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.

Form 836 (7/06)

ENCLOSURE



New Mexico Environment Department Air Quality Bureau Compliance and Enforcement Section 2048 Galisteo



Date Reviewed:

Santa Fe, NM 87505 Phone (505) 827-1494

PLEASE NOTE: ® - Indicates required field SECTION I - GENERAL COMPANY AND FACILITY INFORMATION © Company Name: Los Alamos National Security © Company Address: P.O. Box 1663 MS J978 © City: Los Alamos © Company Environmental Contact: Dianne Wilbum © Phone Number: Dianne Wilbum © Fax Number: Dianne Wilbum					Fax (505) 8	327-1523						
Staff Admin	Version 11.22.06				7 (177	N # T P	700 4 #	EOD34		MMET	LISE OF	
PLEASE NOTE: 6 - Indicates required field SECTION I - GENERAL COMPANY AND FACILITY INFORMATION © Company Name: Los Alamos National Security © Company Address: O Facility Address: Same as Company Ø Company Address: O Facility Address: Same as Company Ø Company Environmental Contact: O Title: Dianne Wilbum Ø Fax Number: Ø Fax Number: Ø Fax Number: Ø Fax Number: Ø Fone Number: Ø Fax N			KEPO	KIIN(<u> </u>		IAL	<u> FORM</u>				
SECTION I - GENERAL COMPANY AND FACILITY INFORMATION © Company Name: Los Alamos National Security © Company Address: P. O. Box 1653 Same as Company Same as								}		_		
© Company Address:	PLEASE NOTE: ® - India	ates require	ed field						AC	<u> </u>		
Los Alarmos National Security	SECTION I - GENER	AL COM	PANY AND	FACILIT	Y INFOR	MATIO	N				<u> </u>	
© Company Address: P.O. Box 1653 MS J978 © State: © Zip: NM J978 © City: © State: © Zip: Los Alamos © Compliance Value © Facility Contact: © Title: Team Leader - Compliance Dennen Wimbur © Fack Number: © Phone Number: © Fack Number: © Phone Number: © Fack Number: 0 Phone Number: © Fack Number: 0 Phone Number: © Fack Number: 0 Fack Number:	® Company Name:					B	•					
Same as Company Same as Company		ırity										
MS J978 © City:												
Scriptions Scription State: 22ip: NM 27545 Section(s): State: 22ip: NM 27545 Section(s): State: 22ip: Section(s): State: 22ip: Section(s): State: 22ip: Section(s): State: Section(s): S					'	Same	as Comp	any				
Los Alamos © Company Environmental Contact: © Title:			Ø State:	♠ 7in:		O City	. —		100	toto:	@ Zin:	
B Company Environmental Contact: EAG Group Leader Steve Story Steve Steve Story Steve Story Steve Ste	•						•		•	tate.	w zip.	
Dianne Wilbum		al Contact:				® Fac	lity Con	 tact:	0	ltie:		
© Phone Number: 505 685 858 © Email Address: dianne@intl.gov Responsible Official: (Title V only): Richard S. Watkins Al Number: Title V Permit Number: Title V Permit Number: Title V Permit Number: Sob 685 8158 Phone Number: Sob 685 8858 © Email Address: dianne@intl.gov Responsible Official: (Title V only): Richard S. Watkins Al Number: Title V Permit Number: Title V Permit Number: Sob 685 3811 NSR Permit Number: Sob 685 3811 NSR Permit Number: Sob 685 3811 NSR Permit Issue Date: Various NSR Permit Issue Date: September 17, 2007 Intel® V Annual Compliance Certification Description: Title V Semi-annual Monitoring Report Regulation: Regulation: Description: Test Protocol Test Report Other Description: NMAC Requirement (40CFR63) Test Protocol Test Report Other Description: NMAC Requirement (20,2,xx) or NESHAP Requirement (20,2,xx) or NESHAP Requirement Test Protocol Test Report Other Description: Permit No: Perm			EAQ Group	Leader								liance
© Email Address: disnine@lant.gov Seponsible Official: (Title V only): Richard S. Walkins Associate Director ESH&Q Associate Director ESH&Q Phone Number: 505 667 4218 Phone Number: 505 665 74218 Sob 665 3811 Phone Number: 505 667 4218 Phone Number: 506 667 4218 Phone Numb	® Phone Number:		_					ber:				
Section Sect			505 565 885	8						665 88	58	
Responsible Official: (Title V only):								_				
Associate Director ESHAQ S05 667 4218 S05 665 3811 S05 665 3811 S01 A Number: Title V Permit Number: S05 Various Vario		tie V only):	Title:						Fa	x Numb	er:	
Section Proposed			Associate D	Director ESH8	LQ	505 66			50			
Date of Submittal: September 17, 2007 January 1, 2007 - June 30, 2007 OR Proposed Test Date: OR Actual Test Date: September 17, 2007 January 1, 2007 - June 30, 2007 OR Proposed Test Date: OR Actual Test Date: Section II - TYPE OF SUBMITTAL (check one that applies)			nit Number:			sue Dat						ue Date:
A.	Date of Submittal:			IO 2007		OR	Propos	ed Test Date:	OR	Actua	Test Dat	D:
A.												
Compliance Certification Compliance Certification	SECTION II - TYPE (OF SUBMI	ITTAL (che	ck one th	at applie	es)						
Monitoring Report Regulation: Section(s): Description:												
C. NSPS Requirement (40CFR60) Test Protocol Test Report Other D. MACT Requirement (40CFR63) Test Protocol Test Report Other E. NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61) Test Protocol Test Report Other F. Permit Requirement Permit No: Condition(s): Description: F. Permit Requirement Permit No: Condition(s): Test Protocol Test Report Other G. Requirement Agreement NOV or SFO No: Section(s): Description: Test Protocol Test Report Other Other Section(s): Description: Title V Semi-Annual Emissions Report Test Protocol Test Report Other Section(s): Description: Test Protocol Test Report Other Section(s): Description: Section(s): Description: Test Protocol Test Report Other Section(s): Description: Section(s): Description: Test Protocol Test Report Other Section(s): Description: Section(s): Descrip	B		Permit Cond	iltion(s):	Description	on:						
