Los Alamos
NATIONAL LABORATORY
EST.1943

*Associate Directorate for ESH&Q*
P.O. Box 1663, MS K491
Los Alamos, New Mexico 87545
505-667-2211/Fax 505-665-8858

*Date:* August 4, 2009
*Ref:* ESH&Q-09-081

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

**SUBJECT: SEMI-ANNUAL MONITORING REPORT FOR JANUARY – JUNE 2009**
**AIR QUALITY TITLE V OPERATING PERMIT P100-M2**
**IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)**

Dear Compliance Reporting Manager:

Enclosed is Los Alamos National Laboratory's Title V Operating Permit Semi-Annual Monitoring Report for the period **January 1 – June 30, 2009** (Enclosure-1). This submission is required by permit condition 4.2 of Operating Permit P100-M2 and is being submitted within the allowed 45 days after the end of the reporting period as specified in permit condition 4.3. No permit deviations or excess emissions were identified 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 Steve Story at 665-2169 or David Paulson at 665-8884.

Sincerely,

J. Chris Cantwell
Associate Director
Environment, Safety, Health & Quality

Enc: a/s

Cy: I.E. Richardson, III, w/o enc., DIR, A100
M. Mallory, w/o enc., PADOPS, A102
S. Fong, w/o enc., DOE-LA-AO, A316
V. George, w/o enc., ENV-DO, J978
P. Wardwell, w/o enc., LC-ESH, A187
D. Wilburn, w/o enc., ENV-EAQ, J978
S. Story, w/o enc., ENV-EAQ, J978
IRM-RMSSO, w/o enc., A150
ENV-EAQ Title V Monitoring Report File
ADESH&Q File

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

## SECTION I - GENERAL COMPANY AND FACILITY INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| **A. ® Company Name:** Los Alamos National Security | | | **D. ® Facility Name:** Los Alamos National Laboratory | | |
| **B.1 ® Company Address:** P.O. Box 1663 MS J978 | | | **E.1 ® Facility Address:** Same as Company | | |
| **B.2 ® City:** Los Alamos | **B.3 ® State:** NM | **B.4 ® Zip:** 87545 | **E.2 ® City:** | **E.3 ® State:** | **E.4 ® Zip:** |
| **C.1 ® Company Environmental Contact:** Dianne Wilburn | **C.2 ® Title:** EAQ Group Leader | | **F.1 ® Facility Contact:** Steve Story | **F.2 ® Title:** Air Compliance Team Leader | |
| **C.3 ® Phone Number:** 505-667-6952 | **C.4 ® Fax Number:** 505-665-8858 | | **F.3 ® Phone Number:** 505-665-2169 | **F.4 ® Fax Number:** 505-665-8858 | |
| **C.5 ® Email Address:** dianne@lanl.gov | | | **F.5 ® Email Address:** story@lanl.gov | | |
| **G. Responsible Official: (Title V only):** J. Chris Cantwell | **H. Title:** Associate Director ESH&Q | | **I. Phone Number:** 505-667-4218 | **J. Fax Number:** 505-665-3811 | |

| **K. ® AI Number:** | **L. Title V Permit Number:** | **M. Title V Permit Issue Date:** | **N. NSR Permit Number:** | **O. NSR Permit Issue Date:** |
|---|---|---|---|---|
| 856 | P100M2 | 7/16/2007 | 2195 | Various |

| **P. Reporting Period:** | | **OR** | **Q. Proposed Test Date:** | **OR** | **R. Actual Test Date:** |
|---|---|---|---|---|---|
| From: 1/1/2009 | To: 6/30/2009 | | | | |

## SECTION II – TYPE OF SUBMITTAL (check one that applies)

| | | | | |
|---|---|---|---|---|
| A. ☐ | **Title V Annual Compliance Certification** | **Permit Condition(s):** | **Description:** | |
| B. ☒ | **Title V Semi-annual Monitoring Report** | **Permit Condition(s):** 4.2 | **Description:** LANL Semi-Annual Monitoring Report January-June 2009 | |
| C. ☐ | **NSPS Requirement (40CFR60)** | **Regulation:** | **Section(s):** | **Description:** |
| D. ☐ | **MACT Requirement (40CFR63)** | **Regulation:** | **Section(s):** | **Description:** |
| E. ☐ | **NMAC Requirement (20.2.xx) or NESHAP Requirement (40CFR61)** | **Regulation:** | **Section(s):** | **Description:** |
| F. ☐ | **Permit or Notice of Intent (NOI) Requirement** | **Permit No.☐: or NOI No.☐:** | **Condition(s):** | **Description:** |
| G. ☐ | **Requirement of an Enforcement Action** | **NOV No. ☐: or SFO No. ☐: or CD No. ☐: or Other ☐:** | **Section(s):** | **Description:** |

## SECTION III – PERIODIC EMISSIONS TEST NOTIFICATIONS, TEST PROTOCOLS AND TEST REPORTS (if applicable)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| T. ☐ | A. Test Report ☐ CMT:_____ | | B. Test Protocol ☐ | C. Notification ☐ CMT:_____ | | | **Description: (Emission Units to be Tested)** |
| | D. Initial Compliance Test (EPA Methods) ☐ | E. Periodic Test (EPA Methods) ☐ | F. RATA Test ☐ | G. Opacity Test ☐ | H Portable Analyzer (Periodic Test) ☐ | | |

