

LA-UR-18-22248

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Title:	Title V Semi-Annual Emissions Report for Permit P100-R2M1 July 1, 2017 -December 31, 2017
Author(s):	Whetham, Walter Wiley
Intended for:	Environmental Regulatory Document
Issued:	2018-03-28 (rev.1)

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Symbol: ADESH-18: 020

Date:

LA-UR: **MAR 26 2018**
18-22248

Locates Action No.: N/A

Mr. Ralph Grubel
Compliance & Enforcement Section Chief
New Mexico Environment Department
Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, New Mexico 87505-1816

Subject: Title V Semi-Annual Emissions Report for Permit P100-R2M1, July 1, 2017 – December 31, 2017 AI No. 856 – Los Alamos National Laboratory (LANL)

Dear Mr. Grubel:

Please find Los Alamos National Laboratory's (LANL) Semi-Annual Emissions report for Permit P100-R2M1 for the period July 1, 2017 through December 31, 2017 (*Enclosure 1*). This report is required by permit condition A109.B and is submitted within 90 days from the end of the reporting period as required by that condition.

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.

Please contact Steven L. Story at (505) 665-2169 or story@lanl.gov of the Environmental Compliance Programs group (EPC-CP) if you have questions.

Sincerely,

William R. Mairson
Associate Director

WRM/SLS/WW:am

Enclosure(s) Enclosure 1 Title V Semi-Annual Emissions Report for Permit P100-R2M1, Jul 1, 2017 –
Dec 31, 2017

Copy: Adrienne L. Nash, LASO-NS-LP, (E-File)
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Version 07.03.08

NMED USE ONLY	
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REPORTING SUBMITTAL FORM

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Staff	
Admin	

PLEASE NOTE: ® - Indicates required field

SECTION I - GENERAL COMPANY AND FACILITY INFORMATION					
A. ® Company Name: U.S. Department of Energy			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: CP Group Leader		F.1 ® Facility Contact: Steve Story	
C.3 ® Phone Number: 505-665-9827		C.4 ® Fax Number: 505-665-8858		F.2 ® Title: Air Compliance Team Leader	
C.5 ® Email Address: tauniav@lanl.gov		F.3 ® Phone Number: 505-665-2169		F.4 ® Fax Number: 505-665-8858	
G. Responsible Official: (Title V only): William R. Mairson		H. Title: Associate Director ES&H		F.5 ® Email Address: story@lanl.gov	
K. ® AI Number: 856		L. Title V Permit Number: P100-R2M1		J. Fax Number: 505-665-3811	
M. Title V Permit Issue Date: 2/3/2017		N. NSR Permit Number: 2195		O. NSR Permit Issue Date: Various	
P. Reporting Period: From: 7/1/2017 To: 12/31/2017		OR		Q. Proposed Test Date:	
OR		OR		R. 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:
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: Title V Semi-Annual Emissions Report 7/1/2017-12/31/2017
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 - PERIODIC EMISSIONS TEST NOTIFICATIONS, TEST PROTOCOLS AND TEST REPORTS (if applicable)

T. <input type="checkbox"/>	A. Test Report <input type="checkbox"/> CMT:	B. Test Protocol <input type="checkbox"/>	C. Notification <input type="checkbox"/> CMT:	Description: (Emission Units to be Tested)
	D. Test (EPA Methods) <input type="checkbox"/>	E. Test (EPA Methods) <input type="checkbox"/>	F. RATA Test <input type="checkbox"/>	

SECTION IV - CERTIFICATION

After reasonable inquiry, I <u>William R. Mairson</u> certify that the information in this submittal is true, accurate and complete. (name of reporting official)			
® Signature of Reporting Official: 	® Title: Associate Director ES&H	® Date: 3-26-18	® Responsible Official for Title V? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Reviewed By: _____

Date Reviewed: _____

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

July 1, 2017 – December 31, 2017

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, July 1, 2017 – Dec. 31, 2017 {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: 3-26-18