Test Protocol Test Report Other Description: D. MACT Requirement (40CFR63) Test Protocol Test Report Other Description: Test Protocol Test Report Other Description: E. MMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61) F. Permit Requirement Permit No.: Pother Description: F. Permit Requirement Other Description: Test Protocol Test Report Other Title V Semi-Annual Emissions Report Test Protocol Test Report Other Description: Test Protocol Test Report Description: Title V Semi-Annual Emissions Report Description: Title V Semi-Annual Emissions Report Description: Test Protocol Test			Regulation:		Section(s	i):		Description:				
D. MACT Requirement (40CFR63)	(40CFF	(60)	Test Protoc	oi Tes	t Report	7 Ot	her					
Test Protocol Test Report Other Description:								Description:				
Test Protocol Test Report Other Description: NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61) Test Protocol Test Report Other Description:												
NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61) Test Protocol Test Report Other Description: F. Permit Requirement Permit No.: P100M1 4.1 Title V Semi-Annual Emissions Report Test Protocol Test Report Other Description: Title V Semi-Annual Emissions Report Test Protocol Test Report Other Description: Description: Title V Semi-Annual Emissions Report Test Protocol Test Report Other Description: Descri	(40CFF	(63)	Test Protor	ol Tee	t Report F	7 0+	her 🗀	1				
Requirement (20.2.xx) or NESHAP Requirement (20.2.xx) or NESHAP Requirement (40CFR61) Test Protocol				- 100				Description:				
Requirement (40CFR61) Test Protocol Test Report Other		lirement				••						
Permit Requirement Permit No.: P100M1 Test Protocol Test Report Other Other Title V Semi-Annual Emissions Report Test Protocol Test Protocol Test Report Other Other Description: Title V Semi-Annual Emissions Report Test Protocol Test Protocol Test Report Other Other Section(s): Description: Test Protocol Test Protocol Test Report Other Other Other Section(s): Test Protocol Test Report Other Other Other Other Section(s): Test Protocol Test Report Other Other Other Other Other Other Other Section(s): Test Protocol Test Report Other			Toot Brots	ol□ ₹==	· Banad F	7 ^4	her 🗆	1				
F. Permit Requirement P100M1 4.1 Title V Semi-Annual Emissions Report Description: Requirement of a Settlement Agreement or Compliance Order Test Protocol Test Report Other SECTION III - CERTIFICATION After reasonable inquiry, I Victoria A. George certify that the information in this submittal is true, accurate and complete. Signature of Reporting Official: Title V Semi-Annual Emissions Report Description: Description: Test Protocol Test Report Other Test Protocol Test Report				168			iei 🗀	Descriptions				
Test Protocol Test Report Other Description: Requirement of a Settlement Agreement or Compliance Order Test Protocol Test Report Other Description:					[K B);		Description:				
Requirement of a Settlement Agreement or Compliance Order Test Protocol Test Report Other SECTION III - CERTIFICATION After reasonable inquiry, I Victoria A. George certify that the information in this submittal is true, accurate and complete. Signature of Reporting Official: Signature of Reporting Official: Test Protocol Test Report Other Test Protocol	F. 🔀 Permit Requ	uirement	_ 			Title \		Title V Semi-Annual Emissions Report				
G. Requirement of a Settlement Agreement or Compliance Order Test Protocol Test Report Other SECTION III - CERTIFICATION After reasonable inquiry, I Victoria A. George certify that the information in this submittal is true, accurate and complete. Signature of Reporting Official: Signature of Reporting Official: Test Protocol Test Report Other							her 🔀	ļ				
Settlement Agreement or Compliance Order Test Protocol Test Report Other SECTION III - CERTIFICATION After reasonable inquiry, I Victoria A. George (name of reporting official) Signature of Reporting Official:	Requireme	ent of a	NOV or SFO	No.:	Section(s):		Description:				
SECTION III - CERTIFICATION After reasonable inquiry, I Victoria A. George certify that the information in this submittal is true, accurate and complete. (name of reporting Official) (Signature of Reporting Official) (Signature of Reporting Official) (Signature of Reporting Official)	G. Settlement Agreement											
After reasonable inquiry, I Victoria A. George certify that the information in this submittal is true, accurate and complete. © Signature of Reporting Official: © Title: Environment Proceeding Official: © Responsible Official for Title:	or Compliance Order Test Protocoi Test Report Other											
After reasonable inquiry, I Victoria A. George certify that the information in this submittal is true, accurate and complete. © Signature of Reporting Official: © Title: Environment Proceeding Official: © Responsible Official for Title:	SECTION III CERT	IEICATIO										
© Signature of Reporting Official: © Title: Environment Protection © Date © Responsible Official for Title:				enrae	certify th	at the in	formatic	on in this submitte	l is true	accur:	ate and co	
Environmental Meteurna		(n		official)			., o, iiiail					
	Signature of Reporting	Official:	7/	® Title:	in ment	J PA	techni	h '	,	® Res	sponsible O	ificial for Title \
	////		//	Dus	icina 1			9/17/	07		Yes	⊠ No

