

LA-UR-07-1496

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Title: Semi-Annual Emissions Report - Operating Permit Number
P100M1 July - December 2006

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Intended for: New Mexico Environmental Department



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Title V Operating Permit Semi-Annual Emission Report

July 1, 2006 – December 31, 2006

Identifying Information

Source Name: Los Alamos National Laboratory County: Los Alamos

Source Address:

City: Los Alamos State: NM Zip Code: 87545

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Principal Company Product or Business: National Security and Nuclear Weapons Research Primary SIC Code: 9711

Permit No. P100M1 {IDEA/Tempo ID No. 856} Permit Issued Date: June 15, 2006

Certification of Truth, Accuracy, and Completeness

I, Victoria A. George certify that, based on information and belief formed after reasonable inquiry, the statements and information in the attached semi-annual emission report are true, accurate, and complete.

Signature



Date:

3/7/07

Title: Division Leader, Environmental Protection Division

Los Alamos National Laboratory Semi-Annual Emissions Report July through December of 2006

This report is being provided to meet the requirement set forth in permit condition 4.1 of the Los Alamos National Laboratory (LANL) Operating Permit Number P100M1. The emissions were calculated using operating data recorded during the second six months of 2006. The emissions from the first six months of 2006 were submitted in the previous Semi-Annual Emissions Report, but are included here to calculate annual emissions.

Facility Emissions

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

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2006 Annual Emissions (tons)	Facility Wide Emission Limits (Permit Condition 2.10.1) (tons per year)
Nitrogen Oxides (NO _x)	31.0	31.1	62.1	245
Sulfur Dioxide (SO ₂)	1.5	3.1	4.6	150
Particulate Matter (PM)	3.1	2.8	5.9	120
Carbon Monoxide (CO)	19.4	18.4	37.8	225
Volatile Organic Compounds (VOCs)	6.4	7.8	14.2	200
Hazardous Air Pollutants (HAPs)	2.2	3.8	6.0	24 combined
Jan-June Highest Individual HAP (Methanol)	0.4	0.4	0.8	8 individual
July-Dec Highest Individual HAP (Hydrochloric Acid)	0.2	0.7	0.9	8 individual

**Los Alamos National Laboratory
Semi-Annual Emissions Report
July through December of 2006**

Source Emissions

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

Permit Condition/Source

2.1 Asphalt Production - Asphalt Plant located at TA-60

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.1.2) (tons per year)
NOx	0.015	0.010	0.025	1.0
SO ₂	0.003	0.002	0.005	1.0
PM	0.006	0.004	0.010	*35.4 lb/hr
CO	0.245	0.157	0.402	2.6
VOC	0.005	0.003	0.008	1.0
HAPs	0.005	0.003	0.008	No Source Permit Limit

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

Los Alamos National Laboratory Semi-Annual Emissions Report July through December of 2006

2.2 Beryllium Activities

Source	Pollutant	January - June Emissions (grams)	July - December Emissions (grams)	Annual Emissions (grams)	Permit Limits (Permit Condition 2.2.2)
Beryllium Test Facility TA-3-141 ⁽¹⁾	Beryllium	< 0.0033	< 0.0033	< 0.007	3.5 gm/yr
Target Fabrication Facility TA-35-213 ⁽²⁾	Beryllium	< 0.00944	< 0.009	< 0.018	0.36 gm/yr
Plutonium Facility TA-55-PF4 ⁽³⁾ Machining Operation Foundry Operation ⁽⁴⁾	Beryllium	< 1.495	< 1.41	< 2.91	2.99 gm/yr
	Aluminum	< 1.495	< 1.41	< 2.91	2.99 gm/yr
	Beryllium	0	0	0.00	8.73×10^{-4} gm/yr
	Aluminum	0	0	0.00	8.73×10^{-4} gm/yr
Beryllium Total⁽⁵⁾ (tons) =		< 1.66E-06	< 1.57E-06	< 3.23E-06	
Aluminum Total (tons) =		< 1.65E-06	< 1.55E-06	< 3.30E-06	

