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Title: Semi-Annual Emissions Report - Operating Permit Number
P100M2 July - December 2007

Author(s): Walt Whetham

Intended for: New Mexico Environmental Department



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Attachment 1
Certification Statement

Title V Operating Permit Semi-Annual Emission Report

July 1, 2007 – December 31, 2007

Identifying Information

Source Name: Los Alamos National Laboratory County: Los Alamos

Source Address:

City: Los Alamos State: NM Zip Code: 87545

Responsible Official: Victoria A. George Ph No. (505) 667-2211 Fax No. (505) 665-8858

Technical Contact: Steven L. Story Ph No. (505) 665-2169 Fax No. (505) 665-8858

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

Permit No. P100M2 {IDEA/Tempo ID No. 856} Permit Issued Date: July 16, 2007

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:

3/17/08

Title: Division Leader, Environmental Protection Division

Attachment 2
Semi-Annual Emissions Report
July 1, 2007 to December 31, 2007

Los Alamos National Laboratory 2007 Semi-Annual Emissions Report (July through December)

This report is being provided to meet the requirement set forth in permit condition 4.1 of the Los Alamos National Laboratory (LANL) Operating Permit Number P100M2. The emissions were calculated using operating data recorded during the second six months of 2007. The emissions from the first six months of 2007 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)	2007 Annual Emissions (tons)	Facility Wide Emission Limits (Permit Condition 2.10.1) (tons per year)
Nitrogen Oxides (NO _x)	26.6	25.4	52.0	245
Sulfur Dioxide (SO ₂)	0.6	0.4	1.0	150
Particulate Matter (PM)	2.7	2.2	4.9	120
Carbon Monoxide (CO)	18.7	14.6	33.3	225
Volatile Organic Compounds (VOCs)	7.3	8.1	15.4	200
Hazardous Air Pollutants (HAPs)	3.6	3.2	6.8	24 combined
Highest Individual HAP (Hydrochloric Acid)	0.51	0.54	1.05	8 individual

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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 TA-60-BDM	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.1.2) (tons per year)
NO_x	0.008	0.013	0.021	1.0
SO₂	0.002	0.002	0.004	1.0
PM	0.003	0.005	0.008	*35.4 lb/hr
CO	0.135	0.211	0.346	2.6
VOC	0.003	0.004	0.007	1.0
HAPs	0.003	0.004	0.007	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.

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2.2 Beryllium Activities

Source	Pollutant	January - June Emissions	July - December Emissions	Annual Emissions	Permit Limits (Condition 2.2.2)
Beryllium Test Facility TA-3-141 ⁽¹⁾	Beryllium (grams)	< 0.0033	< 0.0033	< 0.007	3.5 gm/yr
Target Fabrication Facility TA-35-213 ⁽²⁾	Beryllium (grams)	< 0.00944	< 0.009	< 0.018	0.36 gm/yr
Plutonium Facility TA-55-PF4 ⁽³⁾ Machining Operation	Beryllium (grams)	< 1.495	< 1.41	< 2.91	2.99 gm/yr
	Aluminum (grams)	< 1.495	< 1.41	< 2.91	2.99 gm/yr
Plutonium Facility TA-55-PF4 Foundry Operation ⁽⁴⁾	Beryllium (grams)	0	0	0.00	8.73 x 10 ⁻⁴ gm/yr
	Aluminum (grams)	0	0	0.00	8.73 x 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 Technology 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 2007. ⁽⁵⁾ Other Beryllium activities listed in section 2.2 of the permit do not require reporting in the Semi-Annual Emissions Report.

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2.3 Boilers and Heaters

Boilers and Heaters	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.3.2) (tons per year)
NO _x	15.10	10.53	25.63	80
SO ₂	0.09	0.06	0.15	50
PM	1.20	0.84	2.04	50
PM-10	1.20	0.84	2.04	50
CO	12.25	8.53	20.78	80
VOCs	0.84	0.59	1.43	50
HAPs	0.29	0.20	0.49	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 which can be found under Section 2.9 of this report. The TA-21 steam plant boilers are included in this table.

2.4 Carpenter Shops

Shop	Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.4.2) (tons per year)
TA-3-38	PM ₁₀	0.014	0.008	0.022	3.07
TA-15-563	PM ₁₀	0.029	0.015	0.044	2.81

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2.5 Chemical Usage

Chemical Usage LANL-FW-CHEM	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.5.3.1)
VOCs	5.63	6.62	12.25	Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	2.97	2.83	5.80	
Highest Individual HAP for the first six months (Hydrochloric Acid)	0.51	0.54	1.05	

2.6 Degreasers

Degreaser TA-55-DG-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.6.2.1) (tons per year)
VOCs	0.005	0.007	0.012	Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	0.005	0.007	0.012	

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used from January 1 to December 31, 2007. These degreasers are not expected to be used in the near future and are in storage.

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2.7 Internal Combustion Sources

Generator TA-33-G-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.7.2) (tons per year)
NO _x	0.00	0.00	0.0	18.1
SO _x	0.00	0.00	0.0	2.5
TSP	0.00	0.00	0.0	0.6
PM ₁₀	0.00	0.00	0.0	0.6
CO	0.00	0.00	0.0	15.2
VOC	0.00	0.00	0.0	0.3
HAPs	0.00	0.00	0.0	No Source Limit

Note: This generator did not run in 2007.

Stationary Standby Generators	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NO _x	3.52	9.23	12.75	No Source Specific Emission Limits for Standby Generators
SO _x	0.10	0.26	0.36	
TSP	0.14	0.37	0.51	
PM ₁₀	0.14	0.37	0.51	
CO	0.83	2.04	2.87	
VOC	0.14	0.37	0.51	
HAPs	1.40E-03	2.24E-03	3.64E-03	

Note: Standby Generators are insignificant sources.

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2.8 Data Disintegrator

Data Disintegrator TA-52-11	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition 2.8.2) (tons per year)
TSP	0.28	0.20	0.48	9.9
PM10	0.26	0.18	0.44	9.9

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

Boilers TA_3-22-1, TA-3-22-2 TA-3-22-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Condition 2.9.2) (tons per year)
NO_x	7.97	5.49	13.46	60.2
SO₂	0.38	0.07	0.45	7.9
TSP	1.13	0.72	1.85	8.4
PM₁₀	1.09	0.72	1.81	8.2
CO	5.46	3.78	9.24	41.3
VOC	0.73	0.52	1.25	5.6
HAPs	0.25	0.18	0.43	No Source Limit

Combustion Turbine TA-3-22 CT-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Condition 2.9.2) (tons per year)
NO_x	0.00	0.16	0.16	33.2
SO₂	0.00	0.01	0.01	1.9
TSP	0.00	0.02	0.02	2.3
PM₁₀	0.00	0.02	0.02	2.3
CO	0.00	0.03	0.03	19.8
VOC	0.00	0.01	0.01	No TPY Limit
HAPs	0.00	3.34E-03	3.34E-03	No Source Limit

Note: The combustion turbine began operation on September 23, 2007.