

Environmental, Safety, Health & Quality

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Date: September 12, 2008
Refer To: ESH&Q-08-050

Ms. Debra McElroy
Compliance & Enforcement Section
New Mexico Environment Department
Air Quality Bureau
1301 Siler Road, Building B
Santa Fe, New Mexico 87507

**SUBJECT: SEMI-ANNUAL EMISSIONS REPORT - JANUARY 1, 2008 – JUNE 30, 2008
AIR QUALITY TITLE V OPERATING PERMIT P100M2
IDEA ID No. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)**

Dear Ms. McElroy:

Enclosed is Los Alamos National Laboratory's (LANL) semi-annual emissions report for the period January 1, 2008 through June 30, 2008 (Enclosure-1). This report is required by permit condition 4.1 and is submitted within 90 days from the end of the reporting period as required by permit condition 4.3.

The semi-annual emissions report includes actual emissions from permitted sources included in section 2.0 of LANL's Operating Permit. Emissions are also reported from insignificant boiler and generator sources. These sources are included to demonstrate that LANL has not exceeded Prevention of Significant Deterioration (PSD) applicability thresholds. In this report, actual emissions are listed along with the emission limits for ease in comparing and verifying compliance. No annual emission limits were exceeded during this reporting period.

A Construction Permit (NSR Permit 2195-P) was issued on August 8, 2007 to construct and operate three electrical generator engines at Technical Area 33. These three units are not listed in the current Operating Permit, but have been included in the LANL Operating Permit application submitted in April of 2008. The three units are included in this emissions report.

Should you have any questions or comments regarding the information provided in this report, please contact Steve Story at (505) 665-2169.

Sincerely,

Richard S. Watkins
Associate Director, ESH&Q

Ms. Debra McElroy
ESH&Q-08-050
LA-UR: 08-05553

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Title: Semi-Annual Emissions Report - Operating Permit Number
P100M2 January - June 2008

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Intended for: New Mexico Environmental Department




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Enclosure - 1

**Los Alamos National Laboratory's
Title V Operating Permit
Emissions Report for the period
January 1 – June 30, 2008**

Title V Report Certification Form

I. Report Type		
<input type="checkbox"/> Annual Compliance Certification		
<input type="checkbox"/> Semi-Annual Monitoring Report		
<input checked="" type="checkbox"/> Other Specify: Title V Semi-Annual Emissions Report January-June 2008		
II. Identifying Information		
Facility Name: Los Alamos National Laboratory		
Facility Address: P.O. Box 1663, MS J978, Los Alamos	State: NM	Zip: 87545
Responsible Official (RO): Richard S. Watkins	Phone: 505-667-4218	Fax: 505-665-3811
RO Title: Assoc. Director Environmental, Safety, Health, and Quality	RO e-mail: rswatkin@lanl.gov	
Permit No.: P100M2	Date Permit Issued: July 16, 2007	
Report Due Date (as required by the permit): 09/28/2008	Permit AI number: 856	
Time period covered by this Report: From: January 1, 2008	To: June 30, 2008	
III. Certification of Truth, Accuracy, and Completeness		
<p>I am the Responsible Official indicated above. I, (<u>Richard S. Watkins</u>) certify that I meet the requirements of 20.2.70.7.AD NMAC. I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in the attached Title V report are true, accurate, and complete.</p>		
Signature: 	Date: 9/12/08	

**Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2008 through June 30, 2008**

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 first six months of 2008.

