



Associate Directorate for ESH&Q  
P.O. Box 1663, MS K491  
Los Alamos, New Mexico 87545  
505-667-4218/Fax 505-665-3811

Date: March 20, 2009  
Refer To: ESH&Q-09-014

Compliance Reporting Manager  
Compliance & Enforcement Section  
New Mexico Environment Department  
Air Quality Bureau  
1301 Siler Road, Building B  
Santa Fe, NM 87507

**IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)  
OPERATING PERMIT NO: P100M2  
SEMI-ANNUAL EMISSIONS REPORT – JULY 1, 2008 TO DECEMBER 31, 2008**

Dear Compliance Reporting Manager:

Enclosed is Los Alamos National Laboratory's (LANL) Semi-Annual Emissions report for the period July 1, 2008 through December 31, 2008. This report is required by permit condition 4.1 and is submitted within 90 days from the end of the reporting period as required by permit condition 4.3.

The semi-annual emissions report includes actual emissions from permitted sources included in section 2.0 of LANL's Operating Permit. Emissions are also reported from insignificant boiler and generator sources. These sources are included to demonstrate that LANL has not exceeded Prevention of Significant Deterioration (PSD) applicability thresholds. 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 Steve Story at (505) 665-2169.

Sincerely,

J. Chris Cantwell

Associate Director, ESH&Q

WWW

Cy:

M. Mallory, PADOPS, A102  
S. Fong, DOE-LA-AO, A316  
P. Wardwell, LC-ESH, A187  
D. Wilburn, ENV-EAQ, J978  
D. Janecky, ENV-EAQ, J978  
S. Story, ENV-EAQ, J978  
M. Stockton, ENV-EAQ, J978  
W. Whetham, ENV-EAQ, J978

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IRM-RM550, A150

ENV-EAQ Title V Emissions Report File

ENV-EAQ Admin File

ESH&Q File

# Enclosure

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Los Alamos National Laboratory's  
Title V Operating Permit  
Emissions Report for the period  
**July 1 – December 31, 2008**

# Title V Operating Permit Semi-Annual Emission Report

July 1, 2008 – December 31, 2008

## Identifying Information

Source Name: Los Alamos National Laboratory County: Los Alamos

Source Address:

City: Los Alamos State: NM Zip Code: 87545

Responsible Official: J. Chris Cantwell Ph No. (505) 606-2354 Fax No. (505) 665-3811

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

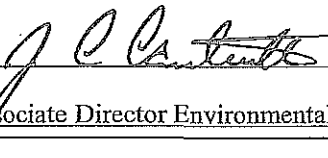
Principal Company Product or Business: National Security and Nuclear Weapons Research Primary SIC Code: 9711

Permit No. P100M2 {IDEA/Tempo ID No. 856} Permit Issued Date: July 16, 2007

## Certification of Truth, Accuracy, and Completeness

I, J. Chris Cantwell 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: 3/16/08

Title: Associate Director Environmental, Safety, Health, and Quality

## Title V Semi-Annual Emission Report for Permit P100M2

### Emission Reporting Requirements

#### 4.0 Reporting

Conditions of 4.0 are pursuant to 20.2.70.302.E NMAC.

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.
- 4.3 The report required by Condition 4.1 shall be submitted within 90 days from the end of the reporting period. The semiannual report required by Condition 4.2 shall be submitted within 45 days from the end of the reporting period. The reporting periods are January 1<sup>st</sup> to June 30<sup>th</sup> and July 1<sup>st</sup> to December 31<sup>st</sup>. This condition is pursuant to 20.2.70.302.E.1 NMAC.

