Risk Reduction & Environmental Stewardship Division
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Date: January 28, 2003
Refer to: RRES-MAQ:03-021

Mr. Ned Jerabek
Air Quality Bureau
New Mexico Environment Department
2048 Galisteo
Santa Fe, NM 87505

Dear Mr. Jerabek:

On November 27, 2002, Los Alamos National Laboratory (LANL) submitted an updated Operating Permit application. Since that submittal, LANL has identified some corrections and omissions. Enclosed are three (3) copies of replacement pages for LANL's operating permit application. Explanation of the replacement pages follows.

- Section 3.2 **Asphalt Production** contains a typographical error in subsection 3.2.6 *Applicable Requirements* in the regulatory citation for 20.2.11.109 NMAC for the Barber-Greene Asphalt Plant. Please replace page 3-12.

- Section 3.10 **Power Plant** contains a typographical error in subsection 3.10.4 *Emissions* in the reference to AP-42 for the natural gas emission factors. Please replace page 3-64.

- Section 3.14 **Storage Tanks** was updated to include a liquid asphalt emulsion storage tank that was inadvertently omitted in the Operating Permit application. The tank was included in the application for a general permit, under 20.2.72 NMAC, submitted to NMED on September 26, 2002. The general construction permit was issued on October 29, 2002. Please replace pages 3-83 through 3-88. In addition, replace pages 4, 5, 15, 20, and 27 of the permit application forms.

- Section 4.1 **Compliance Status with Applicable Requirements**, Subsection 4.1.5 *20.2.60 NMAC - Open Burning* was corrected to clarify a generalization made in the application regarding insignificant activities. Please replace page 4-52.

These corrections are also being submitted to EPA Region 6. The application posted on our website (http://www.lanl.gov/orgs/rres/maq/opPermitLANL.htm) has also been updated. If you have any questions concerning this submittal, please contact Jackie Hurtle (665-4380) at LANL's Meteorology and Air Quality Group (RRES-MAQ), permitting section.

Sincerely,

Original signed by:

Scott Miller
Deputy Group Leader
RRES-MAQ

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RRES-MAQ Operating Permit Project File
RRES-MAQ File

efficiencies respectively.

3.2.6. Applicable Requirements

20.2.1l NMAC sets maximum particulate matter emission rates in pounds per hour. In addition, the regulation requires the existence of a fugitive dust control system such that all particulate emissions are limited to the stack outlet. The maximum asphalt production rate of the Barber-Greene plant at TA-3-73 is 60 tons per hour (l20,000 pounds per hour). By interpolation, the limit from 20.2.1l NMAC is 33.8 pounds per hour of particulate matter emitted from the stack. Based on a source test performed on August 25, l 993, provided in Appendix C, the particulate matter emission rate at maximum capacity is 4 pounds per hour, well below the 33.8 pound per hour limit in 20.2.1l NMAC. The BDM Engineering asphalt plant has a maximum production rate of 80 tons per hour (160,000 pounds per hour). This production rate corresponds to a 35.4 pounds per hour emission limit for particulate matter. Manufacturer's data indicates that the controlled hourly emissions are 1.44 pounds per hour. A source test will be performed to demonstrate compliance. Table 3.2-3 summarizes the applicable requirements for asphalt production. The proposed production limit of 13,000 tons per year listed in the table is a combined limit for both asphalt plants.

Table 3.2-3. Applicable Requirements for Asphalt Plants

Source Category	Applicable Requirement
Barber-Greene Asphalt Plant	***Operating Requirements:*** • Emission limit of 33.8 pounds per hour of particulate matter. (20.2.11.107(A)(6)-(7) NMAC) • The asphalt process equipment shall not operate without a fugitive dust control system to limit particulate emissions to the stack outlet. (20.2.11.109 NMAC) • Production shall not exceed 13,000 tons per year, 12-month rolling average. (LANL proposed condition)
BDM Engineering Asphalt Plant	***Operating Requirements:*** • Emission limit of 35.4 pounds per hour of particulate matter. (20.2.11.107(A)(6)-(7) NMAC) • Production shall not exceed 13,000 tons per year, 12-month rolling average. (LANL proposed condition) • Particulate matter (PM) emissions released to the atmosphere from the baghouse, dryer, or mixer shall not exceed concentrations of 0.04 grains/dry standard cubic foot of particulate matter and shall not exhibit 20 percent opacity or greater. (40 CFR §60.92 and GCP-3-2195G III.H.1)

The emission estimates for criteria pollutants shown in Table 3.10-1 are the allowable emission rates in the FGR construction permit.

