



Environment Safety & Health Directorate
Los Alamos National Laboratory
 PO Box 1663, K491
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 (505) 667-4218

National Nuclear Security Administration
Los Alamos Field Office
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 Los Alamos, New Mexico, 87545
 (505) 667-5105/Fax (505) 667-5948

Date: **SEP 12 2018**

Symbol: ADESH: 18-061

LA-UR: 18-28268

Locates Action No.: NA

Mr. Ralph Gruebel
 Manager, Compliance and Enforcement Section
 New Mexico Environment Department, Air Quality Bureau
 525 Camino de los Marquez, Suite 1
 Santa Fe, NM 87505-1816

Subject: Semi-Annual Emissions Report for Los Alamos National Laboratory, AI No. 856, Title V Operating Permit P100-R2M1 and P100-R2M2 for January 1 – June 30, 2018

Dear Mr. Gruebel:

Enclosed is Los Alamos National Laboratory's Semi-Annual Emissions Report for the first half of 2018 for Operating Permit P100-R2M1 which became effective February 3, 2017, and P100-R2M2, which consisted of an administrative change to the Owner and Operator, effective May 7, 2018. This Semi-Annual Emissions Report covers the January 1 – June 30, 2018 reporting period. We are submitting one Semi-Annual Emissions Report for the six month period, and two Report Certifications, and Report Submittal Forms. One Report Certification and Report Submittal Form for the period January 1 – May 6, 2018 (P100-R2M1) signed by the Los Alamos National Security, LLC (LANS) Responsible Official, and separate Report Certification and Report Submittal Forms for the period May 7 – June 30, 2018 (P100-R2M2) signed by the National Nuclear Security Administration, Los Alamos Site Office (NNSA-LASO) Responsible Official.

This submission is required by permit condition A109.B. of the Title V Operating Permit P100-R2M1/M2, and is submitted within 90 days following June 30, 2018, the end of the six month reporting period.

The Semi-Annual Emissions report includes actual emissions from permitted sources included in LANL's Operating Permit. In this report, the 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.

If you have questions or comments regarding this submittal or would like to discuss this submittal in greater detail, please contact Steven L. Story at (505) 665-2169 or Adrienne Nash, NA-LA at (505) 665-5026.

Sincerely,



William R. Mairson
Associate Director

Sincerely,



William S. Goodrum
Manager

WRM/WSG/SLS/WWW:jdm

Enclosure: 1) LANL Title V Semi-Annual Emissions Report for AI 856/P100-R2M1 and P100-R2M2,
January 1-June 30, 2018.

Copy: Adrienne L. Nash, LASO-NS-LP, (E-File)
Hai Shen, EM-SG, (E-File)
Annette E. Russell, EM-LA, (E-File)
Frazer R. Lockhart, N3B, (E-File)
Christian T. Maupin, N3B, (E-File)
Richard M. Kacich, DIR, (E-File)
Craig S. Leasure, PADOPS, (E-File)
John Bretzke, ADESH, (E-File)
Enrique Torres, EPC-DO, (E-File)
Jennifer Payne, EPC-DO, (E-File)
Taunia Van Valkenburg, EPC-CP, (E-File)
Steven L. Story, EPC-CP, (E-File)
Walter W. Whetham, EPC-CP, (E-File)
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[EPC-CP Title V Monitoring Report File](#)



**New Mexico Environment Department
Air Quality Bureau
Compliance and Enforcement Section
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505**



Version 04.04.18

Phone (505) 476-4300 Fax (505) 476-4375

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REPORTING SUBMITTAL FORM

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PLEASE NOTE: ® - Indicates required field

