A108 Facility: Hours of Operations	A108 Facility: Hours of Operations
X	A109 Facility: Reporting Schedules NR for NSR	A109 Facility: Reporting Schedules
	A110 Facility: Fuel Sulfur Requirements	A110 Facility: Fuel Sulfur Requirements
	A111 Facility: Opacity	A111 Facility: Opacity
	A112 Alternative Operating Scenario	
	A113 Radionuclide NESHAP	
	A114 Asbestos NESHAP	
	A115 Stratospheric Ozone	
X	A600 Asphalt	Asphalt
	A700 Beryllium	Beryllium
X	A800 External Combustion	External Combustion
	A900 Chemical Usage	Chemical Usage
	A1000 Degreasers	Degreasers
X	A1100 Internal Combustion	Internal Combustion
	A1200 Data Disintegrator	Data Disintegrator
X	A1300 TA-3 Power Plant	TA-3 Power Plant
	A1400 Open Burning	Open Burning
	A1500 Evaporative Sprayers	Evaporative Sprayers
X	A1600 Miscellaneous Equipment	N/A
X	<b>Part B General Conditions, entire Section updated</b>	<b>Part B General Conditions</b>

16.0 **Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions.**

- A. TV Minor Modification P100-R2M4 evaporative sprayer revisions were carried forward into this Renewal action.
- B. Primary NSR action incorporated into this renewal was for the Power Plant NSR 2195B-M3.
- C. Power Plant (Section A1300) boiler makes for TA-3-22-4 and -5 have been revised from Cleaver Brooks to Victory Energy Operations as the manufacturer. Unit capacities and emissions remain unchanged.
- D. Numerous conditions have been revised and updated to current Department monitoring

- protocol language.
- E. Section 1300 on TA-Power Plant follows the same condition organization format as seen in the most recent NSR for Power Plant 2195B-M3, which follows standard Department permit organization. The NSR organization was maintained for easy comparison of TV to NSR for the Power Plant.
  - F.
  - G. Notes Below: Carried forward from P100-R2M1 issued February 3, 2017.**
  - H. There are no NSPS (40 CFR 60), NESHAPs (40 CFR 61), or MACTs (40 CFR 63) that apply to the evaporative sprayers.
  - I. Hazardous Air Pollutants (HAPs) from the water that is evaporated with the sprayers are regulated under the existing facility-wide (Laboratory Wide) emissions cap.
  - J. New Mexico Toxic Air Pollutants (NM TAPs) have been detected in the basin water that is being evaporated, but water sampling in 2015 showed that the concentrations were less than the TAP air quality permitting thresholds located in Tables A and B found at 20.2.72.502 NMAC of the Construction Permit Regulation. Fluoride is 13% of the threshold and all other TAPs were at 1% of the threshold. See chart following Table 2-P of the application.
  - K. The HAP and NM TAP emissions were calculated from analyses of the water in the basins conducted in both 2012 and 2015 for the LANL groundwater permit and/or shipment of water off-site. The concentrations in the water analyses were converted to emissions in pounds per hour assuming that all of the chemicals within the evaporating water was released into the air. All calculations assumed that 42.5% of the water in the spray evaporated: this value is the midpoint of the range in the manufacturer's specifications and is higher than the measured evaporation rate at the basins of 34%. The methods used to determine the concentrations in the water were: Gas Chromatograph/Mass Spectrometer method SW-846:8260B for Volatile Organic Compounds (VOC); Gas Chromatograph/Mass Spectrometer method SW846 3510C/8270D for Semivolatile Organic Compounds (SVOCs); methods SW846 3005A/6010C, SW846 3005A/6020A, EPA 245.2 1974 and SM:A2340B for metals; method: EPA 350.1 for ammonia nitrogen; and method EPA 335.4 for cyanide. The permit contains a condition (A1507.A) that requires submission of a new water analysis form the basins to AQB every two years so that AQB can continue to verify the HAP and NMTAP emissions remain below reporting criteria.
  - L. Particulate matter emissions in the form of TSP and PM10 from evaporation of the Total Dissolved Solids (TDS) in the water are fugitive emissions and therefore do require reporting in emissions inventory. However, PM emissions from the new sprayers are lower than PM emissions from the previous sprayer which has since been shut down and decommissioned.
  - M. Comparison of water concentrations of TAPs and HAPs from 2012 and 2015 showed consistency in the types of analytes detected and their concentrations to support and require sampling of the basin water every other year (see application, calculation worksheet, and email from Bill Blankenship 8/16/16).
  - N.