Table 3.10-1. Criteria Pollutant Emission Estimates for the TA-3 Power Plant

Unit No.	TSP[(a)] (lb/hr)		PM_{10}[(a)] (lb/hr)		NO_x[(a)] (lb/hr)		CO[(a)] (lb/hr)		VOC[(a)] (lb/hr)		SO_2[(a)] (lb/hr)	
	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil	Gas	Oil
B-1	1.4	2.7	1.4	2.7	9.0	9.9	7.4	6.8	1.0	0.3	2.6	68.7
B-2	1.4	2.7	1.4	2.7	9.0	9.9	7.4	6.8	1.0	0.3	2.6	68.7
B-3	1.4	2.7	1.4	2.7	9.9[(b)]	9.9	7.4	6.8	1.0	0.3	2.6	68.7
Total (ton/yr)	**15.7**		**15.7**		**99.6**		**81.3**		**11.1**		**36.9**	

(a) The allowable emissions estimates for the FGR construction permit were calculated using a heat value of 138,500 Btu/gallon of diesel, a derated capacity of 189.5 Btu/hr, and a sulfur content of 0.34% for diesel.
(b) Revised limit from technical permit revision, November 2002.

The emission factors that were used in the FGR permit application are shown in Table 3.10-2. Natural gas emission factors are from AP-42, 7/98, Section 1.4, Natural Gas Combustion, Tables 1.4-2 through 1.4-4 except for NO_x and CO. The NO_x emission factor was based on the result of a 1995 source test at the TA-3 plant. The CO emission factor was based on the 1995 version of Section 1.4 of AP-42 because this value was closer to source test results at TA-3 than the 1998 revised value in Section 1.4. Fuel oil emission factors are from AP-42, 9/98, Section 1.3, Fuel Oil Combustion, Tables 1.3-1 and 1.3-3. The SO_2 emission factor is the sum of the AP-42 SO_2 and SO_3 emission factors using a sulfur content of 0.34%. LANL estimated total SO_2 emissions to be 13.8 tons per year but the NMED established an allowable limit of 36.9 tons per year in the final permit.

Table 3.10-2. Criteria Pollutant Emission Factors Used in the FGR Permit

Fuel	TSP/PM_{10}	NO_x	CO	VOC	SO_2	HAP
Natural gas[(a)] ($lb/10^6$ ft^3)	7.6	163[(b)]	40[(c)]	5.5	0.6	1.89
Distillate oil[(d)] ($lb/10^3$ gal)	2.0	24	5	0.2	50.2[(e)]	6.11E-02[(f)]

(a) Emission factors, unless otherwise indicated are from AP-42, 7/98, Section 1.4, Natural Gas Combustion, Tables 1.4-2, 1.4-3 and 1.4-4.
(b) Based on source test data in Appendix D from 1995.
(c) AP-42, 1/95, Section 1.4, Natural Gas Combustion, Table 1.4-2.
(d) AP-42, 9/98, Section 1.3, Fuel Oil Combustion, Tables 1.3-1, 1.3-2, and 1.3-3.
(e) The SO_2 emission factor is the sum of the AP-42 SO_2 and SO_3 emission factors using a sulfur content of 0.34%. LANL estimated total SO_2 emissions to be 13.8 tons per year but NMED established an allowable limit of 36.9 tons per year in the final permit.
(f) Heating value of 137,000 Btu/gal used in emission factor conversions.

3.14 Storage Tanks

3.14.1. General Description of Source Category

LANL maintains and operates underground and aboveground storage tanks that are located throughout the Laboratory site. All of the tanks at LANL are fixed-roof vertical or horizontal tanks. These tanks store gasoline, diesel fuel oil (No. 2), mineral oil, dielectric oil, scintillation oil, and asphalt emulsion. All of the storage tanks at LANL have been evaluated for applicability under NMED AQB List of Insignificant Activities dated September 29, 1995 and also have been evaluated to determine the applicability of the New Source Performance Standards (NSPS) contained within 40 CFR 60, Subparts K, Ka, and Kb.