SECTION I - GENERAL COMPANY AND FACILITY INFORMATION								
A. ® Company Name: Los Alamos National Security, LLC				D. ® Facility Name: Los Alamos National Laboratory				
B.1 ® Company Address: P.O Box 1663 MS J978				E.1 ® Facility Address: Same as Company				
B.2 ® City: Los Alamos		B.3 ® State: NM	B.4 ® Zip: 8 7 5 4 5		E.2 ® City:		E.3 ® State:	E.4 ® Zip:
C.1 ® Company Environmental Contact: Taunia S. Van Valkenburg		C.2 ® Title: EPC-CP Group Leader		F.1 ® Facility Contact: Steven L. Story		F.2 ® Title: Air Quality Compliance Team Leader		
C.3 ® Phone Number: (505) 665-9827		C.4 ® Fax Number: (505) 665-8858		F.3 ® Phone Number: (505) 665-2169		F.4 ® Fax Number: (505) 665-8858		
C.5 ® Email Address: tauniav@lanl.gov				F.5 ® Email Address: story@lanl.gov				
G. Responsible Official: (Title V only): William R. Mairson			H. Title: Associate Director for ESH		I. Phone Number: (505) 667-4218		J. Fax Number: (505) 665-3811	
K. ® AI Number: 856		L. Title V Permit Number: P100-R2M1		M. Title V Permit Issue Date: Feb 3, 2017		N. NSR Permit Number: 2195		O. NSR Permit Issue Date: Various
P. Reporting Period: From: January 1, 2018 To: May 6, 2018								

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:
D. <input type="checkbox"/>	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:
E. <input type="checkbox"/>	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:
F. <input checked="" type="checkbox"/>	Permit or Notice of Intent (NOI) Requirement	Permit No. <input checked="" type="checkbox"/> : or NOI No. <input type="checkbox"/> : P100-R2M1	Condition(s): A109 B	Description: LANL Semi-Annual Emissions Report for January 1 - May 6, 2018
G. <input type="checkbox"/>	Requirement of an Enforcement Action	NOV No. <input type="checkbox"/> : or SFO No. <input type="checkbox"/> : or CD No. <input type="checkbox"/> : or Other <input type="checkbox"/> :	Section(s):	Description:

SECTION III - CERTIFICATION			
After reasonable inquiry, I <u>William R. Mairson</u> certify that the information in this submittal is true, accurate and complete. <small>(name of reporting official)</small>			
® Signature of Reporting Official: 		® Title: Associate Director for ESH	® Date: 9-12-18
		® Responsible Official for Title V? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Reviewed By: _____

Date Reviewed: _____



**New Mexico Environment Department
Air Quality Bureau
Compliance and Enforcement Section
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505
Phone (505) 476-4300 Fax (505) 476-4375**



Version 04.04.18

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REPORTING SUBMITTAL FORM

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Staff	
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PLEASE NOTE: @ - Indicates required field

SECTION I - GENERAL COMPANY AND FACILITY INFORMATION					
A. @ Company Name: U.S. Department of Energy, National Nuclear Security Administration			D. @ Facility Name: Los Alamos National Laboratory		
B.1 @ Company Address: P.O Box 1663 MS A316			E.1 @ Facility Address: P.O.Box 1663, MS J978		
B.2 @ City: Los Alamos	B.3 @ State: NM	B.4 @ Zip: 8 - 7 5 4 5	E.2 @ City: Los Alamos	E.3 @ State: NM	E.4 @ Zip: 87545
C.1 @ Company Environmental Contact: Adrienne L. Nash		C.2 @ Title:		F.1 @ Facility Contact: Steven L. Story	
C.3 @ Phone Number: (505) 665-5026		C.4 @ Fax Number: (505) 667-9998		F.3 @ Phone Number: (505) 665-2169	
C.5 @ Email Address: adrienne.nash@nnsa.doe.gov			F.5 @ Email Address: story@lanl.gov		
G. Responsible Official: (Title V only): William S. Goodrum		H. Title: Manager, NNSA-LASO		I. Phone Number: (505) 667-5015	
J. Fax Number: (505) 667-9998		K. @ AI Number: 856		L. Title V Permit Number: P100-R2M2	
M. Title V Permit Issue Date: May 7, 2018		N. NSR Permit Number: 2195		O. NSR Permit Issue Date: Various	
P. Reporting Period: From: May 7, 2018 To: June 30, 2018					