Title: Associate Director Environmental, Safety, and Health

ENCLOSURE 1

**Title V Semi-Annual Emissions Report
For Permit P100-R2M1
July 1, 2017 – December 31, 2017**

ADESH-18: 020

LA-UR-18-22248

MAR 26 2018

Date: _____

Title V Semi-Annual Emissions Report
Permit P100-R2M1, July 1, 2017 - December 31, 2017

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	0.0019	0.0025	0.004	50.0
SO ₂	0.0007	0.0009	0.002	50.0
PM	0.0011	0.0015	0.003	50.0
CO	0.0662	0.0883	0.155	30.0
VOC	0.0013	0.0017	0.003	50.0
HAPs	0.0012	0.0016	0.003	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: 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)	0.012	0.007	0.019	10 gm/24 hr
Beryllium Technology Facility TA-3-141 ⁽²⁾	Beryllium (grams)	< 0.00407	< 0.00293	< 0.007	3.5 gm/yr
Target Fabrication Facility TA-35-213 ⁽³⁾	Beryllium (grams)	< 0.00944	< 0.009	< 0.018	0.36 gm/yr
Plutonium Facility TA-55-PF4 Machining Operation ⁽⁴⁾	Beryllium (grams)	< 1.495	< 1.41	< 2.91	2.99 gm/yr
	Aluminum (grams)	< 1.495	< 1.41	< 2.91	2.99 gm/yr
Plutonium Facility TA-55-PF4 Foundry Operation ⁽⁵⁾	Beryllium (grams)	0	0	0.00	8.73 x 10 ⁻⁴ gm/yr
	Aluminum (grams)	0	0	0.00	8.73 x 10 ⁻⁴ gm/yr
Beryllium Total⁽⁵⁾ (tons) =		< 1.66E-06	< 1.57E-06	< 3.23E-06	
Aluminum Total (tons) =		< 1.65E-06	< 1.55E-06	< 3.30E-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 last 6 months of 2017.

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 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	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A802 A) (tons per year)
NOx	11.18	8.08	19.3	80
SO ₂	0.07	0.05	0.1	50
TSP	0.90	0.65	1.5	50
PM-10	0.90	0.65	1.5	50
CO	8.97	6.41	15.4	80
VOCs	0.64	0.46	1.1	50
HAPs	0.21	0.15	0.4	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	0.0062	0.0053	0.011	2.9
SO ₂	0.0001	0.0001	0.0002	0.3
TSP	0.0010	0.0009	0.002	0.4
PM-10	0.0010	0.0009	0.002	0.4
PM-2.5	0.0010	0.0009	0.002	0.4
CO	0.0079	0.0067	0.015	4.8
VOCs	0.0053	0.0045	0.010	No Source Limit
HAPs	3.92E-04	3.32E-04	0.001	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	0.0062	0.0053	0.011	2.9
SO ₂	0.0001	0.0001	0.0002	0.3
TSP	0.0010	0.0009	0.002	0.4
PM-10	0.0010	0.0009	0.002	0.4
PM-2.5	0.0010	0.0009	0.002	0.4
CO	0.0079	0.0067	0.015	4.8
VOCs	0.0053	0.0045	0.010	No Source Limit
HAPs	3.92E-04	3.32E-04	0.001	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	0.0062	0.0053	0.011	2.9
SO ₂	0.0001	0.0001	0.0002	0.3
TSP	0.0010	0.0009	0.002	0.4
PM-10	0.0010	0.0009	0.002	0.4
PM-2.5	0.0010	0.0009	0.002	0.4
CO	0.0079	0.0067	0.015	4.8
VOCs	0.0053	0.0045	0.010	No Source Limit
HAPs	3.92E-04	3.32E-04	0.001	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	0.000	0.000	0.000	2.9
SO ₂	0.000	0.000	0.000	0.3
TSP	0.000	0.000	0.000	0.4
PM-10	0.000	0.000	0.000	0.4
PM-2.5	0.000	0.000	0.000	0.4
CO	0.000	0.000	0.000	4.8
VOCs	0.000	0.000	0.000	No Source Limit
HAPs	0.000	0.000	0.000	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	0.000	0.000	0.000	2.9
SO₂	0.000	0.000	0.000	10.4
TSP	0.000	0.000	0.000	0.5
PM-10	0.000	0.000	0.000	0.3
PM-2.5	0.000	0.000	0.000	0.3
CO	0.000	0.000	0.000	0.9
VOCs	0.000	0.000	0.000	No Source Limit
HAPs	0.000	0.000	0.000	No Source Limit