The 150,000 gallon No. 2 Fuel Oil tank at TA-3-26 is a grandfathered source since it was installed in 1950. Furthermore, it would fall under insignificant activity #1(a) because emissions are below 1 ton/yr (<0.03 ton/yr). There are several hundred storage tanks at LANL that have tank capacities less than 500 gallons. Since No. 2 fuel oil, mineral oil, and dielectric oil have vapor pressures below 10 millimeters of mercury (mm Hg), storage and handling of these materials in quantities less than 500 gallons is defined as insignificant activity #5. All remaining tanks not identified in this section, or exempted under insignificant activity #5, have been included under insignificant activity #1(a) because emissions will not exceed 1 ton per year. The storage tanks that qualify as insignificant emission units are not discussed further in this section.

Tanks that are subject to the provisions of 40 CFR 60 do not qualify as insignificant emission units and must be included in the permit application. The applicability criteria of the standards under 40 CFR 60, Subparts K, Ka, and Kb are summarized in Table 3.14-1.

Table 3.14-1. 40 CFR 60 Subparts K, Ka, and Kb Storage Vessel Applicability Criteria

NSPS	Tank Size (gallons)	Constructed, Reconstructed or Modified Dates	Liquid Stored
Subpart K	> 65,000	Between June 12, 1973 and May 18, 1978	Petroleum Liquids (except No.2-6 fuel oils, diesel oils, and gas turbine oils).
Subpart K	40,000 – 65,000	Between March 9, 1974 and May 18, 1978	Petroleum Liquids (except No.2-6 fuel oils, diesel oils, and gas turbine oils).
Subpart Ka	> 40,000	Between May 19, 1978 and July 22, 1984	Petroleum Liquids (except No.2-6 fuel oils, diesel oils, and gas turbine oils).
Subpart Kb	> 10,500	July 24, 1984 to Present	Volatile Organic Liquids (except gasoline at service stations and bulk plants).

There are no tanks at the Laboratory that are subject to Subparts K and Ka because LANL tanks of this size were either constructed before the effective date of the regulation or the tanks store materials that do not fall under the applicable criteria. However, there are 16 storage tanks that currently fall under Subpart Kb. The tanks that are subject to 40 CFR 60 Subpart Kb are listed in Table 3.14-2. This table shows tank location, installation date, capacity, dimensions, and type of liquid stored.

Table 3.14-2. Non-Exempt Aboveground Storage Tanks Subject to 40 CFR 60 Subpart Kb

Location	Date Installed	Capacity (gallons)	Diameter (ft)	Length (ft)	Liquid Stored
TA-15-435	1990	12,000	12	15	Mineral Oil
TA-15-436	1990	12,000	12	15	Mineral Oil
TA-36-141	1986	24,500	10	41.5	Dielectric Oil
TA-36-142	1986	24,500	10	41.5	Dielectric Oil
TA-53-640	1992	60,000	22.33	22.33	Mineral Oil
TA-53-1058	1989	20,000	11.33	37	Scintillation Oil
TA-53-1071-C	1992	12,000	10	20.83	Scintillation Oil
TA-53-1071-A	1992	20,000	11	28.33	Scintillation Oil
TA-53-1071-B	1992	20,000	11	28.33	Scintillation Oil
TA-15-461	1998	12,000	12	15	Mineral Oil
TA-15-462	1998	12,000	12	15	Mineral Oil
TA-15-473	1997	21,000	10	36.5	Mineral Oil
TA-15-474	1997	21,000	10	36.5	Mineral Oil
TA-35-197	1999	40,000	12.5	49	Dielectric Oil
TA-3-779	1999	228,000	35	31.8	No. 2 Fuel Oil (Diesel)
TA-60-BDM-TK-1	2002	16,449	10	28	Asphalt Emulsion

(a) Scintillation oil is mineral oil mixed with a scintillating compound (butyl-PBD)