Notes: ⁽¹⁾ Emission values shown for the Beryllium Test Facility are from actual stack emission measurements which are submitted to NMED quarterly.⁽²⁾ Emissions for the Target Fabrication Facility are from initial compliance testing of that source and calculated based on a conservative assumption of 8 hour work days. Log books were checked to verify that work days were much less than 8 hours.⁽³⁾ Emissions for the Plutonium Facility are calculated based on permitted throughputs. Log books were checked to verify that throughputs were much less than permitted values.⁽⁴⁾ The Plutonium Facility foundry operations did not operate during 2006. ⁽⁵⁾ Other Beryllium activities listed in section 2.2 of the permit do not require reporting in the Semi-Annual Emissions Report.

2.3 Boilers and Heaters

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.3.2) (tons per year)
NO _x	13.8	12.0	25.8	80
SO ₂	0.1	0.1	0.2	50
PM	1.1	1.0	2.0	50
PM-10	1.1	1.0	2.0	50
CO	11.3	9.7	21.0	80
VOCs	0.8	0.7	1.4	50
HAPs	0.26	0.23	0.5	No Source Limit

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

**Los Alamos National Laboratory
Semi-Annual Emissions Report
July through December of 2006**

2.4 Carpenter Shops

Shop	Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Permit Condition 2.4.2) (tons per year)
TA-3-38	PM ₁₀	0.035	0.025	0.06	3.07
TA-15-563	PM ₁₀	0.026	0.025	0.05	2.81

2.5 Chemical Usage

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.5.3.1)
VOCs	4.3	5.8	10.1	Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	1.6	3.2	4.8	
Highest Individual HAP for the first six months (Methanol)	0.4	0.4	0.8	
Highest Individual HAP for the second six months (Hydrochloric Acid)	0.2	0.7	0.9	

2.6 Degreasers

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

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used in 2006. These degreasers are not expected to be used in the near future and are in storage.

Los Alamos National Laboratory Semi-Annual Emissions Report July through December of 2006

2.7 Internal Combustion Sources

Generator TA-33-G-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.7.2) (tons per year)
NO _x	0.086	0	0.086	18.1
SO _x	0.013	0	0.013	2.5
TSP	0.003	0	0.003	0.6
PM ₁₀	0.003	0	0.003	0.6
CO	0.070	0	0.070	15.2
VOC	0.002	0	0.002	0.3
HAPs	1.86E-05	0	1.86E-05	No Source Limit

Note: The TA-33-G-1 generator had initial start-up on May 18, 2006. All of the emissions are from the source test. The generator did not run during the second six months of 2006.

Standby Generators	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NO _x	8.4	10.0	18.4	No Source Specific Emission Limits for Standby Generators
SO _x	1.3	2.8	4.1	
TSP	0.5	0.4	0.9	
PM ₁₀	0.5	0.4	0.9	
CO	1.9	2.2	4.1	
VOC	0.5	0.4	0.9	
HAPs	2.7E-03	2.7E-03	0.005	

Note: Standby Generators are insignificant sources.

2.8 Data Disintegrator

Emission Unit TA-52-11	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.8.2) (tons per year)
TSP	0.27	0.16	0.43	9.9
PM10	0.24	0.15	0.39	9.9

Note: The data disintegrator was started on August 18, 2004, and replaced the existing paper shredder. Operating Permit No: P100M1 issued June 15, 2006 removed the paper shredder and added the data disintegrator.

**Los Alamos National Laboratory
Semi-Annual Emissions Report
July through December of 2006**

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

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Permit Condition 2.9.2) (tons per year)
NO _x	8.7	9.1	17.8	60.2
SO ₂	0.1	0.2	0.3	7.9
TSP	1.1	1.2	2.3	8.4
PM ₁₀	1.1	1.2	2.3	8.2
CO	6.0	6.3	12.3	41.3
VOC	0.8	0.9	1.7	5.6
HAPs	0.3	0.3	0.6	No Source Limit

Note: On June 15, 2006, LANL received a revised Title V permit, Operating Permit NO: P100M1. This permit lowered the power plant boilers emission limits to be consistent with Construction Permit 2195B-M1 (issued July 30, 2004). The limits shown here reflect the permit limits in the current Title V permit.