

LA-UR-07-5846

*Approved for public release;
distribution is unlimited.*

Title: Semi-Annual Emissions Report - Operating Permit Number
P100M1 January - June 2007

Author(s): Walt Whetham

Intended for: New Mexico Environmental Department



Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by the Los Alamos National Security, LLC for the National Nuclear Security Administration of the U.S. Department of Energy under contract DE-AC52-06NA25396. By acceptance of this article, the publisher recognizes that the U.S. Government retains a nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

ENCLOSURE

1



**New Mexico Environment Department
Air Quality Bureau
Compliance and Enforcement Section
2048 Galisteo
Santa Fe, NM 87505
Phone (505) 827-1494
Fax (505) 827-1523**



Version 11.22.06

REPORTING SUBMITTAL FORM

NMED USE ONLY

Staff _____

Admin _____

PLEASE NOTE: ⊗ - Indicates required field

SECTION I - GENERAL COMPANY AND FACILITY INFORMATION					
⊗ Company Name: Los Alamos National Security			⊗ Facility Name: Los Alamos National Laboratory		
⊗ Company Address: P.O. Box 1663 MS J978			⊗ Facility Address: Same as Company		
⊗ City: Los Alamos	⊗ State: NM	⊗ Zip: 87545	⊗ City:	⊗ State:	⊗ Zip:
⊗ Company Environmental Contact: Dianne Wilbum		⊗ Title: EAQ Group Leader	⊗ Facility Contact: Steve Story		⊗ Title: Team Leader - Compliance
⊗ Phone Number: 505 667 6952		⊗ Fax Number: 505 665 8858	⊗ Phone Number: 505 665 2169		⊗ Fax Number: 505 665 8858
⊗ Email Address: dianne@lanl.gov			⊗ Email Address: story@lanl.gov		
Responsible Official: (Title V only): Richard S. Watkins		Title: Associate Director ESH&Q	Phone Number: 505 667 4218		Fax Number: 505 665 3811
⊗ AI Number: 856	Title V Permit Number: P100M1	Title V Permit Issue Date: June 15, 2006	NSR Permit Number: 2195	NSR Permit Issue Date: Various	
⊗ Date of Submittal: September 17, 2007	Reporting Period: January 1, 2007 - June 30, 2007		OR	Proposed Test Date:	OR
Actual Test Date:					

SECTION II - TYPE OF SUBMITTAL (check one that applies)					
A.	<input type="checkbox"/>	Title V Annual Compliance Certification	Permit Condition(s):	Description:	
B.	<input type="checkbox"/>	Title V Semi-annual Monitoring Report	Permit Condition(s):	Description:	
C.	<input type="checkbox"/>	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:
			Test Protocol <input type="checkbox"/> Test Report <input type="checkbox"/> Other <input type="checkbox"/>		
D.	<input type="checkbox"/>	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:
			Test Protocol <input type="checkbox"/> Test Report <input type="checkbox"/> Other <input type="checkbox"/>		
E.	<input type="checkbox"/>	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:
			Test Protocol <input type="checkbox"/> Test Report <input type="checkbox"/> Other <input type="checkbox"/>		
F.	<input checked="" type="checkbox"/>	Permit Requirement	Permit No.: P100M1	Condition(s): 4.1	Description: Title V Semi-Annual Emissions Report
			Test Protocol <input type="checkbox"/> Test Report <input type="checkbox"/> Other <input checked="" type="checkbox"/>		
G.	<input type="checkbox"/>	Requirement of a Settlement Agreement or Compliance Order	NOV or SFO No.:	Section(s):	Description:
			Test Protocol <input type="checkbox"/> Test Report <input type="checkbox"/> Other <input type="checkbox"/>		

SECTION III - CERTIFICATION			
After reasonable inquiry, I <u>Victoria A. George</u> certify that the information in this submittal is true, accurate and complete. <small>(name of reporting official)</small>			
⊗ Signature of Reporting Official: 	⊗ Title: Environmental Protection Division Leader	⊗ Date: 9/17/07	⊗ Responsible Official for Title V? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Reviewed By: _____

Date Reviewed: _____

11

ENCLOSURE

2

Title V Operating Permit Semi-Annual Emission Report

January 1, 2007 – June 30, 2007

SECTION 1 - SOURCE IDENTIFICATION

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

SECTION 2 - CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETION

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:

9/12/07

Title: Division Leader, Environmental Protection Division

ENCLOSURE

3

**Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007**

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 first six months of 2007.

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 (NOx)	26.6			245
Sulfur Dioxide (SO ₂)	0.6			150
Particulate Matter (PM)	2.7			120
Carbon Monoxide (CO)	18.7			225
Volatile Organic Compounds (VOCs)	7.3			200
Hazardous Air Pollutants (HAPs)	3.6			24 combined
Jan-June Highest Individual HAP (Hydrochloric Acid)	0.5			8 individual

**Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007**

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	0.008			1.0
SO ₂	0.002			1.0
PM	0.003			*35.4 lb/hr
CO	0.135			2.6
VOC	0.003			1.0
HAPs	0.003			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
January 1, 2007 through June 30, 2007**

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			3.5 gm/yr
Target Fabrication Facility TA-35-213 ⁽²⁾	Beryllium	< 0.00944			0.36 gm/yr
Plutonium Facility TA-55-PF4 ⁽³⁾ Machining Operation Foundry Operation ⁽⁴⁾	Beryllium	< 1.495			2.99 gm/yr
	Aluminum	< 1.495			2.99 gm/yr
	Beryllium	0			8.73 x 10 ⁻⁴ gm/yr
	Aluminum	0			8.73 x 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 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 the first six months of 2007. ⁽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)
NOx	15.10			80
SO₂	0.09			50
PM	1.20			50
PM-10	1.20			50
CO	12.25			80
VOCs	0.84			50
HAPs	0.29			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
January 1, 2007 through June 30, 2007**

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	0.014			3.07
TA-15-563	PM ₁₀	0.029			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	5.6			Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	3.0			
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 (Permit Condition 2.6.2.1) (tons per year)
VOCs	0.005			Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
HAPs	0.005			

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used from January 1 to June 30, 2007. These degreasers are not expected to be used in the near future and are in storage.

**Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007**

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	0.000			18.1
SO _x	0.000			2.5
TSP	0.000			0.6
PM ₁₀	0.000			0.6
CO	0.000			15.2
VOC	0.000			0.3
HAPs	0.00E+00			No Source Limit

Note: This generator did not run during the first six months of 2007.

Standby Generators	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NO _x	3.52			No Source Specific Emission Limits for Standby Generators
SO _x	0.10			
TSP	0.14			
PM ₁₀	0.14			
CO	0.83			
VOC	0.14			
HAPs	1.40E-03			

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	0.28			9.9
PM ₁₀	0.26			9.9

**Los Alamos National Laboratory
Semi-Annual Emissions Report
January 1, 2007 through June 30, 2007**

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)
NOx	8.0			60.2
SO ₂	0.4			7.9
TSP	1.1			8.4
PM ₁₀	1.1			8.2
CO	5.5			41.3
VOC	0.7			5.6
HAPs	0.3			No Source Limit