**Specific Emissions Reports:**

**2.1 Asphalt Production**

2.1.2 Emission Limits

| Emission Unit | Allowable Emission Limits |                 |                             |         |         |
|---------------|---------------------------|-----------------|-----------------------------|---------|---------|
|               | NO <sub>x</sub>           | SO <sub>2</sub> | PM                          | CO      | VOC     |
| TA-60-BDM     | 1.0 tpy                   | 1.0 tpy         | 0.04 gr/dscf<br>35.4 lbs/hr | 2.6 tpy | 1.0 tpy |

**Reporting Requirement**

2.1.6.1 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

<sup>(1)</sup> Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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<br>TA-60-BDM | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limits<br>(Condition 2.1.2)<br>(tons per year) |
|----------------------------|---------------------------------------|---|-------------------------------|---|
| NO <sub>x</sub>            | 0.013                                 | 0.014                                     | 0.027                         | 1.0   |
| SO <sub>2</sub>            | 0.002                                 | 0.003                                     | 0.005                         | 1.0   |
| PM                         | 0.005                                 | 0.005                                     | 0.010                         | *35.4 lb/hr   |
| CO                         | 0.210                                 | 0.220                                     | 0.430                         | 2.6   |
| VOC                        | 0.004                                 | 0.005                                     | 0.009                         | 1.0   |
| HAPs                       | 0.004                                 | 0.004                                     | 0.008                         | No Source Permit<br>Limit                             |

Note: \* The Asphalt Plant does not have an annual limit for PM. The hourly emissions were demonstrated during the initial source compliance test conducted on August 25th & 26th, 2005.

## 2.2 Beryllium Activities

### 2.2.2 Emission Limits

| Source   | Allowable Emission Limits                |                |
|--|--|----------------|
|  | Beryllium                                | Aluminum       |
| Chemistry and Metallurgy<br>Research Facility<br>TA-3-29 | 10 gm/24 hr                              | Not Applicable |
| Sigma Facility<br>TA-3-66                                | 10 gm/24 hr                              | Not Applicable |
| Beryllium Test Facility<br>TA-3-141                      | 0.35 gm/24 hr<br>3.5 gm/yr               | Not Applicable |
| TA-16-207  | 10 gm/24 hr                              | Not Applicable |
| TA-35-87   | 10 gm/24 hr                              | Not Applicable |
| Target Fabrication Facility<br>TA-35-213                 | $1.8 \times 10^{-4}$ gm/hr<br>0.36 gm/yr | Not Applicable |

| Source                          | Allowable Emission Limits                                     |   |
|---------------------------------|---|---|
|                                 | Beryllium   | Aluminum  |
| Plutonium Facility<br>TA-55-PF4 |   |   |
| Machining Operation             | 0.12 gm/24 hr<br>2.99 gm/yr                                   | 0.12 gm/24 hr<br>2.99 gm/yr                                   |
| Foundry Operation               | $3.49 \times 10^{-5}$ gm/24 hr<br>$8.73 \times 10^{-4}$ gm/yr | $3.49 \times 10^{-5}$ gm/24 hr<br>$8.73 \times 10^{-4}$ gm/yr |

### Reporting Requirement

2.2.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

<sup>(1)</sup> Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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

## 2.2 Beryllium Activities - continued

### Comments:

| Source  | Pollutant         | January - June Emissions | July - December Emissions | Annual Emissions     | Permit Limits (Condition 2.2.2) |
|---|-------------------|--------------------------|---------------------------|----------------------|---------------------------------|
| Beryllium Test Facility<br>TA-3-141 <sup>(1)</sup>                    | Beryllium (grams) | < 0.0033                 | < 0.0033                  | < 0.007              | 3.5 gm/yr                       |
| Target Fabrication Facility<br>TA-35-213 <sup>(2)</sup>               | Beryllium (grams) | < 0.00944                | < 0.009                   | < 0.018              | 0.36 gm/yr                      |
| Plutonium Facility<br>TA-55-PF4<br>Machining Operation <sup>(3)</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<br>TA-55-PF4<br>Foundry Operation <sup>(4)</sup>   | Beryllium (grams) | 0                        | 0                         | 0.00                 | $8.73 \times 10^{-4}$ gm/yr     |
|   | Aluminum (grams)  | 0                        | 0                         | 0.00                 | $8.73 \times 10^{-4}$ 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: <sup>(1)</sup> Emission values shown for the Beryllium Test Facility are from actual stack emission measurements which are submitted to NMED quarterly. <sup>(2)</sup> 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. <sup>(3)</sup> 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. <sup>(4)</sup> The Plutonium Facility foundry operations did not operate in 2008. <sup>(5)</sup> Other Beryllium activities listed in section 2.2 of the permit do not require reporting in the Semi-Annual Emissions Report.