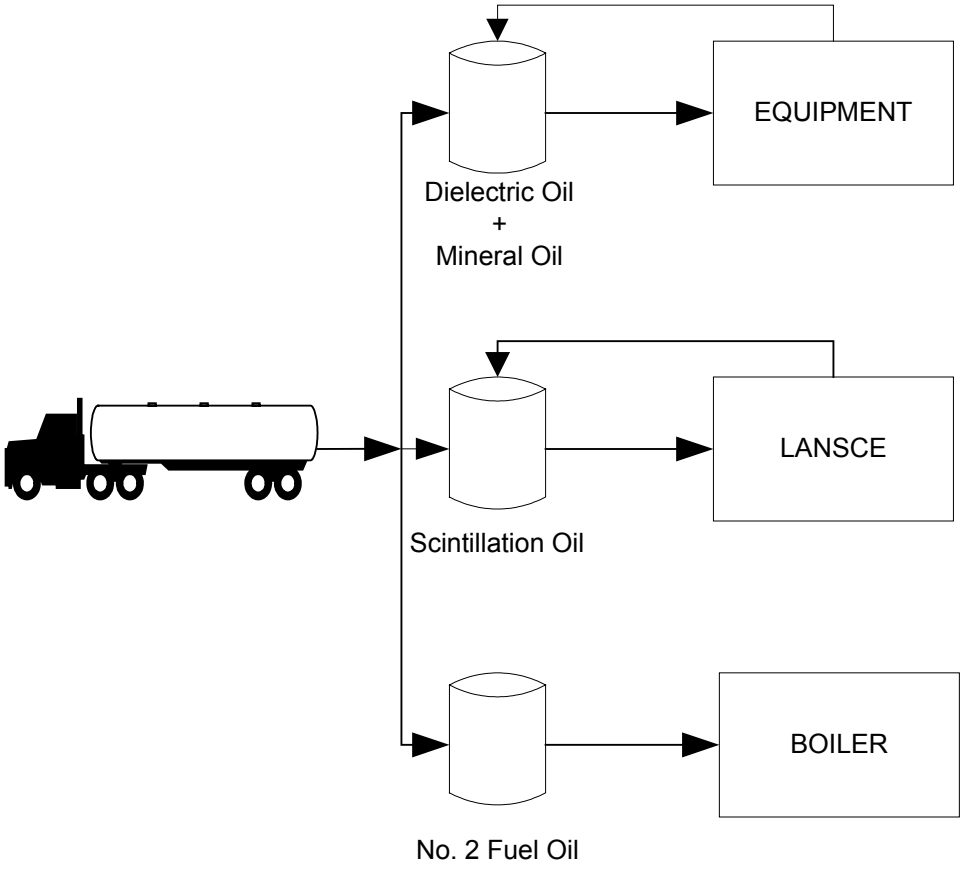
3.14.2. Operating Schedule

Each of the listed tanks shown in Table 3-14.2 is in operation year-round. The tanks containing mineral oil, dielectric oil, and scintillation oil are expected to have approximately one turn over per year. The No. 2 fuel oil tank at TA-3-779 may have up to 2 tank turnovers per year based on allowable annual fuel use for the power plant. The asphalt emulsion tank may have up to 12 tank turnovers per year based on allowable annual asphalt production.

3.14.3. Process Flow Diagram

A general process flow diagram for storage tanks is provided in Figure 3.14-1.

Figure 3.14-1. Process Flow Diagram for Storage Tanks



3.14.4. Emissions

Since mineral oil and dielectric oil have extremely low vapor pressures (<0.01 mm Hg) and because the turnover rate for these tanks is expected to be less than one exchange per year, the emissions from these storage tanks are insignificant. Furthermore, scintillation oil is assumed to have the same vapor pressure as mineral oil since scintillation oil is mineral oil with the addition of butyl-PBD, an organic scintillating compound (powder) that enhances the production of scintillation light in fluid used for particle identification and tracking.

Emissions were estimated from the No.2 fuel oil tank (TA-3-779) using the EPA

approved TANKS Program (Version 4.0). The calculations performed with this program are based on equations presented in AP-42 Section 7.1, Organic Liquid Storage Tanks, dated September 1997. Based on this analysis and conservative input parameters such as 2 tank turnovers per year, emissions from this No. 2 fuel oil tank are very small, approximately 0.03 tons/yr. Based on this conservative estimate, the remaining mineral, dielectric, and scintillation oil tanks listed in Table 3.14-2 are expected to have much smaller emissions when compared to the No.2 fuel oil tank at TA-3. Emissions from the asphalt emulsion tank were also estimated using the TANKS Program and conservative input parameters such as 12 tank turnovers per year. Emissions from the asphalt emulsion tank are approximately 0.37 tons/yr.