Note: The RLUOB boilers did not operate on fuel oil during 2017.

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	0.0186	0.0158	0.034	14.5
SO₂	0.0004	0.0003	0.001	11.6
TSP	0.0031	0.0026	0.006	2.1
PM-10	0.0031	0.0026	0.006	1.9
PM-2.5	0.0031	0.0026	0.006	1.9
CO	0.0237	0.0201	0.044	20.1
VOCs	0.0160	0.0136	0.030	No Source Limit
HAPs	1.18E-03	9.96E-04	0.002	No Source Limit

A900 Chemical Usage

A902 Emission Limits - Chemical Usage

Unit No.	VOC/HAPs tpy
LANL-FW-CHEM	3.75 ¹
CMRR-CHEM	3.75 ¹

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 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:

Chemical Usage LANL-FW-CHEM		January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A902 B)
VOCs		3.94	6.38	10.32	Source limits refer to facility-wide limits.
HAPs		2.53	2.63	5.16	
Individual HAPs greater than 0.5 tons	Methanol	0.504	0.774	1.28	
	Hydrochloric Acid	0.764	0.377	1.14	
	Cyanide Compounds	0.510	0.092	0.60	

Chemical Usage CMRR-CHEM		January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A902 B)
HAPs		0.0029	0.0035	0.0064	3.75
VOCs		0.0000	0.0000	0.0000	3.75
TAPs		0.0128	0.0067	0.0195	No Source Limit

A1000 Degreasers

A1002 Emission Limits - Degreasers

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

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	0.0016	0.000	0.0016	Source limits refer to facility-wide limits.
HAPs	0.0016	0.000	0.0016	

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:

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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	0.0040	0.000	0.0040	18.1
SO ₂	0.0001	0.000	0.0001	2.5
TSP	0.0001	0.000	0.0001	0.6
PM ₁₀	0.0001	0.000	0.0001	0.6
CO	0.0004	0.000	0.0004	15.2
VOC	0.0003	0.000	0.0003	0.3
HAPs	1.16E-06	0.000	1.16E-06	No Source Limit

Note: The TA-33-G-1P generator did not operate during the second six months of 2017.

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	0.0009	0.0001	0.0010	0.21
SO ₂	0.0001	0.0000	0.0001	Not Required
TSP	0.0001	0.0000	0.0001	Not Required
PM ₁₀	0.0001	0.0000	0.0001	Not Required
CO	0.0003	0.0000	0.0003	0.1
VOC	0.0001	0.0000	0.0001	Not Required
HAPs	2.84E-07	2.70E-08	3.11E-07	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	0.0004	0.0001	0.0005	0.21
SO ₂	0.0000	0.0000	0.0000	Not Required
TSP	0.0000	0.0000	0.0000	Not Required
PM ₁₀	0.0000	0.0000	0.0000	Not Required
CO	0.0001	0.0000	0.0001	0.1
VOC	0.0000	0.0000	0.0000	Not Required
HAPs	1.35E-07	2.70E-08	1.62E-07	No Source Limit

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	0.000	0.000	0.000	2.33
SO ₂	0.000	0.000	0.000	0.16
TSP	0.000	0.000	0.000	Not Required
PM ₁₀	0.000	0.000	0.000	Not Required
CO	0.000	0.000	0.000	1.4
VOC	0.000	0.000	0.000	0.2
HAPs	0.000	0.000	0.000	No Source Limit

Note: The TA-33-G-4 generator did not operate during 2017.