## 2.3 Boilers and Heaters

### 2.3.2 Emission Limits

| Source                               | Allowable Emission Limits |             |                                 |                          |              |
|--------------------------------------|---------------------------|-------------|---------------------------------|--------------------------|--------------|
|                                      | NO <sub>x</sub><br>(tpy)  | CO<br>(tpy) | PM or PM <sub>10</sub><br>(tpy) | SO <sub>2</sub><br>(tpy) | VOC<br>(tpy) |
| All Boilers and Heaters <sup>1</sup> | 80                        | 80          | 50                              | 50                       | 50           |

<sup>1</sup> Excludes TA-3-22 Power Plant addressed in Condition 2.9

### Reporting Requirement

2.3.6.1 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

(1) Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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 and Heaters | January - June Emissions (tons) | July - December Emissions (tons) | Annual Emissions (tons) | Permit Limits (Condition 2.3.2) (tons per year) |
|---------------------|---------------------------------|----------------------------------|-------------------------|---|
| NO <sub>x</sub>     | 14.60                           | 10.98                            | 25.58                   | 80  |
| SO <sub>2</sub>     | 0.09                            | 0.07                             | 0.16                    | 50  |
| PM                  | 1.16                            | 0.87                             | 2.03                    | 50  |
| PM-10               | 1.16                            | 0.87                             | 2.03                    | 50  |
| CO                  | 11.83                           | 8.86                             | 20.69                   | 80  |
| VOCs                | 0.81                            | 0.61                             | 1.42                    | 50  |
| HAPs                | 0.28                            | 0.21                             | 0.49                    | No Source Limit                                 |

Note: The emissions shown in this table include significant and insignificant sources. This section does not include the TA-3-22 Power Plant boilers. These can be found under Section 2.9 of this report.

## 2.4 Carpenter Shops

### 2.4.2 Emission Limits

| Source    | Allowable Emission Limits |
|-----------|---------------------------|
|           | PM <sub>10</sub> (tpy)    |
| TA-15-563 | 2.81                      |
| TA-3-38   | 3.07                      |

### Reporting Requirement

2.4.6.1 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

(1) Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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:

| Shop      | Pollutant        | January - June Emissions (tons) | July - December Emissions (tons) | Annual Emissions (tons) | Permit Limits (Condition 2.4.2) (tons per year) |
|-----------|------------------|---------------------------------|----------------------------------|-------------------------|---|
| TA-3-38   | PM <sub>10</sub> | 0.006                           | 0.011                            | 0.017                   | 3.07  |
| TA-15-563 | PM <sub>10</sub> | 0.013                           | 0.015                            | 0.028                   | 2.81  |

**2.5 Chemical Usage**

**2.5.2 Emission Limits**

2.5.3.1 The contribution of VOC and/or HAPs emissions from chemical usage shall not cause the exceedence of the corresponding facility-wide limit listed below:

- 200 tons per year of facility-wide VOCs
- 8 tons per year of individual facility-wide HAP
- 24 tons per year of total facility-wide HAPs

**Reporting Requirement**

2.5.5.1 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

(1) Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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<br>LANL-FW-CHEM  | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limits<br>(Condition 2.5.3.1)               |
|---|---------------------------------------|---|-------------------------------|--|
| VOCs  | 4.7                                   | 4.3                                       | 9.0                           | Source limits refer<br>to facility-wide<br>limits. |
| HAPs  | 2.6                                   | 1.9                                       | 4.5                           |  |
| Highest Individual HAP for both<br>the first and the second six<br>months (Hydrochloric Acid) | 0.5                                   | 0.5                                       | 1.0                           |  |

