



Environmental Stewardship Division
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Date: March 24, 2006
Refer to: ENV-MAQ:06-078

Mr. Edward L. Horst
Environmental Compliance Specialist
Compliance & Enforcement Section
New Mexico Environment Department
Air Quality Bureau
2048 Galisteo Street
Santa Fe, NM 87505

**IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)
SEMI-ANNUAL EMISSIONS REPORT – OPERATING PERMIT NUMBER: P100**

Dear Mr. Horst:

Attached is the semi-annual emissions report for July - December of 2005. This report includes actual emissions from permitted sources included in section 2.0 of the Los Alamos National Laboratory (LANL) Operating Permit. This submission satisfies permit condition 4.1, which requires submission of an emissions report on a 6-month basis. Furthermore, this report is submitted within 90 days from the end of the reporting period as stipulated in permit condition 4.3.

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. Emissions are also reported for insignificant boiler and generator sources. These sources are included to demonstrate that LANL has not exceeded Prevention of Significant Deterioration (PSD) applicability thresholds.

A Construction Permit modification (NSR Permit 2195B M1) was issued on July 30, 2004 to install a combustion turbine at the TA-3 power plant, but installation is not yet complete. This permit reduced the allowable emissions for the TA-3 power plant boilers. In addition, emissions from the data disintegrator, which replaced the paper shredder in 2005, are included in this report. The emission limits for this unit were taken from NSR Air Quality Permit 2195-H. Both of these changes were incorporated into the LANL Operating Permit modification application submitted in July of 2005.

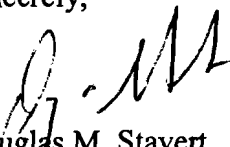
Should you have any questions or comments regarding the information provided in this report, please contact Steve Story at (505) 665-2169 or Margie Stockton at (505) 667-9359.

Mr. Edward L. Horst
ENV-MAQ:06-078
LA-UR:06-2145

-2-

March 24, 2006

Sincerely,



Douglas M. Stavert
Deputy Division Leader (Acting)
Environmental Stewardship Division

DMS:alb

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ENV-MAQ Title V Emissions Report File
ENV-MAQ Reading File

Title V Operating Permit Semi-Annual Emissions Report

July 1 - December 31, 2005

Identifying Information

Source Name: Los Alamos National Laboratory County: Los Alamos

Source Address:

City: Los Alamos State: NM Zip Code: 87545

Responsible Official: Douglas M. Stavert Ph No. (505) 665-0235 Fax No. (505) 665-8190

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. P100 {IDEA/Tempo ID No. 856} Permit Issued Date: April 30, 2004

Certification of Truth, Accuracy, and Completeness

I, Douglas M. Stavert certify that, based on information and belief formed after reasonable inquiry, the statements and information in the attached semi-annual emissions report are true, accurate, and complete.

Signature:  Date: 3/27/06

Title: Deputy Division Leader (Acting), Environmental Stewardship Division

Los Alamos National Laboratory 2005 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 P100. The emissions were calculated using operating data recorded during the second six months of 2005. The emissions from the first six months of 2005 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 2.11 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. Also, due to the method used for calculating Hazardous Air Pollutant (HAP) and Volatile Organic Compound (VOC) emissions from chemical use, fugitive emissions are included (see permit condition 4.1).

Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	2005 Annual Emissions (ton)	Facility-Wide Emission Limits (Permit Condition 2.11) (ton per year)
Nitrogen Oxides (NO _x)	27.6	22.9	50.5	245
Carbon Monoxide (CO)	19.6	15.5	35.1	225
Volatile Organic Compounds (VOCs)	8.0	6.6	14.6	200
Sulfur Dioxide (SO ₂)	0.9	1.0	1.9	150
Particulate Matter (PM)	2.8	2.3	5.1	120
Hazardous Air Pollutants (HAPs)	4.3	2.2	6.5	24 combined
Highest Individual HAP (Hydrochloric Acid)	0.7	0.3	1.0	8 individual

Note: NO_x emissions shown for Jan-June are slightly lower than originally reported due to a correction to one of the generator meter readings after the report was submitted.

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2005 Semi-Annual Emissions Report
(July through December)**

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 when applicable.

Permit Condition/Source

2.1 Asphalt Production - BDM Asphalt Plant located at TA-60

Source	Pollutant	Jan-June Emissions (ton)	July-Dec Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.1.2) (ton per year)
BDM Asphalt Plant TA-60	NO_x	0.0	0.020	0.020	1.0
	SO₂	0.0	0.004	0.004	1.0
	PM	0.0	0.008	0.008	No Ton Per Year Limit
	CO	0.0	0.324	0.324	2.6
	VOC	0.0	0.007	0.007	1.0
	HAPs	0.0	0.006	0.006	No Source Permit Limit

Note: The new Asphalt Plant started operation in July 2005. The Asphalt Plant does not have a ton per year limit for PM. Compliance with the lb/hr emission limit was demonstrated during the initial source compliance test.

