



**Environment, Safety, Health, Quality,  
Safeguards, and Security (ESHQSS)**

Los Alamos National Laboratory  
P.O. Box 1663, K491  
Los Alamos, NM 87545  
505-667-4218

**Symbol:** ESHQSS: 21-042

**LA-UR:** 21-28123

**Locates Action No.:** N/A

**Date:**

**SEP 22 2021**



**National Nuclear Security Administration**

Los Alamos Field Office  
3747 West Jemez Road, A316  
Los Alamos, NM 87544  
505-665-7314/Fax 505-667-5948

Mr. David Feather  
Compliance Reporting Manager  
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-R2M4 for January 1 – June 30, 2021**

Dear Mr. Feather:

Enclosed is Los Alamos National Laboratory's (LANL) Semi-Annual Emissions Report for the first half of 2021 for Operating Permit P100-R2M4, effective July 18, 2019. This Semi-Annual Emissions Report covers the January 1 – June 30, 2021 reporting period.

This submission is required by permit condition A109.B. of the Title V Operating Permit P100-R2M4, and is submitted within 90 days following June 30, 2021, 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 any questions or comments regarding this submittal or would like to discuss the submittal in greater detail, please contact either Adrienne Nash at (505) 665-5026 or Marjorie Stockton at (505) 665-3289.

Sincerely,

JENNIFER PAYNE  
(Affiliate)

Digitally signed by  
JENNIFER PAYNE (Affiliate)  
Date: 2021.08.31 10:20:54  
-06'00'

Jennifer E. Payne  
Division Leader  
Environmental Protection and Compliance  
Triad National Security, LLC  
Los Alamos National Laboratory

Sincerely,



Theodore A. Wyka  
Manager  
National Nuclear Security Administration  
U.S. Department of Energy  
Los Alamos Field Office

Attachment(s): Attachment 1 Semi-Annual Emissions Report for Los Alamos National Laboratory, AI  
No. 856, Title V Operating Permit P100-R2M4 for January 1 – June 30, 2021

Copy: Adrienne L. Nash, NA-LA, [adrienne.nash@nnsa.doe.gov](mailto:adrienne.nash@nnsa.doe.gov)  
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Triad, EPC-CP Title V Emissions Report File  
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Version 07.20.18

**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**



NMED USE ONLY	
TEMPO	

## REPORTING SUBMITTAL FORM

NMED USE ONLY	
Staff	
Admin	

PLEASE NOTE: ® - Indicates required field

<b>SECTION I - GENERAL COMPANY AND FACILITY INFORMATION</b>					
<b>A. ® Company Name:</b> Department of Energy, National Nuclear Security Administration			<b>D. ® Facility Name:</b> Los Alamos National Laboratory		
<b>B.1 ® Company Address:</b> 3747 West Jemez Road			<b>E.1 ® Facility Address:</b> P.O. Box 1663 MS J978		
<b>B.2 ® City:</b> Los Alamos	<b>B.3 ® State:</b> NM	<b>B.4 ® Zip:</b> 8 7 5 4 4	<b>E.2 ® City:</b> Los Alamos	<b>E.3 ® State:</b> NM	<b>E.4 ® Zip:</b> 87545
<b>C.1 ® Company Environmental Contact:</b> Adrienne L. Nash		<b>C.2 ® Title:</b> Program Manager	<b>F.1 ® Facility Contact:</b> Marjorie B. Stockton		<b>F.2 ® Title:</b> Meteorology & Air Quality Team Leader
<b>C.3 ® Phone Number:</b> (505) 665-5026		<b>C.4 ® Fax Number:</b> (505) 667-9998	<b>F.3 ® Phone Number:</b> (505) 665-3289		<b>F.4 ® Fax Number:</b> NA
<b>C.5 ® Email Address:</b> adrienne.nash@nnsa.doe.gov			<b>F.5 ® Email Address:</b> mstockton@lanl.gov		
<b>G. Responsible Official: (Title V only):</b> Theodore A. Wyka		<b>H. Title:</b> Manager	<b>I. Phone Number:</b> (505) 667-5105		<b>J. Fax Number:</b> NA
<b>K. ® AI Number:</b> 856	<b>L. Title V Permit Number:</b> P100-R2M4	<b>M. Title V Permit Issue Date:</b> July 18, 2019	<b>N. NSR Permit Number:</b> 2195		<b>O. NSR Permit Issue Date:</b> Various
<b>P. Reporting Period:</b> From: January 1, 2021 To: June 30, 2021					