## 2.6 Degreasers

### 2.6.2 Emission Limits

2.6.2.1 The contribution of VOC and/or HAP emissions from chemical usage shall not cause the exceedence of the corresponding facility-wide limit listed below:

- 200 tons per year of facility-wide VOCs
- 8 tons per year of an individual facility-wide HAP
- 24 tons per year of total facility-wide HAPs

### Reporting Requirement

2.6.6.3 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

(1) Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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<br>TA-55-DG-1 | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limits<br>(Condition 2.6.2.1)<br>(tons per year)   |
|-------------------------|---------------------------------------|---|-------------------------------|---|
| VOCs                    | 0.010                                 | 0.005                                     | 0.015                         | Source limits refer<br>to facility-wide<br>limits. (See Facility<br>Emissions Table on<br>Page 1) |
| HAPs                    | 0.010                                 | 0.005                                     | 0.015                         |   |

**Note:** Degreasers TA-55-DG-2 and TA-55-DG-3 were not used in 2008. The units have been removed from LANL and will not be used in the future. The Title V application submitted to NMED in April 2008 reflects this change.

## 2.7 Internal Combustion Sources

### 2.7.2 Emission Limits

| Source    | Allowable Emission Limits |     |      |     |                 |      |      |      |     |     |                 |     |
|-----------|---------------------------|-----|------|-----|-----------------|------|------|------|-----|-----|-----------------|-----|
|           | TSP                       |     | PM10 |     | NO <sub>x</sub> |      | CO   |      | VOC |     | SO <sub>x</sub> |     |
|           | pph                       | tpy | pph  | tpy | pph             | tpy  | pph  | tpy  | pph | tpy | pph             | tpy |
| TA-33-G-1 | 1.4                       | 0.6 | 1.4  | 0.6 | 40.3            | 18.1 | 33.7 | 15.2 | 0.7 | 0.3 | 5.5             | 2.5 |

### Reporting Requirement

2.7.6.1 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

(1) Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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<br>TA-33-G-1 | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limits<br>(Condition 2.7.2)<br>(tons per year) |
|------------------------|---------------------------------------|---|-------------------------------|---|
| NO <sub>x</sub>        | 0.359                                 | 0.181                                     | 0.540                         | 18.1  |
| SO <sub>x</sub>        | 0.053                                 | 0.027                                     | 0.080                         | 2.5   |
| TSP                    | 0.012                                 | 0.006                                     | 0.018                         | 0.6   |
| PM <sub>10</sub>       | 0.012                                 | 0.006                                     | 0.018                         | 0.6   |
| CO                     | 0.292                                 | 0.148                                     | 0.440                         | 15.2  |
| VOC                    | 0.007                                 | 0.003                                     | 0.010                         | 0.3   |
| HAPs                   | 7.73E-05                              | 3.91E-05                                  | 1.16E-04                      | No Source Limit                                       |

Continued on the next page.

## 2.7 Internal Combustion Sources - continued

### Comments:

| Generator<br>TA-33-G-2 | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limits<br>(NSR Permit 2195-P<br>Condition 2)<br>(tons per year) |
|------------------------|---------------------------------------|---|-------------------------------|--|
| NO <sub>x</sub>        | 0.000                                 | 0.000                                     | 0.000                         | 0.21   |
| SO <sub>x</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                   | 0.00E+00                              | 0.00E+00                                  | 0.00E+00                      | No Source Limit  |

**Note:** This generator is not listed in the latest Title V permit, P100M2. However, it is listed in NSR Permit No. 2195-P which was issued on August 8, 2007 and has been included in the Title V application submitted to NMED in April 2008. This generator did not run during the first six months of 2008 and ran for less than an hour during the second six months of 2008.