3.14.5. Emissions Control Equipment

Under Subpart Kb Section 60.112b, the requirements for installing control equipment is based on design capacity of storage tank and vapor pressure of the *volatile organic liquid*. None of the tanks listed in Table 3.14-2 meet the criteria of 60.112b, for when control equipment is required. No emissions control equipment is required or present on any of LANL's storage tanks.

3.14.6. Applicable Requirements

Applicable operating requirements for tanks that fall under 40 CFR 60 Subpart Kb are dependent on the installation of control equipment. Since the vapor pressure of the materials stored in these storage vessels is low, there are no requirements for the installation of control equipment. Therefore, at this time there are no applicable operating requirements for the storage tanks at LANL. See Table 3.14-3.

Table 3.14-3. Applicable Requirements for Storage Tanks

Source Category	Applicable Requirements
Storage Tanks	***Operating Requirements:*** • There are no operating requirements.

3.14.7. Proposed Monitoring, Recordkeeping, and Reporting

Based on the low volatility of the contents stored (<10 mmHg), these tanks would

normally be considered as insignificant emission units. However, the tanks with capacities greater than or equal to 40 m^3 (>10,500 gallons) with contents considered to be *volatile organic liquids* are subject to 40 CFR 60 Subpart Kb. Under this Subpart, the only monitoring, recordkeeping, or reporting requirements which apply to the tanks listed in Table 3.14-2 are those listed in Section 60.116b (b). This section specifies that records be kept showing the tank dimensions and capacity. LANL will also maintain records of the vapor pressure of the *volatile organic liquid* stored in tanks greater than or equal to 75 m^3 (19,813 gallons) to demonstrate that the requirements of 60.112b do not apply. Table 3.14-4 summarizes applicable monitoring, recordkeeping, and reporting for the tanks listed in Table 3.14-2.

Table 3.14-4. Proposed Monitoring, Recordkeeping, and Reporting Requirements for Storage Tanks

Source Category	Monitoring, Recordkeeping, and Reporting
Subpart Kb Storage Tanks	***Monitoring/Recordkeeping****:* • Records of tank dimensions and capacity must be maintained. (40 CFR 60.116b (a)-(b)) • Maintain records of the vapor pressure of the material stored. (LANL proposed condition) ***Reporting:*** • Report criteria pollutant and HAP emissions on a semiannual basis for those sources that do not qualify as an insignificant emission unit. (20.2.73.300 NMAC for criteria pollutants and LANL proposed condition for HAPs and semiannual basis) • Submit semiannual report of any required monitoring within 45 days from the end of each reporting period. The reporting periods are January to June and July to December. (20.2.70.302(E)(1) NMAC)

3.15 Emissions Summary

Table 3.15-1 presents annual emission estimates for each emission unit and source category described in Chapter 3. These emission estimates are provided to demonstrate that the facility-wide allowable emission limits are feasible. The proposed facility-wide allowable emission limits are described in Chapter 2. There are no regulatory requirements for annual emission limits for most of the individual sources or source categories. Therefore, LANL proposes only facility-wide annual emission limits, except for those sources that have allowable emission limits already established in construction permits.

Table 3.15-1. Chapter 3 Emissions Summary (ton/year)

Source Category	NO_x	SO_x	CO	VOC	PM	PM_{10}	HAP
Air Curtain Destructors[a]	38.2	2.0	23.7	61.3	32.4	24.4	5.6
Asphalt Production[b]	0.2	0.0	2.6	0.1	0.5	0.5	0.1
Beryllium Machining[c]	—	—	—	—	1.09E-05	1.09E-05	7.60E-06
Small Boilers/Heaters	37.2	0.3	31.9	2.4	3.3	3.3	0.8
Carpenter Shops	—	—	—	—	5.9	5.9	—
Chemical Use[d]	—	—	—	30	—	—	13
Degreasers[d]	—	—	—	0.1	—	—	0.1
Internal Combustion	49.1	5.2	22.0	2.0	2.2	2.2	0.04
Paper Shredder	—	—	—	—	13.0	13.0	—
Power Plant (TA-3)	99.6	36.9	81.3	11.1	15.7	15.7	3.8
Remediation[e]	—	—	—	—	—	—	0.5
Rock Crusher	6.4	0.4	1.4	0.5	1.0	0.7	0.01
Steam Plant (TA-21)	3.1	0.3	2.5	0.2	0.2	0.2	0.1
Storage Tanks[f]	—	—	—	0.8	—	—	0.4
Total	**234**	**45**	**165**	**108**	**74**	**66**	**24**
Total (Without Air Curtain Destructors)	**196**	**43**	**142**	**47**	**42**	**41**	**19**