SECTION II - TYPE OF SUBMITTAL (check one that applies)				
<input type="checkbox"/>	Title V Annual Compliance Certification	Permit Condition(s):	Description:	
<input type="checkbox"/>	Title V Semi-Annual Monitoring Report	Permit Condition(s):	Description:	
<input type="checkbox"/>	NSPS Requirement (40CFR60)	Regulation:	Section(s):	Description:
<input type="checkbox"/>	MACT Requirement (40CFR63)	Regulation:	Section(s):	Description:
<input type="checkbox"/>	NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)	Regulation:	Section(s):	Description:
<input checked="" type="checkbox"/>	Permit or Notice of Intent (NOI) Requirement	Permit No. <input checked="" type="checkbox"/> or NOI No. <input type="checkbox"/> P100-R2M2	Condition(s): A 109 B	Description: LANL Semi-Annual Emissions Report for May 7 - June 30, 2018
<input type="checkbox"/>	Requirement of an Enforcement Action	NOV No. <input type="checkbox"/> or SFO No. <input type="checkbox"/> or CD No. <input type="checkbox"/> or Other <input type="checkbox"/>	Section(s):	Description:

SECTION III - CERTIFICATION			
After reasonable inquiry, I <u>William S. Goodrum</u> certify that the information in this submittal is true, accurate and complete. (name of reporting official)			
@ Signature of Reporting Official: 	@ Title: Manager, NNSA-LASO	@ Date: 9-25-18	@ Responsible Official for Title V? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Reviewed By: _____

Date Reviewed: _____

Title V Semi-Annual Emissions Report for Permit P100-R2M1

January 1, 2018 – May 6, 2018

Identifying Information

Source Name: Los Alamos National Laboratory County: Los Alamos

Source Address:

City: Los Alamos State: NM Zip Code: 87545

Responsible Official: William R. Mairson Ph No. (505) 667-4218 Fax No. (505) 665-3811

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: 8733

Permit No. P100-R2M1, January 1, 2018 – May 6, 2018 {IDEA/Tempo ID No. 856} Permit Issued Date: Feb. 3, 2017

Certification of Truth, Accuracy, and Completeness

I, William R. Mairson 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:

9-12-18

Title: Associate Director Environmental, Safety, and Health

Title V Semi-Annual Emissions Report for Permit P100-R2M2

May 7, 2018 – June 30, 2018

Identifying Information

Source Name: Los Alamos National Laboratory County: Los Alamos

Source Address:

City: Los Alamos State: NM Zip Code: 87545

Responsible Official: William S. Goodrum Ph No. (505) 667-5015 Fax No. (505) 667-9998

Technical Contact: Steven L. Story Ph No. (505) 665-2169 Fax No. (505) 665-8858

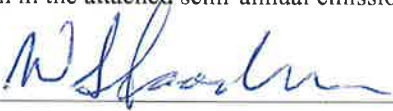
Principal Company Product or Business: National Security and Nuclear Weapons Research Primary SIC Code: 8733

Permit No. P100-R2M2, May 7, 2018 – June 30, 2018 {IDEA/Tempo ID No. 856} Permit Issued Date: May 7, 2018

Certification of Truth, Accuracy, and Completeness

I, William S. Goodrum 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:

9-25-18

Title: Manager, NNSA-LASO

ENCLOSURE 1

LANL Title V Semi-Annual Emissions Report for
AI 856 Permit P100-R2M1 and P100-R2M2
January 1, 2018 – June 30, 2018

ADESH: 18-061

LA-UR-18-28268

SEP 12 2018

Date: _____

**Title V Semi-Annual Emissions Report
AI 856, Permits P100-R2M1 and P100-R2M2
January 1, 2018 - June 30, 2018**

Emission Reporting Requirements

A109 Facility: Reporting Schedules

- A. A Semi-Annual Report of monitoring activities is due within 45 days following the end of every 6-month reporting period. The six month reporting periods start on January 1st and July 1st of each year.

- B. A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NO_x, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Specific Emissions Reports:

A600 Asphalt Production

A602 Emission Limits - Asphalt Production

Unit No.	Nox tpy	SO ₂ tpy	PM tpy	CO tpy	VOC tpy
TA-60-BDM	50.0	50.0	50.0	30.0	50.0

Reporting Requirement

A607 F The permittee shall submit reports described in Section A109 and in accordance with B110.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NO_x, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No

Provide comments and identify any supporting documentation as an attachment.