| Generator<br>TA-33-G-3 | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limits<br>(NSR Permit 2195-P<br>Condition 2)<br>(tons per year) |
|------------------------|---------------------------------------|---|-------------------------------|--|
| NO <sub>x</sub>        | 0.008                                 | 0.000                                     | 0.009                         | 0.21   |
| SO <sub>x</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                     | 0.002                                 | 0.000                                     | 0.002                         | 0.1  |
| VOC                    | 0.001                                 | 0.000                                     | 0.001                         | Not Required   |
| HAPs                   | 2.68E-06                              | 0.00E+00                                  | 2.68E-06                      | No Source Limit  |

**Note:** This generator is not listed in the latest Title V permit, P100M2. However, it is listed in NSR Permit No. 2195-P which was issued on August 8, 2007 and has been included in the Title V application submitted to NMED in April 2008. The unit ran less than an hour during the second six months of 2008. The emissions from this unit are included in the facility wide total.

| Generator<br>TA-33-G-4 | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limits<br>(NSR Permit 2195-P<br>Condition 2)<br>(tons per year) |
|------------------------|---------------------------------------|---|-------------------------------|--|
| NO <sub>x</sub>        | 0.000                                 | 0.255                                     | 0.255                         | 2.33   |
| SO <sub>x</sub>        | 0.000                                 | 0.018                                     | 0.018                         | 0.16   |
| TSP                    | 0.000                                 | 0.018                                     | 0.018                         | Not Required   |
| PM <sub>10</sub>       | 0.000                                 | 0.018                                     | 0.018                         | Not Required   |
| CO                     | 0.000                                 | 0.055                                     | 0.055                         | 1.4  |
| VOC                    | 0.000                                 | 0.018                                     | 0.018                         | 0.2  |
| HAPs                   | 0.00E+00                              | 8.21E-05                                  | 8.21E-05                      | No Source Limit  |

**Note:** This generator is not listed in the latest Title V permit, P100M2. However, it is listed in NSR Permit No. 2195-P which was issued on August 8, 2007 and has been included in the Title V application submitted to NMED in April 2008. This generator did not run during the first six months of 2008. The emissions from this unit are included in the facility wide total.

Continued on the next page.

## 2.7 Internal Combustion Sources - continued

**Comments:**

| Stationary Standby Generators | January - June Emissions (tons) | July - December Emissions (tons) | Annual Emissions (tons) | Permit Limits   |
|-------------------------------|---------------------------------|----------------------------------|-------------------------|---|
| NO <sub>x</sub>               | 2.46                            | 2.52                             | 4.97                    | No Source Specific Emission Limits for Standby Generators |
| SO <sub>x</sub>               | 0.08                            | 0.08                             | 0.17                    |   |
| TSP                           | 0.11                            | 0.11                             | 0.21                    |   |
| PM <sub>10</sub>              | 0.11                            | 0.11                             | 0.21                    |   |
| CO                            | 0.56                            | 0.56                             | 1.12                    |   |
| VOC                           | 0.11                            | 0.11                             | 0.22                    |   |
| HAPs                          | 7.97E-04                        | 6.49E-04                         | 1.45E-03                |   |

**Note:** Standby Generators are insignificant sources.

## 2.8 Data Disintegrator

### 2.8.2 Emission Limits

| Source   | Allowable Emission Limits |           |            |            |
|----------|---------------------------|-----------|------------|------------|
|          | TSP (pph)                 | TSP (tpy) | PM10 (pph) | PM10 (tpy) |
| TA-52-11 | 2.3                       | 9.9       | 2.3        | 9.9        |

PM10 and TSP emissions limits shown in above Table are after controls.

### Reporting Requirement

2.8.6.1 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

(1) Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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<br>TA-52-11 | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limits<br>(Condition 2.8.2)<br>(tons per year) |
|--------------------------------|---------------------------------------|---|-------------------------------|---|
| TSP                            | 0.19                                  | 0.12                                      | 0.31                          | 9.9   |
| PM10                           | 0.17                                  | 0.11                                      | 0.28                          | 9.9   |