(a) The air curtain destructors began operating at LANL in September 2001 as part of fire recovery efforts. They are scheduled to be removed by October 2003 and will not be included in LANL's Title V permit.
(b) Controlled emissions from the Barber Greene Plant.
(c) Emissions from permitted activities. PM and PM_{10} include aluminum.
(d) "Projected" emissions estimated to be approximately double the actual emissions from most recent years.
(e) Only HAP emissions have been projected for future projects.
(f) Worst case emissions were calculated for one tank. The estimate was projected for all of the tanks listed in Table 3.14-2. All of the tanks contain and emit organics. Only the diesel tanks generate HAP emissions.

SECTION 3A - LIQUID STORAGE TANKS - MATERIAL DATA [30]: (Paragraphs 5 and 6 of Subsection D of 20.2.70.300 NMAC)
(Complete asterisk ***** columns only if the tank has an applicable requirement or if necessary to calculate emissions)

(Use additional sheets if necessary)

Tank No. [31]	Liquid Stored [32]	Liquid Composition [33]	* Liquid Density (lb/gal)	* Vapor Molecular Weight (lb/lb-mole)	* Average Storage Temp., T_{av} (ºF)	* True Vapor Pressure at T_{av} (psia)	* Maximum Storage Temp., T_{max} (ºF)	* True Vapor Pressure at T_{max} (psia)
TA-15-435	Mineral Oil	100% Paraffinic Mineral Oil	7.16	Varies	59	<0.0002	71	<0.0002
TA-15-436	Mineral Oil	100% Paraffinic Mineral Oil	7.16	Varies	59	<0.0002	71	<0.0002
TA-15-461	Mineral Oil	100% Paraffinic Mineral Oil	7.16	Varies	59	<0.0002	71	<0.0002
TA-15-462	Mineral Oil	100% Paraffinic Mineral Oil	7.16	Varies	59	<0.0002	71	<0.0002
TA-15-473	Mineral Oil	100% Paraffinic Mineral Oil	7.16	Varies	59	<0.0002	71	<0.0002
TA-15-474	Mineral Oil	100% Paraffinic Mineral Oil	7.16	Varies	59	<0.0002	71	<0.0002
TA-35-197	Dielectric Oil	100% Petroleum Hydrocarbons	7.3	N/A	59	<0.001	71	<0.001
TA-36-141	Dielectric Oil	100% Petroleum Hydrocarbons	7.3	N/A	59	<0.001	71	<0.001
TA-36-142	Dielectric Oil	100% Petroleum Hydrocarbons	7.3	N/A	59	<0.001	71	<0.001
TA-53-640	Mineral Oil	100% Paraffinic Mineral Oil	7.16	Varies	59	<0.0002	71	<0.0002
TA-53-1058	Scintillation Oil	Mixture of: Paraffinic Mineral Oil and butyl-PBD	7.16	Varies	59	<0.0002	71	<0.0002
TA-53-1071-C	Scintillation Oil	Mixture of: Paraffinic Mineral Oil and butyl-PBD	7.16	Varies	59	<0.0002	71	<0.0002
TA-53-1071-A	Scintillation Oil	Mixture of: Paraffinic Mineral Oil and butyl-PBD	7.16	Varies	59	<0.0002	71	<0.0002
TA-53-1071-B	Scintillation Oil	Mixture of: Paraffinic Mineral Oil and butyl-PBD	7.16	Varies	59	<0.0002	71	<0.0002
TA-60-BDM-TK-1	Asphalt Emulsion	Residual product from petroleum crude oil vacuum distillation	9	194[(k)]	280	0.13[(k)]	300	0.21[(k)]
TA-3-779	No. 2 Fuel Oil	Diesel	7.39	130	59	<0.02	71	<0.02