Comments:

Asphalt Plant TA-60-BDM	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A602 A) (tons per year)
NO _x	0.0027			50.0
SO ₂	0.0010			50.0
PM	0.0016			50.0
CO	0.0942			30.0
VOC	0.0018			50.0
HAPs	0.0017			No Source Permit Limit

A700 Beryllium Activities

A702 Emission Limits - Beryllium Activities

Source	Beryllium Particulate Matter	Aluminum Particulate Matter
Sigma Facility TA-3-66	10 gm/24 hr	N/A
Beryllium Technology Facility TA-3-141	3.5 gm/yr	N/A
Target Fabrication Facility TA-35-213	0.36 gm/yr	N/A
Plutonium Facility TA-55-PF-4 Machining Operation	2.99 gm/yr	2.99 gm/yr
Plutonium Facility TA-55-PF-4 Foundry Operation	8.73X10 ⁻⁰⁴ gm/yr	8.73X10 ⁻⁰⁴ gm/yr

Reporting Requirement

A707 D The permittee shall submit reports described in Section A109 and in accordance with B110.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NO_x, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments: To meet condition of 5.f in NSR permit #634-M2, LANL submitted the following quarterly beryllium emissions reports for the Beryllium Technology Facility: first quarter report, April 18, 2018 (SBR20180006) and second quarter report, August 17, 2018 (SBR20180008).

Continued on the next page

A700 Beryllium Activities - continued

Comments:

Source	Pollutant	January - June Emissions	July - December Emissions	Annual Emissions	Permit Limits (Condition A702 A)
Sigma Facility TA-3-66 ⁽¹⁾	Beryllium (grams)	0.020			10 gm/24 hr
Beryllium Technology Facility TA-3-141 ⁽²⁾	Beryllium (grams)	3.17E-03			3.5 gm/yr
Target Fabrication Facility TA-35-213 ⁽³⁾	Beryllium (grams)	< 0.00944			0.36 gm/yr
Plutonium Facility TA-55-PF4 Machining Operation ⁽⁴⁾	Beryllium (grams)	< 1.495			2.99 gm/yr
	Aluminum (grams)	< 1.495			2.99 gm/yr
Plutonium Facility TA-55-PF4 Foundry Operation ⁽⁵⁾	Beryllium (grams)	0			8.73×10^{-4} gm/yr
	Aluminum (grams)	0			8.73×10^{-4} gm/yr
Beryllium Total⁽⁵⁾ (tons) =		< 1.69E-06			
Aluminum Total (tons) =		< 1.65E-06			

Notes: (1) Emissions from the Sigma Facility are from electroplating, chemical milling, and metallographic operations. (2) Emission values shown for the Beryllium Technology Facility are from actual stack emission measurements which are submitted to NMED quarterly. (3) 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. (4) 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. (5) The Plutonium Facility foundry operations did not operate during the first 6 months of 2018.

A800 External Combustion

A802 Emission Limits - External Combustion

Unit No.	NOx tpy	CO tpy	VOC tpy	SO ₂ tpy	TSP tpy	PM ₁₀ tpy
All Boilers	80.0	80.0	50.0	50.0	50.0	50.0

Unit No.	NOx tpy	CO tpy	SO ₂ tpy	TSP tpy	PM ₁₀ tpy	PM _{2.5} tpy
RLUOB-BHW-1 (gas)	2.9	4.8	0.3	0.4	0.4	0.4
RLUOB-BHW-2 (gas)	2.9	4.8	0.3	0.4	0.4	0.4
RLUOB-BHW-3 (gas)	2.9	4.8	0.3	0.4	0.4	0.4
RLUOB-BHW-4 (gas)	2.9	4.8	0.3	0.4	0.4	0.4
RLUOB Boilers (oil)	2.9	0.9	10.4	0.5	0.3	0.3
RLUOB Boilers Total	14.5	20.1	11.6	2.1	1.9	1.9

Reporting Requirement

A807 B The permittee shall submit reports described in Section A109 and in accordance with B110.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NO_x, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

Boilers	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A802 A) (tons per year)
NO _x	10.98			80
SO ₂	0.07			50
TSP	0.88			50
PM-10	0.88			50
CO	8.86			80
VOCs	0.63			50
HAPs	0.21			No Source Limit

Note: The emissions shown in this table includes all exempt, non-exempt, metered, and non-metered boilers at LANL except for the TA-3-22 Power Plant boilers. The Power Plant boilers can be found under Section A1300 of this report.