Do NOT submit NSPS OOOO or OOOOa well completion or flowback notifications to the Air Quality Bureau. See <https://www.env.nm.gov/air-quality/notices-and-faqs-for-compliance-and-enforcement/> for explanation.

<b>SECTION II - TYPE OF SUBMITTAL (check one that applies)</b>				
<b>A. <input type="checkbox"/></b>	<b>Title V Annual Compliance Certification</b>	<b>Permit Condition(s):</b>	<b>Description:</b>	
<b>B. <input type="checkbox"/></b>	<b>Title V Semi-Annual Monitoring Report</b>	<b>Permit Condition(s):</b>	<b>Description:</b>	
<b>C. <input type="checkbox"/></b>	<b>NSPS Requirement (40CFR60)</b>	<b>Regulation:</b>	<b>Section(s):</b>	<b>Description:</b>
<b>D. <input type="checkbox"/></b>	<b>MACT Requirement (40CFR63)</b>	<b>Regulation:</b>	<b>Section(s):</b>	<b>Description:</b>
<b>E. <input type="checkbox"/></b>	<b>NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)</b>	<b>Regulation:</b>	<b>Section(s):</b>	<b>Description:</b>
<b>F. <input checked="" type="checkbox"/></b>	<b>Permit or Notice of Intent (NOI) Requirement</b>	<b>Permit No. <input checked="" type="checkbox"/> or NOI No. <input type="checkbox"/>:</b> P100R2M4	<b>Condition(s):</b> A109 B	<b>Description:</b> Title V Semi-Annual Emissions Report 1/1/2021 - 6/30/2021
<b>G. <input type="checkbox"/></b>	<b>Requirement of an Enforcement Action</b>	<b>NOV No. <input type="checkbox"/> or SFO No. <input type="checkbox"/> or CD No. <input type="checkbox"/> or Other <input type="checkbox"/>:</b>	<b>Section(s):</b>	<b>Description:</b>

<b>SECTION III - CERTIFICATION</b>			
After reasonable inquiry, I <u>Theodore A. Wyka</u> certify that the information in this submittal is true, accurate and complete. (Name of Certifier)			
<b>® Signature of Certifier:</b> 	<b>® Title:</b> Manager	<b>® Date:</b> 9/20/2021	<b>® Responsible Official for Title V?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Reviewed By: \_\_\_\_\_

Date Reviewed: \_\_\_\_\_



## Title V Report Certification Form

### I. Report Type

- ☐ Annual Compliance Certification
- ☐ Semi-Annual Monitoring Report
- ☒ Other Specify: Semi-Annual Emissions Report

### II. Identifying Information

Facility Name: Los Alamos National Laboratory

Facility Address: P.O. Box 1663, MS J978

State: NM

Zip: 87545

Responsible Official (RO): Theodore A. Wyka

Phone: (505) 667-5105

Fax: NA

RO Title: Manager

RO e-mail: [theodore.wyka@nnsa.doe.gov](mailto:theodore.wyka@nnsa.doe.gov)

Permit No.: P100-R2M4

Date Permit Issued: 7/18/2019

Report Due Date (as required by the permit): 9/28/2021

Permit AI number: 856

Time period covered by this Report: From: 1/1/2021

To: 6/30/2021

### III. Certification of Truth, Accuracy, and Completeness

I am the Responsible Official indicated above. I, Theodore A. Wyka certify that I meet the requirements of 20.2.70.7.AE NMAC. I certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in the attached Title V report are true, accurate, and complete.

