

**Environment Safety & Health**

PO Box 1663, MS K491  
Los Alamos, New Mexico 87545  
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*Date:* MAR 22 2016  
*Symbol:* ADESH-16-041  
*LA-UR:* 16-21517  
*Locates Action No.:* N/A

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

Dear Mr. Morris:

**SUBJECT: Title V Semi-Annual Emissions Report for Permit P100-R2, July 1, 2015 – December 31, 2015 AI No. 856 – Los Alamos National Laboratory (LANL)**

Enclosed is Los Alamos National Laboratory's (LANL) Semi-Annual Emissions report for Permit P100-R2 for the period July 1, 2015 through December 31, 2015. 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, 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.

Should you have any questions or comments regarding the information provided in this report, please contact Steven L. Story at (505) 665-2169 or [story@lanl.gov](mailto:story@lanl.gov).

Sincerely,

Michael T. Brandt, DrPH, CIH  
Associate Director  
Environment, Safety & Health  
Los Alamos National Security, LLC

Mr. Allan Morris  
ADESH-16-041

- 2 -

MTB:SLS:WW/lm

Enclosure: 1. Title V Semi-Annual Emissions Report for Permit P100-R2  
July 1, 2015 – December 31, 2015

Cy: Hai Shen, NA-LA, (E-File)  
Richard Kacich, DIR, (E-File)  
Kirsten Laskey, EM-LA, (E-File)  
Adrienne Nash, NA-LA, (E-File)  
Craig Leasure, PADOPS, (E-File)  
William Mairson, PADOPS, (E-File)  
Michael T. Brandt, ADESH, (E-File)  
Raeanna Sharp-Geiger, ADESH, (E-File)  
John P. McCann, EPC-DO, (E-File)  
Steve L. Story, EPC-CP, (E-File)  
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EPC-CP Title V Emissions Report File  
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**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 05.02.13

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> Los Alamos National Security, LLC			<b>D. ® Facility Name:</b> Los Alamos National Laboratory		
<b>B.1 ® Company Address:</b> P.O Box 1663 MS J978			<b>E.1 ® Facility Address:</b> Same as Company		
<b>B.2 ® City:</b> Los Alamos	<b>B.3 ® State:</b> NM	<b>B.4 ® Zip:</b> 87545	<b>E.2 ® City:</b>	<b>E.3 ® State:</b>	<b>E.4 ® Zip:</b>
<b>C.1 ® Company Environmental Contact:</b> Anthony R. Grieggs		<b>C.2 ® Title:</b> EPC-CP Group Leader		<b>F.2 ® Title:</b> Air Quality Permitting and Compliance Programs Team Leader	
<b>C.3 ® Phone Number:</b> (505) 665-0451		<b>C.4 ® Fax Number:</b> (505) 665-8858		<b>F.4 ® Fax Number:</b> (505) 665-8858	
<b>C.5 ® Email Address:</b> grieggst@lanl.gov			<b>F.5 ® Email Address:</b> story@lanl.gov		
<b>G. Responsible Official: (Title V only):</b> Michael T. Brandt		<b>H. Title:</b> Associate Director for ESH		<b>I. Phone Number:</b> (505) 667-4218	
<b>J. Fax Number:</b> (505) 665-3811		<b>K. ® AI Number:</b> 856		<b>L. Title V Permit Number:</b> P100-R2	
<b>M. Title V Permit Issue Date:</b> 02/27/2015		<b>N. NSR Permit Number:</b> 2195		<b>O. NSR Permit Issue Date:</b> Various	
<b>P. Reporting Period:</b> From: July 1, 2015 To: December 31, 2015					

<b>SECTION II - TYPE OF SUBMITTAL (check one that applies)</b>					
<input type="checkbox"/>	<b>A. Title V Annual Compliance Certification</b>	<b>Permit Condition(s):</b>	<b>Description:</b>		
<input type="checkbox"/>	<b>B. Title V Semi-annual Monitoring Report</b>	<b>Permit Condition(s):</b>	<b>Description:</b>		
<input type="checkbox"/>	<b>C. NSPS Requirement (40CFR60)</b>	<b>Regulation:</b>	<b>Section(s):</b>	<b>Description:</b>	
<input type="checkbox"/>	<b>D. MACT Requirement (40CFR63)</b>	<b>Regulation:</b>	<b>Section(s):</b>	<b>Description:</b>	
<input type="checkbox"/>	<b>E. NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)</b>	<b>Regulation:</b>	<b>Section(s):</b>	<b>Description:</b>	
<input checked="" type="checkbox"/>	<b>F. Permit or Notice of Intent (NOI) Requirement</b>	<b>Permit No. <input checked="" type="checkbox"/> or NOI No. <input type="checkbox"/></b> P100-R2	<b>Condition(s):</b> A109 B	<b>Description:</b> LANL Semi-Annual Emissions Report for July 1–December 31, 2015	
<input type="checkbox"/>	<b>G. Requirement of an Enforcement Action</b>	<b>NOV No. <input type="checkbox"/> or SFO No. <input type="checkbox"/></b> <b>or CD No. <input type="checkbox"/> or Other <input type="checkbox"/></b>	<b>Section(s):</b>	<b>Description:</b>	