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)	2008 Annual Emissions (tons)	Facility Wide Emission Limits (Permit Condition 2.10.1) (tons per year)
Nitrogen Oxides (NOx)	25.4			245
Sulfur Dioxide (SO ₂)	0.3			150
Particulate Matter (PM)	2.5			120
Carbon Monoxide (CO)	18.4			225
Volatile Organic Compounds (VOCs)	6.4			200
Hazardous Air Pollutants (HAPs)	3.2			24 combined
Jan-June Highest Individual HAP (Hydrochloric Acid)	0.5			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)
NOx	0.013			1.0
SO ₂	0.002			1.0
PM	0.005			*35.4 lb/hr
CO	0.210			2.6
VOC	0.004			1.0
HAPs	0.004			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			3.5 gm/yr
Target Fabrication Facility TA-35-213 ⁽²⁾	Beryllium (grams)	< 0.00944			0.36 gm/yr
Plutonium Facility TA-55-PF4 ⁽³⁾ Machining Operation	Beryllium (grams)	< 1.495			2.99 gm/yr
	Aluminum (grams)	< 1.495			2.99 gm/yr
Plutonium Facility TA-55-PF4 Foundry Operation ⁽⁴⁾	Beryllium (grams)	0			8.73×10^{-4} gm/yr
	Aluminum (grams)	0			8.73×10^{-4} gm/yr
Beryllium Total⁽⁵⁾ (tons) =		< 1.66E-06			
Aluminum Total (tons) =		< 1.65E-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 the first six months of 2008. ⁽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)
NOx	14.60			80
SO ₂	0.09			50
PM	1.16			50
PM-10	1.16			50
CO	11.83			80
VOCs	0.81			50
HAPs	0.28			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.

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	0.006			3.07
TA-15-563	PM ₁₀	0.013			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	4.7			Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	2.6			
Highest Individual HAP for the first six months (Hydrochloric Acid)	0.5			

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	0.010			Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	0.010			

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used from January 1 to June 30, 2008. The units have been removed from LANL and will not be used in the future. The Title V application submitted to NMED in April 2008 reflects this change.

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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	0.359			18.1
SO _x	0.053			2.5
TSP	0.012			0.6
PM ₁₀	0.012			0.6
CO	0.292			15.2
VOC	0.007			0.3
HAPs	7.73E-05			No Source Limit

Generator TA-33-G-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (NSR Permit 2195-P Condition 2) (tons per year)
NO _x	0.000			0.21
SO _x	0.000			Not Required
TSP	0.000			Not Required
PM ₁₀	0.000			Not Required
CO	0.000			0.1
VOC	0.000			Not Required
HAPs	0.00E+00			No Source Limit

Note: This generator is not listed in the latest Title V permit, P100M2. However, it is listed in NSR Permit No. 2195-P which was issued on August 8, 2007 and has been included in the Title V application submitted to NMED in April 2008. This generator did not run during the first six months of 2008.

Generator TA-33-G-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (NSR Permit 2195-P Condition 2) (tons per year)
NO _x	0.008			0.21
SO _x	0.001			Not Required
TSP	0.001			Not Required
PM ₁₀	0.001			Not Required
CO	0.002			0.1
VOC	0.001			Not Required
HAPs	2.68E-06			No Source Limit

Note: This generator is not listed in the latest Title V permit, P100M2. However, it is listed in NSR Permit No. 2195-P which was issued on August 8, 2007 and has been included in the Title V application submitted to NMED in April 2008. The emissions from this unit are included in the facility wide total.

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Generator TA-33-G-4	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (NSR Permit 2195-P Condition 2) (tons per year)
NO _x	0.000			2.33
SO _x	0.000			0.16
TSP	0.000			Not Required
PM ₁₀	0.000			Not Required
CO	0.000			1.4
VOC	0.000			0.2
HAPs	0.00E+00			No Source Limit

Note: This generator is not listed in the latest Title V permit, P100M2. However, it is listed in NSR Permit No. 2195-P which was issued on August 8, 2007 and has been included in the Title V application submitted to NMED in April 2008. This generator did not run during the first six months of 2008.

Stationary Standby Generators	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NO _x	2.46			No Source Specific Emission Limits for Standby Generators
SO _x	0.08			
TSP	0.11			
PM ₁₀	0.11			
CO	0.56			
VOC	0.11			
HAPs	0.001			

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	0.19			9.9
PM10	0.17			9.9

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)
NOx	8.0			60.2
SO ₂	0.1			7.9
TSP	1.0			8.4
PM ₁₀	1.0			8.2
CO	5.5			41.3
VOC	0.8			5.6
HAPs	0.3			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)
NOx	0.014			33.2
SO ₂	0.001			1.9
TSP	0.002			2.3
PM ₁₀	0.002			2.3
CO	0.003			19.8
VOC	0.001			No TPY Limit
HAPs	3.90E-04			No Source Limit