Reviewed By:

ENCLOSURE

Title V Operating Permit Semi-Annual Emission Report January 1, 2007 – June 30, 2007

skátkatika – magy tehékistikatokakakok		
Source Name: Los Alamos National Laboratory	County: Los A	Alamos
Source Address: City: Los Alamos	State: <u>NM</u>	Zip Code: <u>87545</u>
Responsible Official: Victoria A. George Technical Contact: Steven L. Story Principal Company Product or Business: National Sec	Ph No. (505) 667-22 Ph No. (505) 665-2169 Fax No. (505) 665-2169 Fax No. (505) 605-2169 Fax	11 Fax No. (505) 665-8858 05) 665-8858 Primary SIC Code: 9711
Permit No. P100M1 {IDEA/Tempo ID No. 856}	Permit	Issued Date: <u>June 15, 2006</u>
िक्सावृहेद्देशकाहरूका का विन्तृतिहरू अस्ववादकाहरू आहर्	है। दिशाहरम्बाद्यस्य स्थाः	y w y construction of the
I, <u>Victoria A. George</u> certify that, based on and information in the attached semi-annual emission	information and belief formed after reas report are true, accurate, and complete.	sonable inquiry, the statements
Signature	Date	:9/12/07
Title: Division Leader, Environmental Protection Di	vision	

ENCLOSURE

3

. . .

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

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
СО	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.

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	Beryllium	< 1.495			2.99 gm/yr
wachining Operation	Aluminum	< 1.495			2.99 gm/yr
Foundry Operation ⁽⁴⁾	Beryllium	0			8.73 x 10 ⁻⁴ gm/yr
Foundry Operation 7	Aluminum	0			8.73 x 10 ⁻⁴ gm/yr
Beryllium Total	⁽⁵⁾ (tons) =	< 1.66E-06			
Aluminum Total (tons) =		< 1.65E-06			(2)

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
SO ₂	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.

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			Course limite refer to
HAPs	3.0			Source limits refer to facility-wide limits. (See Facility Emissions Table on Page 1)
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
HAPs	0.005			Facility Emissions Table on Page 1)

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.

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)
NOx	0.000			18.1
so _x	0.000			2.5
TSP	0.000			0.6
PM ₁₀	0.000			0.6
СО	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
NOx	3.52			
SOx	0.10			
TSP	0.14			No Source Specific
PM ₁₀	0.14			Emission Limits for
СО	0.83			Standby Generators
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
PM10	0.26			9.9

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