## 2.9 Power Plant at Technical Area 3 (TA-3-22)

### 2.9.2 Emission Limits

| Source                                | Allowable Emission Limits |      |               |     |                |     |                |     |                             |     |                |     |
|---------------------------------------|---------------------------|------|---------------|-----|----------------|-----|----------------|-----|-----------------------------|-----|----------------|-----|
|                                       | NOx<br>(lb/hr)            |      | CO<br>(lb/hr) |     | SOx<br>(lb/hr) |     | TSP<br>(lb/hr) |     | PM <sub>10</sub><br>(lb/hr) |     | VOC<br>(lb/hr) |     |
|                                       | Gas                       | Oil  | Gas           | Oil | Gas            | Oil | Gas            | Oil | Gas                         | Oil | Gas            | Oil |
| TA-3-22-1                             | 10.2                      | 11.3 | 7.0           | 6.5 | 1.1            | 9.6 | 1.3            | 4.3 | 1.3                         | 3.0 | 1.0            | 0.3 |
| TA-3-22-2                             | 10.2                      | 11.3 | 7.0           | 6.5 | 1.1            | 9.6 | 1.3            | 4.3 | 1.3                         | 3.0 | 1.0            | 0.3 |
| TA-3-22-3                             | 10.2                      | 11.3 | 7.0           | 6.5 | 1.1            | 9.6 | 1.3            | 4.3 | 1.3                         | 3.0 | 1.0            | 0.3 |
| Boilers<br>Combined <sup>1</sup>      | 60.2 tpy                  |      | 41.3 tpy      |     | 7.9 tpy        |     | 8.4 tpy        |     | 8.2 tpy                     |     | 5.6 tpy        |     |
| TA-3-22 CT-<br>1 (lb/hr)              | 23.8                      |      | 170.9         |     | 1.4            |     | 1.6            |     | 1.6                         |     | 1.0            |     |
| TA-3-22 CT-<br>1 (tpy) <sup>1,2</sup> | 33.2                      |      | 19.8          |     | 1.9            |     | 2.3            |     | 2.3                         |     | -              |     |

<sup>1</sup>Annual emission limits are 12-month rolling totals. This is pursuant to NSR Permit No. 2195BM1, Table 2.2, Note 1.

<sup>2</sup>“-“ notation implies emission rates less than or equal to 0.5 tpy.

### Reporting Requirement

2.9.6.1 Reports shall be submitted in accordance with conditions 4.1 and 4.2.<sup>(1)</sup>

4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

(1) Condition 4.2 refers to submitting a Semi-Annual Monitoring report which LANL submitted on February 5, 2009, Tracking Number SBR20090001.

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

2.9 Power Plant at Technical Area 3 (TA-3-22) - Continued

Comments:

| Boilers<br>TA-3-22-1, TA-3-22-<br>2<br>TA-3-22-3 | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limit<br>(Condition 2.9.2)<br>(tons per year) |
|--|---------------------------------------|---|-------------------------------|--|
| NO <sub>x</sub>                                  | 7.98                                  | 6.09                                      | 14.07                         | 60.2   |
| SO <sub>2</sub>                                  | 0.09                                  | 0.06                                      | 0.15                          | 7.9  |
| TSP  | 1.05                                  | 0.80                                      | 1.85                          | 8.4  |
| PM <sub>10</sub>                                 | 1.05                                  | 0.80                                      | 1.85                          | 8.2  |
| CO   | 5.50                                  | 4.20                                      | 9.70                          | 41.3   |
| VOC  | 0.76                                  | 0.58                                      | 1.34                          | 5.6  |
| HAPs   | 0.26                                  | 0.20                                      | 0.46                          | No Source Limit                                      |

| Combustion<br>Turbine<br>TA-3-22 CT-1 | January - June<br>Emissions<br>(tons) | July -<br>December<br>Emissions<br>(tons) | Annual<br>Emissions<br>(tons) | Permit Limit<br>(Condition 2.9.2)<br>(tons per year) |
|---------------------------------------|---------------------------------------|---|-------------------------------|--|
| NO <sub>x</sub>                       | 0.014                                 | 0.413                                     | 0.427                         | 33.2   |
| SO <sub>2</sub>                       | 0.001                                 | 0.029                                     | 0.030                         | 1.9  |
| TSP                                   | 0.002                                 | 0.056                                     | 0.058                         | 2.3  |
| PM <sub>10</sub>                      | 0.002                                 | 0.056                                     | 0.058                         | 2.3  |
| CO                                    | 0.003                                 | 0.086                                     | 0.089                         | 19.8   |
| VOC                                   | 0.001                                 | 0.018                                     | 0.019                         | No TPY Limit   |
| HAPs                                  | 3.93E-04                              | 1.12E-02                                  | 1.16E-02                      | No Source Limit                                      |