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2.2 Beryllium Activities

Source	Pollutant	Jan-June Emissions	July-Dec Emissions	Annual Emissions	Emission Limits (Permit Condition 2.2.2)
Beryllium Test Facility TA-3-141	Beryllium (gram)	3.30E-03	3.30E-03	0.007	3.5 gm/yr
Target Fabrication Facility TA-35-213	Beryllium (gram)	9.44E-03	9.00E-03	0.018	0.36 gm/yr
Plutonium Facility TA-55-PF4					
Machining Operation	Beryllium (gram)	1.495	1.41	2.91	2.99 gm/yr
	Aluminum (gram)	1.495	1.41	2.91	2.99 gm/yr
Foundry Operation	Beryllium (gram)	0	0	0	8.73 x 10 ⁻⁴ gm/yr
	Aluminum (gram)	0	0	0	8.73 x 10 ⁻⁴ gm/yr
Beryllium Total (tons) =		1.66E-06	1.57E-06	3.23E-06	
Aluminum Total (tons) =		1.65E-06	1.55E-06	3.20E-06	

Note: Emission values shown for the Beryllium Test Facility are from actual stack emission measurements. Emissions for the Target Fabrication Facility are based on initial compliance testing of that source and a conservative use of maximum hours of operation. Emissions for the Plutonium Facility Machining Operation are based on initial compliance testing of the source and a conservative use of maximum throughput. The Plutonium Facility Foundry Operations did not operate during 2005. Other beryllium sources listed in section 2.2 of the permit do not require reporting in the Semi-Annual Emissions Report.

2.3 Boilers and Heaters

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.3.2) (ton per year)
Boilers and Heaters	NO _x	15.9	11.4	27.3	80
	SO ₂	0.1	0.1	0.2	50
	PM	1.3	0.9	2.2	50
	PM ₁₀	1.3	0.9	2.2	50
	CO	12.8	9.1	21.9	80
	VOC	0.9	0.6	1.5	50
	HAPs	0.3	0.2	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 (see section 2.9). The TA-21 steam plant boilers are included in this table.

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2.4 Carpenter Shops

Source	Pollutant	January - June Emissions (ton)	July - December Emission (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.4.2) (ton per year)
TA-3-38	PM ₁₀	0.027	0.017	0.044	3.07
TA-15-563	PM ₁₀	0.009	0.032	0.041	2.81

2.5 Chemical Usage

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.5.3.1)
Chemical Usage	VOCs	6.1	5.1	11.2	Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
	HAPs	3.7	1.8	5.5	
	HAP (Hydrochloric)	0.7	0.3	1.0	

2.6 Degreasers

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.6.2.1) (ton per year)
Degreaser TA-55-DG-1	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 2005. 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

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

Note: The TA-33-G-1 generator did not operate during 2005.

Source	Pollutant	Jan-June Emissions (ton)	July-Dec Emissions (ton)	Annual Emissions (ton)	Emission Limits
Standby Generators	TSP	0.1	0.2	0.3	No Source Specific Emission Limits for Standby Generators
	PM ₁₀	0.1	0.2	0.3	
	NO _x	2.9	4.0	7.0	
	CO	0.7	1.0	1.7	
	VOC	0.1	0.2	0.3	
	SO _x	0.7	0.9	1.5	
	HAPs	0.0	0.0	0.0	

Note 1: Standby Generators are insignificant sources. Insignificant source information is provided to demonstrate compliance with PSD applicability thresholds.

Note 2: Emissions shown for Jan-June are slightly lower than originally reported due to a correction to one of the generator meter readings after the report was submitted.

2.8.a Paper Shredder

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limit (Permit Condition 2.8.2.1) (ton per year)
Paper Shredder TA-52-11	TSP	0.00	0.00	0.00	13

Note: The paper shredder was shutdown in July 2004 and was replaced with a new data disintegrator (see data disintegrator - section 2.8.b).

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2.8.b Data Disintegrator (Unit replaced paper shredder)

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (NSR Permit No. 2195-H) (ton)
Data Disintegrator TA-52-11	TSP	0.20	0.12	0.32	9.9
	PM ₁₀	0.18	0.11	0.29	9.9

Note: The data disintegrator was started on August 18, 2004, and replaced the old paper shredder. This unit and its allowable emissions were included in LANL's Title V operating permit application modification submitted to NMED on July, 2005. The data disintegrator was installed under Air Quality Permit No. 2195-H. The emissions from this unit are included in the facility-wide total.

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

Source	Pollutant	January - June Emissions (ton)	July - December Emissions (ton)	Annual Emissions (ton)	Emission Limits (Permit Condition 2.9.2) 12 mo. rolling total (ton)	Emission Limits (NSR Permit No. 2195BM1) 12 mo. rolling total (ton)
Power Plant Boilers TA-3-22	NO _x	8.8	7.5	16.3	99.6	60.2
	SO ₂	0.1	0.1	0.2	36.9	7.9
	TSP	1.2	1.0	2.1	15.7	8.4
	PM ₁₀	1.2	1.0	2.1	15.7	8.2
	CO	6.1	5.1	11.2	81.3	41.3
	VOC	0.8	0.7	1.5	11.1	5.6
	HAPs	0.3	0.2	0.5	No Source Limit	No Source Limit

Note: The allowable emission limits from Air Quality Permit No. 2195BM1 are included above. This permit was issued on July 30, 2004, for the installation of a combustion turbine. Installation of the turbine is not yet complete. These limits are the most current applicable limits for the power plant boilers. These new limits will be included in the next LANL Title V operating permit modification.

2.10 Rock Crusher

The Rock Crusher was not used in 2005. The unit was retired June 10, 2004.