Signature



Date:

9/20/2021

**Attachment 1**  
**Semi-Annual Emissions Report for**  
**Los Alamos National Laboratory, AI No. 856,**  
**Title V Operating Permit P100-R2M4**  
**for January 1 – June 30, 2021**

ESHQSS-21-042

LA-UR-21-28123

**SEP 22 2021**  
Date: \_\_\_\_\_

**Semi-Annual Emissions Report for Los Alamos National Laboratory  
AI 856, Title V Operating Permit P100-R2M4  
January 1, 2021 - June 30, 2021**

**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 1<sup>st</sup> and July 1<sup>st</sup> 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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 <sub>2</sub> 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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 <sub>x</sub>	0			50.0
SO <sub>2</sub>	0			50.0
PM	0			50.0
CO	0			30.0
VOC	0			50.0
HAPs	0			No Source Permit Limit

Note: The TA-60-BDM Asphalt Plant did not operate during the first 6 months of 2021.

## 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 <sup>-04</sup> gm/yr	8.73X10 <sup>-04</sup> 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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, May 6, 2021 (000856-05052021-01) and second quarter report, August 10, 2021 (000856-08102021-01).



## 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 <sup>(1)</sup>	Beryllium (grams)	0.0018			10 gm/24 hr
Beryllium Technology Facility TA-3-141 <sup>(2)</sup>	Beryllium (grams)	0.0032			3.5 gm/yr
Target Fabrication Facility TA-35-213 <sup>(3)</sup>	Beryllium (grams)	< 0.00944			0.36 gm/yr
Plutonium Facility TA-55-PF4 Machining Operation <sup>(4)</sup>	Beryllium (grams)	< 1.495			2.99 gm/yr
	Aluminum (grams)	< 1.495			2.99 gm/yr
Plutonium Facility TA-55-PF4 Foundry Operation <sup>(5)</sup>	Beryllium (grams)	0			$8.73 \times 10^{-4}$ gm/yr
	Aluminum (grams)	0			$8.73 \times 10^{-4}$ gm/yr
<b>Beryllium Total<sup>(6)</sup> (tons) =</b>		<b>&lt; 1.66E-06</b>			
<b>Aluminum Total (tons) =</b>		<b>&lt; 1.65E-06</b>			

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 2021.

## A800 External Combustion

### A802 Emission Limits - External Combustion

Unit No.	NO <sub>x</sub> tpy	CO tpy	VOC tpy	SO <sub>2</sub> tpy	TSP tpy	PM <sub>10</sub> tpy
All Boilers	80.0	80.0	50.0	50.0	50.0	50.0

Unit No.	NO <sub>x</sub> tpy	CO tpy	SO <sub>2</sub> tpy	TSP tpy	PM <sub>10</sub> tpy	PM <sub>2.5</sub> 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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 <sub>x</sub>	10.91			80
SO <sub>2</sub>	0.07			50
TSP	0.87			50
PM-10	0.87			50
CO	8.78			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	0.0078			2.9
SO <sub>2</sub>	0.0002			0.3
TSP	0.0013			0.4
PM-10	0.0013			0.4
PM-2.5	0.0013			0.4
CO	0.0100			4.8
VOCs	0.0067			No Source Limit
HAPs	4.94E-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	0.0078			2.9
SO <sub>2</sub>	0.0002			0.3
TSP	0.0013			0.4
PM-10	0.0013			0.4
PM-2.5	0.0013			0.4
CO	0.0100			4.8
VOCs	0.0067			No Source Limit
HAPs	4.94E-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	0.0078			2.9
SO <sub>2</sub>	0.0002			0.3
TSP	0.0013			0.4
PM-10	0.0013			0.4
PM-2.5	0.0013			0.4
CO	0.0100			4.8
VOCs	0.0067			No Source Limit
HAPs	4.94E-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 <sub>2</sub>	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 <sub>2</sub>	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 2021.