Generator RLUOB-GEN-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.035	0.064	0.099	No Source Specific Emission Limits for the CMRR Generators
SO ₂	0.001	0.002	0.003	
TSP	0.002	0.004	0.006	
PM ₁₀	0.002	0.003	0.005	
CO	0.044	0.079	0.123	
VOC	0.005	0.009	0.014	
HAPs	9.17E-06	1.66E-05	2.58E-05	

Generator RLUOB-GEN-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.045	0.084	0.129	No Source Specific Emission Limits for the CMRR Generators
SO ₂	0.001	0.002	0.003	
TSP	0.003	0.005	0.008	
PM ₁₀	0.002	0.004	0.006	
CO	0.056	0.104	0.160	
VOC	0.006	0.012	0.018	
HAPs	1.18E-05	2.18E-05	0.000	

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	0.034	0.035	0.069	No Source Specific Emission Limits for the CMRR Generators
SO ₂	0.001	0.001	0.002	
TSP	0.002	0.002	0.004	
PM ₁₀	0.002	0.002	0.004	
CO	0.042	0.044	0.086	
VOC	0.005	0.005	0.010	
HAPs	8.73E-06	9.17E-06	1.79E-05	

Generator TA-48-GEN-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.000	0.000	0.000	No Source Specific Emission Limits for the TA-48 Generator
SO ₂	0.000	0.000	0.000	
TSP	0.000	0.000	0.000	
PM ₁₀	0.000	0.000	0.000	
CO	0.000	0.000	0.000	
VOC	0.000	0.000	0.000	
HAPs	0.000	0.000	0.000	

Note: The TA-48-GEN-1 generator did not operate during 2017.

Generator TA-55-GEN-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.000	0.0010	0.0010	No Source Specific Emission Limits for the TA-55 Generators
SO ₂	0.000	0.0001	0.0001	
TSP	0.000	0.0001	0.0001	
PM ₁₀	0.000	0.0001	0.0001	
CO	0.000	0.0002	0.0002	
VOC	0.000	0.0001	0.0001	
HAPs	0.000	2.43E-07	2.43E-07	

Note: The TA-55-GEN-1 generator did not operate during the first six months of 2017.

Generator TA-55-GEN-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.000	0.000	0.000	No Source Specific Emission Limits for the TA-55 Generators
SO ₂	0.000	0.000	0.000	
TSP	0.000	0.000	0.000	
PM ₁₀	0.000	0.000	0.000	
CO	0.000	0.000	0.000	
VOC	0.000	0.000	0.000	
HAPs	0.000	0.000	0.000	

Note: The TA-55-GEN-2 generator did not operate during 2017.

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	0.102	0.072	0.17	No Source Specific Emission Limits for the TA-55 Generators
SO ₂	0.002	0.001	0.003	
TSP	0.003	0.002	0.01	
PM ₁₀	0.003	0.002	0.01	
CO	0.022	0.016	0.04	
VOC	0.005	0.002	0.01	
HAPs	1.86E-05	1.31E-05	3.17E-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 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:

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	0.21	0.43	9.9
PM10	0.20	0.18	0.38	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	PM2.5 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	PM2.5 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:

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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	5.62	4.21	9.8	31.5
SO ₂	0.06	0.05	0.1	4.9
TSP	0.74	0.55	1.3	4.7
PM ₁₀	0.74	0.55	1.3	4.4
PM _{2.5}	0.74	0.55	1.3	4.2
CO	3.88	2.90	6.8	21.5
VOC	0.53	0.40	0.9	2.8
HAPs	0.18	0.14	0.3	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	0.864	0.429	1.29	59.4
SOx	0.060	0.030	0.09	4.2
TSP	0.116	0.058	0.17	4.8
PM ₁₀	0.116	0.058	0.17	4.8
PM _{2.5}	0.116	0.058	0.17	4.8
CO	0.180	0.089	0.27	72.3
VOC	0.038	0.019	0.06	1.5
HAPs	0.024	0.012	0.04	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:

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No

Provide comments and identify any supporting documentation as an attachment.