Continued on the next page

A800 External Combustion - continued

RLUOB-BHW-1 (Gas)	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A802 B) (tons per year)
NOx	0.0056			2.9
SO ₂	0.0001			0.3
TSP	0.0009			0.4
PM-10	0.0009			0.4
PM-2.5	0.0009			0.4
CO	0.0072			4.8
VOCs	0.0048			No Source Limit
HAPs	3.55E-04			No Source Limit

RLUOB-BHW-2 (Gas)	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A802 B) (tons per year)
NOx	0.0056			2.9
SO ₂	0.0001			0.3
TSP	0.0009			0.4
PM-10	0.0009			0.4
PM-2.5	0.0009			0.4
CO	0.0072			4.8
VOCs	0.0048			No Source Limit
HAPs	3.55E-04			No Source Limit

RLUOB-BHW-3 (Gas)	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A802 B) (tons per year)
NOx	0.0056			2.9
SO ₂	0.0001			0.3
TSP	0.0009			0.4
PM-10	0.0009			0.4
PM-2.5	0.0009			0.4
CO	0.0072			4.8
VOCs	0.0048			No Source Limit
HAPs	3.55E-04			No Source Limit

RLUOB-BHW-4 (Gas)	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A802 B) (tons per year)
NOx	0			2.9
SO ₂	0			0.3
TSP	0			0.4
PM-10	0			0.4
PM-2.5	0			0.4
CO	0			4.8
VOCs	0			No Source Limit
HAPs	0			No Source Limit

Note: The RLUOB-BHW-4 boiler has not been installed.

Continued on the next page.

A800 External Combustion - continued

RLUOB Boilers Totals (Oil)	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A802 B) (tons per year)
NOx	0			2.9
SO ₂	0			10.4
TSP	0			0.5
PM-10	0			0.3
PM-2.5	0			0.3
CO	0			0.9
VOCs	0			No Source Limit
HAPs	0			No Source Limit

Note: The RLUOB boilers did not operate on fuel oil during the first 6 months of 2018.

RLUOB Boilers Totals (Gas and Oil)	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A802 B) (tons per year)
NOx	0.0168			14.5
SO ₂	0.0003			11.6
TSP	0.0028			2.1
PM-10	0.0028			1.9
PM-2.5	0.0028			1.9
CO	0.0215			20.1
VOCs	0.0145			No Source Limit
HAPs	1.07E-03			No Source Limit

A900 Chemical Usage

A902 Emission Limits - Chemical Usage

Unit No.	VOC/HAPs tpy
LANL-FW-CHEM	2.1
CMRR-CHEM	3.75

1 The VOC emissions from this source category are included in the facility-wide allowable emissions limit established in Table 106.B: 200 tpy VOC, 8.0 tpy per individual HAP, and 24.0 tpy of combined total HAPs. Any VHAPs that are also defined as a VOC shall be included in the VOC total.

Reporting Requirement

A907 A The permittee shall submit reports described in Section A109 and in accordance with B110. With respect to individual HAPs, reports shall include any HAP emitted in quantity greater than 0.5 tons per year.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NOx, CO, SO2, VOC, TSP, PM10, and PM2.5 shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

Chemical Usage LANL-FW-CHEM		January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A902 B)
VOCs		5.64			Source limits refer to facility-wide limits.
HAPs		3.07			
Individual HAPs greater than 0.5 tons	Hydrochloric Acid	0.70			
	Methanol	0.57			

Chemical Usage CMRR-CHEM		January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A902 B)
HAPs		0.0124			3.75
VOCs		0.0034			3.75
TAPs		0.0369			No Source Limit

A1000 Degreasers

A1002 Emission Limits - Degreasers

Unit No.	VOC/HAPs tpy
TA-55-DG-1	200

1 The VOC emissions from this source category are included in the facility-wide allowable emissions limit established in Table 106.B: 200 tpy VOC, 8.0 tpy per individual HAP, and 24.0 tpy of combined total HAPs. Any VHAPs that are also defined as a VOC shall be included in the VOC total.

