

Los Alamos National Laboratory 2004 Semi-Annual Emissions Report (January through June)

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 P100. The emissions included in this report were calculated using operating data recorded during the first six months of 2004.

Facility Emissions

The following table displays the actual facility-wide emissions compared with the Facility Wide Emission Limits specified in permit condition 2.11 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.

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2004 Annual Emissions (tons)	Facility Wide Emission Limits (Permit Condition 2.11) (tons per year)
Nitrogen Oxides (NOx)	26.5			245
Carbon Monoxide (CO)	19.1			225
Volatile Organic Compounds (VOCs)	6.7			200
Sulfur Dioxide (SO₂)	0.7			150
Particulate Matter (PM)	2.5			120
Hazardous Air Pollutants (HAPs)	4.8			24 combined
Jan-June Highest Individual HAP (Hydrochloric Acid)	1.2			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 located at TA-60

Pollutant	Jan-June Emissions (tons)	July-Dec Emissions (tons)	Annual Emissions (tons)	Permit Limits (Permit Condition 2.1.2) (tons per year)
NOx	0.0			1.0
SO ₂	0.0			1.0
PM	0.0			*35.4 lbs/hr
CO	0.0			2.6
VOC	0.0			1.0
HAPs	0.0			No Source Permit Limit

Note: The Asphalt Plant did not operate during the first 6 months of 2004.

* The Asphalt Plant does not have a tons per year limit for PM. The lb/hr emissions will be demonstrated during the initial source compliance test.

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2.2 Beryllium Activities

Source	Pollutant	Jan-June Emissions (grams)	July-Dec Emissions (grams)	Annual Emissions (grams)	Permit Limits (Permit Condition 2.2.2)
Beryllium Test Facility TA-3-141	Beryllium	3.30E-03			3.5 gm/yr
Target Fabrication Facility TA-35-213	Beryllium	0.04			0.36 gm/yr
Plutonium Facility TA-55-PF4					
	Machining Operation	Beryllium	1.495		2.99 gm/yr
		Aluminum	1.495		2.99 gm/yr
Foundry Operation		Beryllium	0		8.73×10^{-4} gm/yr
		Aluminum	0		8.73×10^{-4} gm/yr
Jan-June Beryllium Total (tons) =		1.70E-06	Jan-June Aluminum Total (tons) =		1.65E-06

Note: Emission values shown for the Beryllium Test Facility are from actual stack emission measurements. Emissions for the Target Facility are from initial compliance testing of that source. Emissions for the Plutonium Facility are based on permitted limits. The Plutonium Facility foundry operations did not operate during the first six months of 2004. Other sources 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	15.5			80
SO ₂	0.1			50
PM	1.2			50
PM-10	1.2			50
CO	12.5			80
VOC	0.9			50
HAPs	0.26			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 2.9. The TA-21 steam plant boilers are included in this table.

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2.4 Carpenter Shops

Shop	Pollutant	January - June Emissions (tons)	July - December Emission (tons)	Annual Emissions (tons)	Permit Limit (Permit Condition 2.42) (tons per year)
TA-3-38	PM ₁₀	0.016			3.07
TA-15-563	PM ₁₀	0			2.81

Note: The TA-15-563 Carpenter Shop did not operate during the first 6 months of the year.

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	4.9			Source limits refer to facility wide limits. (See Facility Emissions Table on Page 1)
HAPs	4.3			
Highest Individual HAP (Hydrochloric Acid)	1.2			

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	0.004			Source limits refer to facility wide limits. (See Facility Emissions Table on Page 1)
HAPs	0.004			

Note: Degreasers TA-55-DG-2 and TA-55-DG-3 were not used in the first six months of 2004. 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	Jan-June Emissions (tons)	July-Dec Emissions (tons)	Annual (tons)	Permit Limits (Permit Condition 2.7.2) (tons per year)
TSP	0.0			0.6
PM ₁₀	0.0			0.6
NO _x	0.0			18.1
CO	0.0			15.2
VOC	0.0			0.3
SO _x	0.0			2.5
HAPs	0.0			No Source Limit

Note: The TA-33-G-1 generator did not operate during the first six months of 2004.

Standby Generators	Jan-June Emissions (tons)	July-Dec Emissions (tons)	Annual (tons)	Permit Limits (Permit Condition 2.7.2)
TSP	0.1			No Source Specific Emission Limits for Standby Generators
PM ₁₀	0.1			
NO _x	2.2			
CO	0.5			
VOC	0.1			
SO _x	0.5			
HAPs	1.1E-03			

Note: Standby Generators are insignificant sources.

2.8 Paper Shredder

Emission Unit TA-52-11	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	TSP Emission Limit (Permit Condition 2.8.2.1) (tons per year)
TSP	0.0012			13

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2.9 Power Plant 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	8.9			99.6
SO ₂	0.1			36.9
TSP	1.2			15.7
PM ₁₀	1.2			15.7
CO	6.1			81.3
VOC	0.8			11.1
HAPs	0.3			No Source Limit

2.10 Rock Crusher

The Rock Crusher was not used during this 6 month reporting period. The source was retired.