Comments:

No open burning activities took place during 2017.

A1500 Evaporative Sprayers

A1502 Emission Limits - Evaporative Sprayers

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

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 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:

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	7.14E-10	1.11E-09	1.83E-09	Source limits refer to facility-wide limits.
Chloroform	3.28E-06	5.12E-06	8.40E-06	
Chloromethane	2.25E-06	3.51E-06	5.75E-06	
Bromoform	2.90E-06	4.52E-06	7.42E-06	
Cyanide Compounds	6.67E-06	1.04E-05	1.71E-05	
Manganese Compounds	2.41E-05	3.76E-05	6.17E-05	
Antimony Compounds	1.14E-05	1.78E-05	2.92E-05	
TOTAL HAPs	5.06E-05	7.90E-05	1.30E-04	

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	3.26E-10	9.38E-10	1.26E-09	Source limits refer to facility-wide limits.
Chloroform	1.50E-06	4.31E-06	5.80E-06	
Chloromethane	1.03E-06	2.95E-06	3.98E-06	
Bromoform	1.32E-06	3.81E-06	5.13E-06	
Cyanide Compounds	3.04E-06	8.76E-06	1.18E-05	
Manganese Compounds	1.10E-05	3.17E-05	4.27E-05	
Antimony Compounds	5.20E-06	1.50E-05	2.02E-05	
TOTAL HAPs	2.31E-05	6.64E-05	8.95E-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	6.61E-10	5.00E-10	1.16E-09	Source limits refer to facility-wide limits.
Chloroform	3.04E-06	2.30E-06	5.33E-06	
Chloromethane	2.08E-06	1.57E-06	3.65E-06	
Bromoform	2.69E-06	2.03E-06	4.71E-06	
Cyanide Compounds	6.18E-06	4.67E-06	1.08E-05	
Manganese Compounds	2.23E-05	1.69E-05	3.92E-05	
Antimony Compounds	1.06E-05	7.98E-06	1.85E-05	
TOTAL HAPs	4.69E-05	3.54E-05	8.23E-05	

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	0.000	0.000	0.000	Source limits refer to facility-wide limits.
Chloroform	0.000	0.000	0.000	
Chloromethane	0.000	0.000	0.000	
Bromoform	0.000	0.000	0.000	
Cyanide Compounds	0.000	0.000	0.000	
Manganese Compounds	0.000	0.000	0.000	
Antimony Compounds	0.000	0.000	0.000	
TOTAL HAPs	0.000	0.000	0.000	

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	0.000	0.000	0.000	Source limits refer to facility-wide limits.
Chloroform	0.000	0.000	0.000	
Chloromethane	0.000	0.000	0.000	
Bromoform	0.000	0.000	0.000	
Cyanide Compounds	0.000	0.000	0.000	
Manganese Compounds	0.000	0.000	0.000	
Antimony Compounds	0.000	0.000	0.000	
TOTAL HAPs	0.000	0.000	0.000	

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 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:

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2017 Annual Emissions (tons)	Facility Wide Permit Limits (Condition A102) (tons per year)
Nitrogen Oxides	17.89	12.97	30.9	245
Carbon Monoxide	13.26	9.73	23.0	225
Volatile Organic Carbons	5.17	7.29	12.5	200
Sulfur Dioxide	0.19	0.13	0.3	150
Total Particulate Matter	1.98	1.48	3.5	120
Particulate Matter less than 10 microns	1.96	1.46	3.4	120
Particulate Matter less than 2.5 microns	0.86	0.61	1.5	120
Hazardous Air Pollutants	2.95	2.93	5.9	24