Reporting Requirement

A1007 A The permittee shall submit reports described in Section A109 and in accordance with B110.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NO_x, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No

Provide comments and identify any supporting documentation as an attachment.

Comments:

Degreaser TA-55-DG-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1002 A) (tons per year)
VOCs	0			Source limits refer to facility-wide limits.
HAPs	0			

Note: The TA-55-DG-1 degreaser did not operate during the first 6 months of 2018.

A1100 Internal Combustion

A1102 Emission Limits - Internal Combustion

Unit No.	NOx tpy	CO tpy	VOC tpy	SO ₂ tpy	TSP tpy	PM ₁₀ tpy
TA-33-G-1P	18.1	15.2	0.3	2.5	0.6	0.6
TA-33-G-2	0.21	0.1	-- ¹	--	--	--
TA-33-G-3	0.21	0.1	-- ¹	--	--	--
TA-33-G-4	2.33	1.4	0.2	0.16	--	--

¹ The VOC emissions from this source category are included in the facility-wide allowable emissions limit established in condition 106.B: 200 tpy VOC, 8.0 tpy per individual HAP, and 24.0 tpy of combined total HAPs.

Reporting Requirement

A1107 A The permittee shall comply with all applicable reporting requirements of 40 CFR 60, Subpart A as required in 60.4218 and in accordance with Section B110.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NOx, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

Generator TA-33-G-1P	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1102 A) (tons per year)
NOx	0.0157			18.1
SO ₂	0.0004			2.5
TSP	0.0005			0.6
PM ₁₀	0.0005			0.6
CO	0.0016			15.2
VOC	0.0011			0.3
HAPs	4.53E-06			No Source Limit

Generator TA-33-G-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1102 A) (tons per year)
NOx	5.21E-05			0.21
SO ₂	3.58E-06			Not Required
TSP	3.58E-06			Not Required
PM ₁₀	3.58E-06			Not Required
CO	1.52E-05			0.1
VOC	4.13E-06			Not Required
HAPs	1.69E-08			No Source Limit

Continued on the next page.

A1100 Internal Combustion- continued

Generator TA-33-G-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1102 A) (tons per year)
NOx	0			0.21
SO ₂	0			Not Required
TSP	0			Not Required
PM ₁₀	0			Not Required
CO	0			0.1
VOC	0			Not Required
HAPs	0			No Source Limit

Note: The TA-33-G-3 generator did not operate during the first 6 months of 2018.

Generator TA-33-G-4	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1102 A) (tons per year)
NOx	0.0234			2.33
SO ₂	0.0016			0.16
TSP	0.0016			Not Required
PM ₁₀	0.0016			Not Required
CO	0.0141			1.4
VOC	0.0019			0.2
HAPs	7.60E-06			No Source Limit

Generator RLUOB-GEN-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0			No Source Specific Emission Limits for the CMRR Generators
SO ₂	0			
TSP	0			
PM ₁₀	0			
CO	0			
VOC	0			
HAPs	0			

Note: The RLUOB-GEN-1 generator did not operate during the first 6 months of 2018.

Generator RLUOB-GEN-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.722			No Source Specific Emission Limits for the CMRR Generators
SO ₂	0.019			
TSP	0.042			
PM ₁₀	0.035			
CO	0.895			
VOC	0.102			
HAPs	2.07E-04			

Continued on the next page.

A1100 Internal Combustion- continued

Generator RLUOB-GEN-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.227			No Source Specific Emission Limits for the CMRR Generators
SO ₂	0.006			
TSP	0.013			
PM ₁₀	0.011			
CO	0.281			
VOC	0.032			
HAPs	6.51E-05			

Generator TA-48-GEN-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0			No Source Specific Emission Limits for the TA-48 Generator
SO ₂	0			
TSP	0			
PM ₁₀	0			
CO	0			
VOC	0			
HAPs	0			

Note: The TA-48-GEN-1 generator did not operate during the first six months of 2018.