## 2.10 Facility Wide Emission Limits

### 2.10.1 Emission Limits

#### Total Allowable Criteria Pollutant and HAP Emission Limits

| Pollutant                          | Emission Limit (tons per year) |
|------------------------------------|--------------------------------|
| Nitrogen Oxides (NO <sub>x</sub> ) | 245                            |
| Carbon Monoxide (CO)               | 225                            |
| Volatile Organic Compounds (VOCs)  | 200                            |
| Sulfur Dioxide (SO <sub>2</sub> )  | 150                            |
| Particulate Matter (PM)            | 120                            |
| Hazardous Air Pollutants (HAPs)    | 24 combined / 8 individual     |

### Reporting Requirement

- 4.1 Reports of actual emissions from permitted sources in Section 2.0 shall be submitted on a 6 month basis. Reports shall not include emissions from insignificant activities. Emission estimates of criteria pollutants NO<sub>x</sub>, CO, SO<sub>2</sub>, PM and VOCs shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits specified in Section 2.10 of this permit.

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) | 2008 Annual Emissions (tons) | Facility Wide Emission Limits (Permit Condition 2.10.1) (tons per year) |
|--|---------------------------------|----------------------------------|------------------------------|---|
| Nitrogen Oxides                            | 25.4                            | 20.4                             | 45.8                         | 245   |
| Sulfur Dioxide                             | 0.3                             | 0.3                              | 0.6                          | 150   |
| Particulate Matter                         | 2.5                             | 2.0                              | 4.5                          | 120   |
| Carbon Monoxide                            | 18.4                            | 14.1                             | 32.5                         | 225   |
| Volatile Organic Compounds                 | 6.4                             | 5.6                              | 12.0                         | 200   |
| Hazardous Air Pollutants                   | 3.2                             | 2.3                              | 5.5                          | 24 combined   |
| Highest Individual HAP (Hydrochloric Acid) | 0.5                             | 0.5                              | 1.0                          | 8 individual  |



**New Mexico Environment Department  
Air Quality Bureau  
Compliance and Enforcement Section  
1301 Siler Road Building B  
Santa Fe, NM 87507  
Phone (505) 476-4300 Fax (505) 476-4375**



Version 07.03.08

|               |  |
|---------------|--|
| NMED USE ONLY |  |
| DTS           |  |
| TEMPO         |  |

## REPORTING SUBMITTAL FORM

|               |  |
|---------------|--|
| NMED USE ONLY |  |
| Staff         |  |
| Admin         |  |