SECTION 3B - LIQUID STORAGE TANKS - TANK DATA: (Paragraphs 5 and 6 Subsection D of 20.2.70.300 NMAC)
(Complete asterisk * columns only if the tank has an applicable requirement or if necessary to calculate emissions)

(Use additional sheets if necessary)

Tank No. [34]	Date Installed/ Modified[35]	Capacity (gal)	* Tank Diameter (ft)	* Roof Type [36]	* Seal Type[37]	* Vapor Space Height (ft) [38]	* Roof/ Shell Color [39]	* Paint Cond-ition [40]	* Annual Throughput (gal/yr) [41]	* Turnovers per Year [42]
TA-15-435	1990	12000	12	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-15-436	1990	12000	12	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-15-461	1998	12000	12	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-15-462	1998	12000	12	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-15-473	1997	21000	10	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-15-474	1997	21000	10	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-35-197	1999	40000	12	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-36-141	1986	24500	10	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-36-142	1986	24500	10	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-53-640	1992	60000	22	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-53-1058	1989	20000	11	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-53-1071-C	1992	12000	10	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-53-1071-A	1992	20000	11	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-53-1071-B	1992	20000	11	FX	N/A	N/A	N/A	N/A	N/A	N/A
TA-60-BDM-TK-1	2003	16449	10	FX	N/A	N/A	Aluminum/ Specular	Good	200,000	12
TA-3-779	1999	228,000	35	FX	N/A	6.5	Gray/Light	Good	500,000	2.44

SECTION 6 - AIR POLLUTION UNITS and CONTROL EQUIPMENT DATA [122]: (Paragraphs 5.e and 7.a of Subsection D of 20.2.70.300 NMAC)
(List all Air pollution units of plant, including the units listed in Sections 3 thru 5)

(Continued)

Emission Unit No.[123]	Process or Operation [124]	Is Air Pollution Control Equipment Installed (Yes/No) [125]	Air Pollution Control Equipment No.[126]	AIR POLLUTION CONTROL EQUIPMENT DATA		AIR POLLUTION CONTROL EQUIPMENT EFFICIENCY DATA		Applicable Requirements for this Process and/or Control [127]
				Equipment Type [128]	Manufacturer and Model No. [129]	% by Weight [130]	Method of Determination [131]	
TA-15-473	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-15-474	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-35-197	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-36-141	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-36-142	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-53-640	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-53-1058	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-53-1071-A	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-53-1071-B	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-53-1071-C	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-60-BDM-TK-1	Storage Tank	No						See Sections 3.14.6 and 3.14.7
TA-3-779	Storage Tank	No						See Sections 3.14.6 and 3.14.7

SECTION 7 - AIR POLLUTION EMISSION RATES [144]: (Paragraph 5.c of Subsection D of 20.2.70.300 NMAC)
(List all Air pollution units of plant, including the units listed in Sections 3 thru 6, and tank-flashing emissions estimates.) (Continued)

Emission Unit No.[145]	ALLOWABLE AIR POLLUTANT EMISSION RATES (after control equipment) [146]												Emission Rate Units in
	Pollutant-1 NO_x	Pollutant-2 CO	Pollutant-3 SO_x	Pollutant-4 TSP	Pollutant-5 PM_{10}	Pollutant-6 VOC	Pollutant-7 HAP	Pollutant-8 Be	Pollutant-9 Al	Pollutant-10 ----------	Pollutant-11 ----------	Pollutant-12 ----------	
TA-53-1058[(g)]													pounds/hr
	--	--	--	--	--	<0.03	--	--	--				tons/yr
TA-53-1071-A[(g)]													pounds/hr
	--	--	--	--	--	<0.03	--	--	--				tons/yr
TA-53-1071-B[(g)]													pounds/hr
	--	--	--	--	--	<0.03	--	--	--				tons/yr
TA-53-1071-C[(g)]													pounds/hr
	--	--	--	--	--	<0.03	--	--	--				tons/yr
TA-60-BDM-TK-1[(g)]													pounds/hr
	--	--	--	--	--	0.37	<0.37	--	--				tons/yr
													pounds/hr
													tons/yr
													pounds/hr
													tons/yr
													pounds/hr
													tons/yr
													pounds/hr
													tons/yr

(a) LANL does not process raw materials. Streams processed are wastes in equipment including the rock crusher, paper shredder, and the air curtain destructors.