<b>SECTION IV - CERTIFICATION</b>			
After reasonable inquiry, I <u>Michael T. Brandt</u> certify that the information in this submittal is true, accurate and complete. <small>(name of reporting official)</small>			
<b>® Signature of Reporting Official:</b> 	<b>® Title:</b> Associate Director for ESH	<b>® Date:</b> 3/22/16	<b>® Responsible Official for Title V?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Reviewed By:

Date Reviewed:

**Title V Semi-Annual Emission Report  
for Permit P100-R2  
July 1, 2015 – December 31, 2015**

**Identifying Information**

Source Name: Los Alamos National Laboratory County: Los Alamos

Source Address:

City: Los Alamos State: NM Zip Code: 87545

Responsible Official: Michael T. Brandt 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

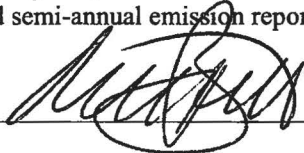
Principal Company Product or Business: National Security and Nuclear Weapons Research Primary SIC Code: 8733

Permit No. P100-R2 {IDEA/Tempo ID No. 856} Permit Issued Date: February 27, 2015

**Certification of Truth, Accuracy, and Completeness**

I, Michael T. Brandt 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:

3/22/16

Title: Associate Director Environmental, Safety, and Health





**Title V Semi-Annual Emissions Report**  
**Permit P100-R2, July 1, 2015 - December 31, 2015**

**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 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	SO2 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 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:**

Asphalt Plant TA-60-BDM	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A602 A) (tons per year)
NOx	0.001	0.002	0.003	50.0
SO <sub>2</sub>	0.000	0.001	0.001	50.0
PM	0.001	0.001	0.002	50.0
CO	0.042	0.060	0.102	30.0
VOC	0.001	0.001	0.002	50.0
HAPs	0.001	0.001	0.002	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 <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 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 <sup>(1)</sup>	Beryllium (grams)	9.80E-07	5.60E-07	1.54E-06	10 gm/24 hr
Beryllium Test Facility TA-3-141 <sup>(2)</sup>	Beryllium (grams)	< 0.0032	< 0.0038	< 0.007	3.5 gm/yr
Target Fabrication Facility TA-35-213 <sup>(3)</sup>	Beryllium (grams)	< 0.00944	< 0.009	< 0.018	0.36 gm/yr
Plutonium Facility TA-55-PF4 Machining Operation <sup>(4)</sup>	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 <sup>(5)</sup>	Beryllium (grams)	0	0	0.00	8.73 x 10 <sup>-4</sup> gm/yr
	Aluminum (grams)	0	0	0.00	8.73 x 10 <sup>-4</sup> gm/yr
<b>Beryllium Total<sup>(5)</sup> (tons) =</b>		<b>&lt; 1.66E-06</b>	<b>&lt; 1.57E-06</b>	<b>&lt; 3.23E-06</b>	
<b>Aluminum Total (tons) =</b>		<b>&lt; 1.65E-06</b>	<b>&lt; 1.55E-06</b>	<b>&lt; 3.30E-06</b>	

Notes: (1) Emissions from the Sigma Facility are from electroplating, chemical milling, and metallographic operations. (2) Emission values shown for the Beryllium Test 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 2015.



## A800 External Combustion

### A802 Emission Limits - External Combustion

Unit No.	NOx 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.	NOx 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 NOx, 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:

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	12.18	8.57	20.75	80
SO <sub>2</sub>	0.07	0.05	0.12	50
TSP	0.98	0.69	1.67	50
PM-10	0.98	0.69	1.67	50
CO	9.80	6.82	16.62	80
VOCs	0.70	0.49	1.19	50
HAPs	0.23	0.16	0.39	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	0.008	0.006	0.014	2.9
SO <sub>2</sub>	0.000	0.000	0.000	0.3
TSP	0.001	0.001	0.002	0.4
PM-10	0.001	0.001	0.002	0.4
PM-2.5	0.001	0.001	0.002	0.4
CO	0.011	0.008	0.019	4.8
VOCs	0.007	0.005	0.012	No Source Limit
HAPs	0.001	0.000	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	0.008	0.006	0.014	2.9
SO <sub>2</sub>	0.000	0.000	0.000	0.3
TSP	0.001	0.001	0.002	0.4
PM-10	0.001	0.001	0.002	0.4
PM-2.5	0.001	0.001	0.002	0.4
CO	0.011	0.008	0.019	4.8
VOCs	0.007	0.005	0.012	No Source Limit
HAPs	0.001	0.000	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	0.008	0.006	0.014	2.9
SO <sub>2</sub>	0.000	0.000	0.000	0.3
TSP	0.001	0.001	0.002	0.4
PM-10	0.001	0.001	0.002	0.4
PM-2.5	0.001	0.001	0.002	0.4
CO	0.011	0.008	0.019	4.8
VOCs	0.007	0.005	0.012	No Source Limit
HAPs	0.001	0.000	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 <sub>2</sub>	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
SO <sub>2</sub>	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 2015.

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	0.025	0.018	0.043	14.5
SO <sub>2</sub>	0.000	0.000	0.000	11.6
TSP	0.004	0.003	0.007	2.1
PM-10	0.004	0.003	0.007	1.9
PM-2.5	0.004	0.003	0.007	1.9
CO	0.032	0.023	0.055	20.1
VOCs	0.021	0.015	0.036	No Source Limit
HAPs	0.002	0.001	0.003	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 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		5.72	3.36	9.08	Source limits refer to facility-wide limits.
HAPs		2.35	2.06	4.41	
Individual HAPs greater than 0.5 tons	Glycol Ethers	0.72	0.69	1.41	
	Hydrochloric Acid	0.67	0.51	1.18	

Chemical Usage CMRR-CHEM		January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits (Condition A902 B)
HAPs		0	0	0	3.75
VOCs		0	0	0	3.75
TAPs		0	0	0	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 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	0.003	0.003	0.006	Source limits refer to facility-wide limits.
HAPs	0.003	0.003	0.006	



## A1100 Internal Combustion

### A1102 Emission Limits - Internal Combustion

Unit No.	NOx 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 NOx, 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:

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	0.015	0.010	0.025	18.1
SO <sub>2</sub>	0.000	0.000	0.000	2.5
TSP	0.000	0.000	0.000	0.6
PM <sub>10</sub>	0.000	0.000	0.000	0.6
CO	0.002	0.001	0.003	15.2
VOC	0.001	0.001	0.002	0.3
HAPs	4.36E-06	2.91E-06	7.27E-06	No Source Limit

Note: The TA-33-G-1P generator only operated for 2.5 hours during 2015.

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	0.010	0.000	0.010	0.21
SO <sub>2</sub>	0.001	0.000	0.001	Not Required
TSP	0.001	0.000	0.001	Not Required
PM <sub>10</sub>	0.001	0.000	0.001	Not Required
CO	0.003	0.000	0.003	0.1
VOC	0.001	0.000	0.001	Not Required
HAPs	3.34E-06	2.70E-08	3.37E-06	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	0.000	0.000	0.000	0.21
SO <sub>2</sub>	0.000	0.000	0.000	Not Required
TSP	0.000	0.000	0.000	Not Required
PM <sub>10</sub>	0.000	0.000	0.000	Not Required
CO	0.000	0.000	0.000	0.1
VOC	0.000	0.000	0.000	Not Required
HAPs	1.35E-08	1.08E-07	1.22E-07	No Source Limit

Note: The TA-33-G-3 generator only operated for a 0.9 hours during 2015.

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	0.65	0.80	1.45	2.33
SO <sub>2</sub>	0.04	0.05	0.09	0.16
TSP	0.04	0.05	0.09	Not Required
PM <sub>10</sub>	0.04	0.05	0.09	Not Required
CO	0.39	0.48	0.87	1.4
VOC	0.05	0.06	0.11	0.2
HAPs	2.10E-04	2.59E-04	4.69E-04	No Source Limit

Generator RLUOB-GEN-1	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.217	0.181	0.398	No Source Specific Emission Limits for the CMRR Generators
SO <sub>2</sub>	0.006	0.005	0.011	
TSP	0.013	0.011	0.024	
PM <sub>10</sub>	0.011	0.009	0.020	
CO	0.268	0.225	0.493	
VOC	0.031	0.026	0.057	
HAPs	5.63E-05	4.71E-05	1.03E-04	