PLEASE NOTE: ® - Indicates required field

|   |                                     |  |   |  |                                   |
|---|-------------------------------------|--|---|--|-----------------------------------|
| <b>SECTION I - GENERAL COMPANY AND FACILITY INFORMATION</b>   |                                     |  |   |  |                                   |
| A. ® Company Name:<br>Los Alamos National Security            |                                     |  | D. ® Facility Name:<br>Los Alamos National Laboratory |  |                                   |
| B.1 ® Company Address:<br>P.O. Box 1663<br>MS J978            |                                     |  | E.1 ® Facility Address:<br>Same as Company            |  |                                   |
| B.2 ® City:<br>Los Alamos                                     |                                     | B.3 ® State:<br>NM                         | B.4 ® Zip:<br>87545                                   | E.2 ® City:                                |                                   |
| C.1 ® Company Environmental Contact:<br>Dianne Wilburn        |                                     | C.2 ® Title:<br>EAQ Group Leader           |   | F.1 ® Facility Contact:<br>Steve Story     |                                   |
| C.3 ® Phone Number:<br>505-667-6952                           |                                     | C.4 ® Fax Number:<br>505-665-8858          |   | F.2 ® Title:<br>Air Compliance Team Leader |                                   |
| C.5 ® Email Address:<br>dianne@lanl.gov                       |                                     |  | F.3 ® Phone Number:<br>505-665-2169                   |  |                                   |
| G. Responsible Official: (Title V only):<br>J. Chris Cantwell |                                     |  | H. Title:<br>Associate Director ESH&Q                 |  | F.4 ® Fax Number:<br>505-665-8858 |
| I. Phone Number:<br>505-606-2354                              |                                     | J. Fax Number:<br>505-665-3811             |   | F.5 ® Email Address:<br>story@lanl.gov     |                                   |
| K. ® AI Number:<br>856  | L. Title V Permit Number:<br>P100M2 | M. Title V Permit Issue Date:<br>7/16/2007 | N. NSR Permit Number:<br>2195                         | O. NSR Permit Issue Date:<br>Various       |                                   |
| P. Reporting Period:<br>From: 7/1/2008 To: 12/31/2008         |                                     | OR   | Q. Proposed Test Date:                                |  | OR                                |
|   |                                     |  |   | R. Actual Test Date:                       |                                   |

|  |  |  |   |              |  |
|--|--|--|---|--------------|--|
| <b>SECTION II - TYPE OF SUBMITTAL (check one that applies)</b> |  |  |   |              |  |
| A. <input type="checkbox"/>                                    | Title V Annual Compliance Certification                    | Permit Condition(s):   | Description:  |              |  |
| B. <input checked="" type="checkbox"/>                         | Title V Semi-annual Monitoring Report                      | Permit Condition(s):<br>Condition 4.1  | Description:<br>Title V Semi-Annual Emissions Report July - December 2008 |              |  |
| 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 type="checkbox"/>                                    | Permit or Notice of Intent (NOI) Requirement               | Permit No. <input type="checkbox"/> : or NOI No. <input type="checkbox"/> :  | Condition(s):   | Description: |  |
| G. <input type="checkbox"/>                                    | Requirement of an Enforcement Action                       | NOV No. <input type="checkbox"/> : or SFO No. <input type="checkbox"/> :<br>or CD No. <input type="checkbox"/> : or Other <input type="checkbox"/> : | Section(s):   | Description: |  |

|   |  |  |  |   |  |
|---|--|--|--|---|--|
| <b>SECTION III - PERIODIC EMISSIONS TEST NOTIFICATIONS, TEST PROTOCOLS AND TEST REPORTS (if applicable)</b> |  |  |  |   |  |
| T. <input type="checkbox"/>   | A. Test Report <input type="checkbox"/> CMT: _____ |  | B. Test Protocol <input type="checkbox"/>      | C. Notification <input type="checkbox"/> CMT: _____           |  |
|   | D. Test (EPA Methods) <input type="checkbox"/>     |  | E. Test (EPA Methods) <input type="checkbox"/> | F. RATA Test <input type="checkbox"/>                         | G. Opacity Test <input type="checkbox"/>   |
|   |  |  |  | H. Portable Analyzer (Periodic Test) <input type="checkbox"/> | Description: (Emission Units to be Tested) |

|   |  |                                   |  |  |  |
|---|--|-----------------------------------|--|--|--|
| <b>SECTION IV - CERTIFICATION</b>   |  |                                   |  |  |  |
| After reasonable inquiry, I <u>J. Chris Cantwell</u> certify that the information in this submittal is true, accurate and complete.<br>(name of reporting official) |  |                                   |  |  |  |
| ® Signature of Reporting Official:<br>  |  | ® Title:<br>Assoc. Director ESH&Q |  | ® Date:<br>3/16/09   |  |
|   |  |                                   |  | ® Responsible Official for Title V?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |  |

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

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