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	0.0234			14.5
SO <sub>2</sub>	0.0005			11.6
TSP	0.0039			2.1
PM-10	0.0039			1.9
PM-2.5	0.0039			1.9
CO	0.0299			20.1
VOCs	0.0202			No Source Limit
HAPs	1.48E-03			No Source Limit

## A900 Chemical Usage

### A902 Emission Limits - Chemical Usage

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

<sup>1</sup> 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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		4.09			Source limits refer to facility-wide limits.
HAPs		4.02			
Individual HAPs greater than 0.5 tons	Ethylene Glycol	1.57			

Chemical Usage CMRR-CHEM		January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A902 B)
HAPs		5.45E-04			3.75
VOCs		6.00E-05			3.75
TAPs		3.50E-03			No Source Limit

## A1000 Degreasers

### A1002 Emission Limits - Degreasers

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

<sup>1</sup> 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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.

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Yes

Date report submitted:

Tracking Number:

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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	0.022			Source limits refer to facility-wide limits.
HAPs	0.022			



## A1100 Internal Combustion

### A1102 Emission Limits - Internal Combustion

Unit No.	NO <sub>x</sub> tpy	CO tpy	VOC tpy	SO <sub>2</sub> tpy	TSP tpy	PM <sub>10</sub> 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	-- <sup>1</sup>	--	--	--
TA-33-G-3	0.21	0.1	-- <sup>1</sup>	--	--	--
TA-33-G-4	2.33	1.4	0.2	0.16	--	--

<sup>1</sup> 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 NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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.

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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)
NO <sub>x</sub>	0.208			18.1
SO <sub>2</sub>	0.006			2.5
TSP	0.006			0.6
PM <sub>10</sub>	0.006			0.6
CO	0.021			15.2
VOC	0.015			0.3
HAPs	6.02E-05			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)
NO <sub>x</sub>	0			0.21
SO <sub>2</sub>	0			Not Required
TSP	0			Not Required
PM <sub>10</sub>	0			Not Required
CO	0			0.1
VOC	0			Not Required
HAPs	0			No Source Limit

Note: The TA-33-G-2 generator did not operate during the first 6 months of 2021.

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 <sub>2</sub>	0			Not Required
TSP	0			Not Required
PM <sub>10</sub>	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 2021.

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	0.047			2.33
SO <sub>2</sub>	0.003			0.16
TSP	0.003			Not Required
PM <sub>10</sub>	0.003			Not Required
CO	0.028			1.4
VOC	0.004			0.2
HAPs	1.52E-05			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 RLUOB Generators
SO <sub>2</sub>	0			
TSP	0			
PM <sub>10</sub>	0			
CO	0			
VOC	0			
HAPs	0			

Note: The TA-RLUOB-GEN-1 generator did not operate during the first 6 months of 2021.

Generator RLUOB-GEN-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.524			No Source Specific Emission Limits for the RLUOB Generators
SO <sub>2</sub>	0.014			
TSP	0.031			
PM <sub>10</sub>	0.026			
CO	0.649			
VOC	0.074			
HAPs	1.50E-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	0.460			No Source Specific Emission Limits for the RLUOB Generators
SO <sub>2</sub>	0.012			
TSP	0.027			
PM <sub>10</sub>	0.023			
CO	0.570			
VOC	0.065			
HAPs	1.32E-04			

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 <sub>2</sub>	0			
TSP	0			
PM <sub>10</sub>	0			
CO	0			
VOC	0			
HAPs	0			

Note: The TA-48-GEN-1 generator did not operate during the first 6 months of 2021.

Generator TA-55-GEN-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.0012			No Source Specific Emission Limits for the TA-55 Generators
SO <sub>2</sub>	0.0001			
TSP	0.0001			
PM <sub>10</sub>	0.0001			
CO	0.0003			
VOC	0.0001			
HAPs	3.80E-07			

Generator TA-55-GEN-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.00059			No Source Specific Emission Limits for the TA-55 Generators
SO <sub>2</sub>	0.00004			
TSP	0.00004			
PM <sub>10</sub>	0.00004			
CO	0.00013			
VOC	0.00004			
HAPs	1.90E-07			

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**A1100 Internal Combustion-** continued

Generator TA-55-GEN-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.100			No Source Specific Emission Limits for the TA-55 Generators
SO <sub>2</sub>	0.002			
TSP	0.003			
PM <sub>10</sub>	0.003			
CO	0.022			
VOC	0.003			
HAPs	1.83E-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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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.