Generator TA-55-GEN-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0			No Source Specific Emission Limits for the TA-55 Generators
SO ₂	0			
TSP	0			
PM ₁₀	0			
CO	0			
VOC	0			
HAPs	0			

Note: The TA-55-GEN-1 generator did not operate during the first six months of 2018.

Generator TA-55-GEN-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0			No Source Specific Emission Limits for the TA-55 Generators
SO ₂	0			
TSP	0			
PM ₁₀	0			
CO	0			
VOC	0			
HAPs	0			

Note: The TA-55-GEN-2 generator did not operate during the first six months of 2018.

Continued on the next page.

A1100 Internal Combustion- continued

Generator TA-55-GEN-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NO _x	0.1474			No Source Specific Emission Limits for the TA-55 Generators
SO ₂	0.0025			
TSP	0.0046			
PM ₁₀	0.0046			
CO	0.0322			
VOC	0.0046			
HAPs	2.68E-05			

A1200 Data Disintegrator

A1202 Emission Limits - Data Disintegrator

Unit No.	TSP tpy	PM10 tpy
TA-52-11	9.9	9.9

Reporting Requirement

A1207 A The permittee shall submit reports described in Section A109 and in accordance with B110.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NO_x, CO, SO₂, VOC, TSP, PM10, and PM2.5 shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

Data Disintegrator TA-52-11	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1202 A) (tons per year)
TSP	0.22			9.9
PM10	0.20			9.9

A1300 TA-3 Power Plant

A1302 Emission Limits - TA-3 Power Plant

All TA-3 Power Plant Boilers Combined (TA-33-1, TA-33-2, TA-33-3)						
NOx tpy	CO tpy	VOC tpy	SOx tpy	TSP tpy	PM ₁₀ tpy	PM _{2.5} tpy
31.5	21.5	2.8	4.9	4.7	4.4	4.2

TA-3 Power Plant Turbine (TA-3-22-CT-1)						
NOx tpy	CO tpy	VOC tpy	SOx tpy	TSP tpy	PM ₁₀ tpy	PM _{2.5} tpy
59.4	72.3	1.5	4.2	4.8	4.8	4.8

Reporting Requirement

A1307 A The permittee shall submit reports described in Section A109 and in accordance with B110.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NOx, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

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 A1302 A) (tons per year)
NOx	5.40			31.5
SO ₂	0.06			4.9
TSP	0.71			4.7
PM ₁₀	0.71			4.4
PM _{2.5}	0.71			4.2
CO	3.72			21.5
VOC	0.51			2.8
HAPs	0.18			No Source Limit

Combustion Turbine TA-3-22 CT-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limit (Condition A1302 A) (tons per year)
NOx	3.254			59.4
SOx	0.226			4.2
TSP	0.438			4.8
PM ₁₀	0.438			4.8
PM _{2.5}	0.438			4.8
CO	0.677			72.3
VOC	0.142			1.5
HAPs	0.089			No Source Limit

A1400 Open Burning

A1402 Emission Limits - Open Burning

Unit No.	Individual HAP ¹ (tpy)	Total HAPs ¹ (tpy)
Facility-Wide Open Burning	8.0	24.0

¹ Individual and Total HAPs emitted by Open Burning are included in facility-wide HAP emission limits at Table 106.B.

Reporting Requirement

A1407 A The permittee shall submit reports as outlined in the Condition 1407.A Requirements, as described in Section A109, and in accordance with Section B110.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NO_x, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources and the Soil Vapor Extraction equipment at Material Disposal Area L shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No

Provide comments and identify any supporting documentation as an attachment.

Comments:

No open burning activities took place during the first six months of 2018.

A1500 Evaporative Sprayers

A1502 Emission Limits - Evaporative Sprayers

Unit No.	HAPs tpy
TA-60-EVAP-1	.. 1
TA-60-EVAP-2	.. 3
TA-60-EVAP-3	.. 1
TA-60-EVAP-4	.. 3
TA-60-EVAP-5	.. 1

Hazardous air pollutants (HAPs) from the evaporative coolers are included in and subject to the individual and total HAP facility-wide emission limits in Table 106.B: 8.0 tpy per individual HAP, and 24.0 tpy of combined total HAPs.