Generator RLUOB-GEN-2	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.074	0.289	0.363	No Source Specific Emission Limits for the CMRR Generators
SO <sub>2</sub>	0.002	0.008	0.010	
TSP	0.004	0.017	0.021	
PM <sub>10</sub>	0.004	0.014	0.018	
CO	0.092	0.358	0.450	
VOC	0.010	0.041	0.051	
HAPs	1.92E-05	7.51E-05	9.43E-05	

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**A1100 Internal Combustion- continued**

Generator RLUOB-GEN-3	January - June Emissions (tons)	July - December Emissions (tons)	Annual Emissions (tons)	Permit Limits
NOx	0.202	0.168	0.370	No Source Specific Emission Limits for the CMRR Generators
SO <sub>2</sub>	0.005	0.004	0.009	
TSP	0.012	0.010	0.022	
PM <sub>10</sub>	0.010	0.008	0.018	
CO	0.250	0.208	0.458	
VOC	0.028	0.024	0.052	
HAPs	5.24E-05	4.36E-05	9.60E-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 CMRR Generators
SO <sub>2</sub>	0.000	0.000	0.000	
TSP	0.000	0.000	0.000	
PM <sub>10</sub>	0.000	0.000	0.000	
CO	0.000	0.000	0.000	
VOC	0.000	0.000	0.000	
HAPs	0.00E+00	0.00E+00	0.00E+00	

Note: The TA-48-GEN-1 generator did not operate during 2015.

Generator TA-55-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 CMRR Generators
SO <sub>2</sub>	0.000	0.000	0.000	
TSP	0.000	0.000	0.000	
PM <sub>10</sub>	0.000	0.000	0.000	
CO	0.000	0.000	0.000	
VOC	0.000	0.000	0.000	
HAPs	0.00E+00	0.00E+00	0.00E+00	

Note: The TA-55-GEN-1 generator did not operate during 2015.

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 CMRR Generators
SO <sub>2</sub>	0.000	0.000	0.000	
TSP	0.000	0.000	0.000	
PM <sub>10</sub>	0.000	0.000	0.000	
CO	0.000	0.000	0.000	
VOC	0.000	0.000	0.000	
HAPs	0.00E+00	0.00E+00	0.00E+00	

Note: The TA-55-GEN-2 generator did not operate during 2015.

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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	0.148	0.199	0.347	No Source Specific Emission Limits for the OMRR Generators
SO <sub>2</sub>	0.003	0.003	0.006	
TSP	0.005	0.006	0.011	
PM <sub>10</sub>	0.005	0.006	0.011	
CO	0.032	0.043	0.075	
VOC	0.007	0.006	0.013	
HAPs	2.70E-05	2.44E-05	5.14E-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 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:

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	0.03	0.03	0.06	9.9
PM10	0.03	0.03	0.06	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, 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: \_\_\_\_\_

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	6.11	4.82	10.93	31.5
SO <sub>2</sub>	0.06	0.05	0.11	4.9
TSP	0.80	0.63	1.43	4.7
PM <sub>10</sub>	0.80	0.63	1.43	4.4
PM <sub>2.5</sub>	0.80	0.63	1.43	4.2
CO	4.21	3.33	7.54	21.5
VOC	0.58	0.46	1.04	2.8
HAPs	0.20	0.16	0.36	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	0.39	0.86	1.25	59.4
SOx	0.03	0.06	0.09	4.2
TSP	0.05	0.12	0.17	4.8
PM <sub>10</sub>	0.05	0.12	0.17	4.8
PM <sub>2.5</sub>	0.05	0.12	0.17	4.8
CO	0.08	0.18	0.26	72.3
VOC	0.02	0.04	0.06	1.5
HAPs	0.01	0.02	0.03	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 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 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 2015.

**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 <sub>2</sub> )	150.0
Total Particulate Matter (TSP)	120.0
Particulate Mater less than 10 microns (PM <sub>10</sub> )	120.0
Particulate Mater 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**

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, 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:

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

**Comments:**

Pollutant	January - June Emissions (tons)	July - December Emissions (tons)	2015 Annual Emissions (tons)	Facility Wide Permit Limits (Condition A102) (tons per year)
Nitrogen Oxides	20.00	15.90	35.90	245
Carbon Monoxide	15.18	11.70	26.88	225
Volatile Organic Carbons	7.15	4.51	11.66	200
Sulfur Dioxide	0.23	0.24	0.47	150
Total Particulate Matter	1.94	1.57	3.51	120
Particulate Matter less than 10 microns	1.94	1.56	3.50	120
Particulate Matter less than 2.5 microns	0.86	0.75	1.61	120
Hazardous Air Pollutants	2.80	2.41	5.21	24