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Yes

Date report submitted:

Tracking Number:

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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	0.231			9.9
PM10	0.208			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 <sub>10</sub> 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 <sub>10</sub> 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 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.

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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	5.40			31.5
SOx	0.08			4.9
TSP	0.71			4.7
PM <sub>10</sub>	0.71			4.4
PM <sub>2.5</sub>	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	5.02			59.4
SOx	0.35			4.2
TSP	0.68			4.8
PM <sub>10</sub>	0.68			4.8
PM <sub>2.5</sub>	0.68			4.8
CO	1.04			72.3
VOC	0.22			1.5
HAPs	0.14			No Source Limit



## A1400 Open Burning

### A1402 Emission Limits - Open Burning

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

<sup>1</sup> 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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.

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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 the first 6 months of 2021.

## A1500 Evaporative Sprayers

### A1502 Emission Limits - Evaporative Sprayers

Unit No.	HAPs tpy
TA-60-EVAP-1	-- <sup>1</sup>
TA-60-EVAP-2	-- <sup>1</sup>
TA-60-EVAP-3	-- <sup>1</sup>
TA-60-EVAP-4	-- <sup>1</sup>
TA-60-EVAP-5	-- <sup>1</sup>

<sup>1</sup> 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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:

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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	5.52E-10			Source limits refer to facility-wide limits.
Chloroform	3.36E-06			
Chloromethane	6.21E-06			
Bromoform	7.14E-07			
Cyanide	3.03E-05			
Manganese	1.31E-05			
Mercury	1.92E-07			
Nickel	2.20E-05			
TOTAL HAPs	7.58E-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	0			Source limits refer to facility-wide limits.
Chloroform	0			
Chloromethane	0			
Bromoform	0			
Cyanide	0			
Manganese	0			
Mercury	0			
Nickel	0			
TOTAL HAPs	0			

Note: The TA-60-EVAP-2 evaporative sprayer did not operate during the first six months of 2021.

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	0			
Manganese	0			
Mercury	0			
Nickel	0			
<b>TOTAL HAPs</b>	0			

Note: The TA-60-EVAP-3 evaporative sprayer did not operate during the first six months of 2021.

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	0			
Manganese	0			
Mercury	0			
Nickel	0			
<b>TOTAL HAPs</b>	0			

Note: The TA-60-EVAP-4 evaporative sprayer did not operate during the first six months of 2021.

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	0			
Manganese	0			
Mercury	0			
Nickel	0			
<b>TOTAL HAPs</b>	0			

Note: The TA-60-EVAP-5 evaporative sprayer did not operate during the first six months of 2021.

Evaporative Sprayer TA-60-EVAP-6	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	0			
Manganese	0			
Mercury	0			
Nickel	0			
<b>TOTAL HAPs</b>	0			

Note: The TA-60-EVAP-6 evaporative sprayer did not operate during the first six months of 2021.

## A102 Facility Wide Emission Limits

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

Pollutant	Emissions (tons per year)
Nitrogen Oxides (NO <sub>x</sub> )	245.0
Carbon Monoxide (CO)	225.0
Volatile Organic Carbons (VOC)	200.0
Sulfur Dioxide (SO <sub>2</sub> )	150.0
Total Particulate Matter (TSP)	120.0
Particulate Matter less than 10 microns (PM <sub>10</sub> )	120.0
Particulate Matter less than 2.5 microns (PM <sub>2.5</sub> )	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

A 109 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<sub>x</sub>, CO, SO<sub>2</sub>, VOC, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> 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:

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

Comments:

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2021 Annual Emissions (tons)
Nitrogen Oxides	22.67		
Carbon Monoxide	14.83		
Volatile Organic Carbons	5.63		
Sulfur Dioxide	0.53		
Total Particulate Matter	2.57		
Particulate Matter less than 10 microns	2.53		
Particulate Matter less than 2.5 microns	1.39		
Hazardous Air Pollutants	4.56		