Reporting Requirement

A1507 A The permittee shall submit reports described in Section A109 and in accordance with B111.

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NO_x, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No

Provide comments and identify any supporting documentation as an attachment.

Comments:

Evaporative Sprayer TA-60-EVAP-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1502 A) (tons per year)
Polychlorinated biphenyls	1.02E-09			Source limits refer to facility-wide limits.
Chloroform	4.71E-06			
Chloromethane	3.22E-06			
Bromoform	4.16E-06			
Cyanide Compounds	9.57E-06			
Manganese Compounds	3.46E-05			
Antimony Compounds	1.64E-05			
TOTAL HAPs	7.26E-05			

Evaporative Sprayer TA-60-EVAP-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1502 A) (tons per year)
Polychlorinated biphenyls	6.20E-10			Source limits refer to facility-wide limits.
Chloroform	2.85E-06			
Chloromethane	1.95E-06			
Bromoform	2.52E-06			
Cyanide Compounds	5.79E-06			
Manganese Compounds	2.09E-05			
Antimony Compounds	9.89E-06			
TOTAL HAPs	4.39E-05			

Continued on the next page.

A1500 Evaporative Sprayers - continued

Evaporative Sprayer TA-60-EVAP-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1502 A) (tons per year)
Polychlorinated biphenyls	0			Source limits refer to facility-wide limits.
Chloroform	0			
Chloromethane	0			
Bromoform	0			
Cyanide Compounds	0			
Manganese Compounds	0			
Antimony Compounds	0			
TOTAL HAPs	0			

Note: The TA-60-EVAP-3 evaporative sprayer did not operate during the first 6 months of 2018.

Evaporative Sprayer TA-60-EVAP-4	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1502 A) (tons per year)
Polychlorinated biphenyls	0			Source limits refer to facility-wide limits.
Chloroform	0			
Chloromethane	0			
Bromoform	0			
Cyanide Compounds	0			
Manganese Compounds	0			
Antimony Compounds	0			
TOTAL HAPs	0			

Note: The TA-60-EVAP-4 evaporative sprayer has not been installed.

Evaporative Sprayer TA-60-EVAP-5	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A1502 A) (tons per year)
Polychlorinated biphenyls	0			Source limits refer to facility-wide limits.
Chloroform	0			
Chloromethane	0			
Bromoform	0			
Cyanide Compounds	0			
Manganese Compounds	0			
Antimony Compounds	0			
TOTAL HAPs	0			

Note: The TA-60-EVAP-5 evaporative sprayer has not been installed.

A102 Facility Wide Emission Limits

Table 102.A: Total Potential Criteria Pollutant Emissions from Entire Facility

Pollutant	Emissions (tons per year)
Nitrogen Oxides (NOx)	245.0
Carbon Monoxide (CO)	225.0
Volatile Organic Carbons (VOC)	200.0
Sulfur Dioxide (SO ₂)	150.0
Total Particulate Matter (TSP)	120.0
Particulate Matter less than 10 microns (PM ₁₀)	120.0
Particulate Matter less than 2.5 microns (PM _{2.5})	120.0

Table 102.B: Total Potential HAPs that exceed 1.0 tons per year

Pollutant	Emissions (tons per year)
Individual HAP	8.0
Total HAPs	24.0

Reporting Requirement

A109 B A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of criteria pollutants NOx, CO, SO₂, VOC, TSP, PM10, and PM2.5 shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate reporting submittal? Answer Yes or No below.

Yes

Date report submitted:

Tracking Number:

No Provide comments and identify any supporting documentation as an attachment.

Comments:

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2018 Annual Emissions (tons)	Facility Wide Permit Limits (Condition A102) (tons per year)
Nitrogen Oxides	20.77			245
Carbon Monoxide	14.57			225
Volatile Organic Carbons	7.06			200
Sulfur Dioxide	0.38			150
Total Particulate Matter	2.31			120
Particulate Matter less than 10 microns	2.28			120
Particulate Matter less than 2.5 microns	1.15			120
Hazardous Air Pollutants	3.55			24