(b) LANL is proposing a fuel usage limit of 870 MMscf/yr for all boilers and process heaters described in Chapter 3.4.

(c) These boilers and process heaters are exempted as insignificant activities, but are listed to show that the proposed gas usage limit of 870 MMscf/yr takes into account these units as well as the remaining boilers and heaters from Section 3.4.

(d) Fuel quantity for the asphalt plant heaters have not been included in Section 5 - Fuel Usage and Fuel Data because the emissions from these heaters are factored into the calculations provided in Section 11.1 of AP-42 for Hot Mix Asphalt Plants. Only the BDM Engineering Asphalt Plant is listed because the Barber-Greene Plant is not subject to sulfur limits on the fuel.

(e) Filters are purchased on a 5 year contractual basis. Contracts are awarded using cost and specification considerations. All HEPA filters must have a manufacturer's filtration efficiency rating of 99.97%. Control efficiency for HEPA filtration is 99.95% as measured by particle filter efficiency testing. The discrepancy between manufacturer's filtration efficiency and installed efficiency rating is due to a small amount of leakage around the seal of an installed filter. The following is a list of some of the manufacturers currently providing filters to the Laboratory: Cambridge; Cam-Farr; Flanders; Donaldson; and American Air. Model numbers will vary between manufacturer and change as new models are introduced.

(f) Baghouses are purchased on a 5 year contractual basis. Contracts are awarded using cost and specification considerations. The following is a list of some of the manufacturers currently providing baghouses to the Laboratory: American Wheelabrator Corp.; Carter Day; and Bin-o-matic.

(g) LANL has included emissions limits for these units to ensure continuity with Chapter 3 emissions information. However, LANL is proposing that these emissions not be enforced as a unit-specific limitation, but rather LANL be subject to facility-wide emissions limitations as discussed in Chapter 2.

(h) A heating value for No. 2 Fuel Oil of 137,000 Btu/gal was used in the calculations for the power plant and 138,500 Btu/gal was used in the FGR permit application.

(i) Pound/hr limits vary depending on the fuel used. Refer to Chapter 3, Table 3.10-1 for more detail regarding when each limit applies.

(j) The TA-33 Generator was issued a permit on October 10, 2002. The generator is currently undergoing installation and a kilowatt meter has not yet been installed.

(k) Parameter is estimated for a surrogate chemical that is populated in the TANKS 4.0 program. Dimethyl phthalate was selected as the surrogate because the vapor pressure is similar to the asphalt emulsion at 212°F.

separate and distinct from the new source review or construction permit processes under NMED permit regulations 20.2.72 NMAC, 20.2.73 NMAC, and 20.2.74 NMAC. The following burn sites are included in open burn permits:

- TA-11 Fire Testing Area
- TA-14 Burn Cage
- TA-16 Burn Ground
- TA-36 Open Burn Area
- TA-36 Sled Track

Except for the requirements of 20.2.60 NMAC, each of these sites, other than TA-36 Open Burn Area, meet the criteria of Insignificant Activity #1.a, under the operating permit requirements.

LANL has complied with the 20.2.60 NMAC requirement to obtain an open burn permit for the disposal of dangerous materials. LANL also complies with open burn permit conditions. The current open burn permit requires the following conditions:

- Twenty-four (24) hour advance burn notification;
- Obtaining pre-approval of operational changes affecting burn conditions;
- Submittal of an annual fire activity report;
- Making Standard Operating Procedures (SOPs) available for inspection;
- Conducting burns on good dispersion days; and
- Ensuring NAAQS and NMAAQS are not violated.

Additional operation specific conditions are included in the current open burn permit. LANL demonstrates compliance with specific conditions of the burn in the annual fire activity report submitted to NMED. The current permit expires at the end of 2002. The open burn permit conditions are subject to change when the new permits are issued.

At the direction of NMED, the three air curtain destructors described in Section 3.1 of this application are also permitted under 20.2.60 NMAC. The compliance status of these units is discussed in Section 4.1.15 of this Chapter.