## SECTION IV - CERTIFICATION

**After reasonable inquiry, I** J. Chris Cantwell **certify that the information in this submittal is true, accurate and complete.**
(name of reporting official)

| **® Signature of Reporting Official:** | **® Title:** | **® Date** | **® Responsible Official for Title V?** |
|---|---|---|---|
| J C Cantwell | Assoc. Director ESH&Q | 8/4/09 | ☒ Yes ☐ No |

Reviewed By: _____ Date Reviewed: _____

# Title V Report Certification Form

## I. Report Type

☐ **Annual Compliance Certification**

☒ **Semi-Annual Monitoring Report**

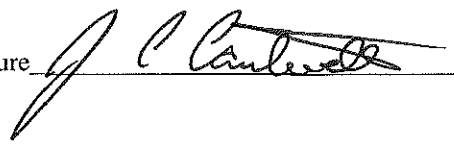
☐ **Other Specify:**

## II. Identifying Information

| | | |
|---|---|---|
| Facility Name: Los Alamos National Laboratory | | |
| Facility Address: P.O. Box 1663, MS J978, Los Alamos | State: NM | Zip: 87545 |
| Responsible Official (RO): J. Chris Cantwell | Phone: 505-667-4218 | Fax: 505-665-3811 |
| RO Title: Assoc. Director Environmental, Safety, Health, and Quality | RO e-mail: cantwe@lanl.gov | |
| Permit No.: P100M2 | Date Permit Issued: July 16, 2007 | |
| Report Due Date (as required by the permit): 08/14/2009 | Permit AI number: 856 | |
| Time period covered by this Report: From: January 1, 2009 | To: June 30, 2009 | |

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

I am the Responsible Official indicated above. I, (J. Chris Cantwell) certify that I meet the requirements of 20.2.70.7.AD 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: 8/4/2009 .

# Enclosure - 1

Los Alamos National Laboratory's
Title V Operating Permit
Monitoring Report for the period
**January 1 – June 30, 2009**

LA-UR-09-04659

*Approved for public release; distribution is unlimited.*

| | |
|---|---|
| *Title:* | Title V Semi-Annual Monitoring Report for Permit P100M2 January 2009 through June 2009 |
| *Author(s):* | David Paulson, ENV-EAQ |
| *Intended for:* | Compliance Reporting Manager<br>New Mexico Environment Department - Air Quality Bureau<br>1301 Siler Road, Building B<br>Santa Fe, New Mexico 87507 |

Los Alamos
NATIONAL LABORATORY
EST. 1943



Form 836 (7/06)

# Title V Semi-Annual Monitoring Report for Permit P100M2

# Part 1 – Monitoring Activity 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 NOx, CO, $SO_2$, 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.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

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 1st to June 30th and July 1st to December 31st. This condition is pursuant to 20.2.70.302.E.1 NMAC.

4.4 The permittee shall submit reports of all deviations (including emergencies) from permit requirements to the Department when they occur. The permittee shall communicate initial notice of the deviation to the Department within twenty-four (24) hours of the start of the first business day following the start of the occurrence via telephone or facsimile. Within ten (10) calendar days of the start of the first business day following the start of the occurrence, written notice using the Excess Emissions Form (attached to this permit) shall be submitted to the Department. This condition is pursuant to 20.2.70.302.E.2. NMAC.

**Attachment 1**
**Asphalt Plant Opacity Reports**

**Summary Table, Reports Attached**

| Month | Read Location | Date | Time | Average Opacity | EPA Method |
|---|---|---|---|---|---|
| January | Top of Shaker | 01/13/09 | 9:20 am | 0 | 9 [(a)] |
| February | Top of Shaker | 02/04/09 | 8:40 am | 0 | 9 [(a)] |
| March | Top of Shaker | 03/11/09 | 9:16 am | 0 | 9 [(a)] |
| April | Top of Shaker | 04/09/09 | 8:40 am | 0 | 9 [(a)] |
| May | Top of Shaker | 05/18/09 | 10:12 am | 0 | 9 [(a)] |
| June | Top of Shaker | 06/05/09 | 9:55 am | 0 | 9 [(a)] |

(a) EPA Method 9 was used. Average opacity for the Asphalt Plant is the sum of the highest consecutive 24 readings divided by 24 (6 minutes of readings). The method is in accordance with 20.2.61 NMAC and conditions 2.1.4.1 and 2.1.4.3 of the Los Alamos National Laboratory (LANL) Operating Permit P100M2.

Los Alamos

## LOS ALAMOS NATIONAL LABORATORY (LANL)
## VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name: LANL ASPHALT PLANT

Source Location: TA-60 Sigma Mesa

Type of Source: Asphalt Plant

Type of Control Equipment: Baghouse

Describe Emission Point (Top of stack, etc.): Top of Asphalt Plant stack

Height Above Ground Level: 45 Feet

Height Relative to Observer: 45 Feet

Distance From Observer: 60 Feet

Direction of Source From Observer: NW

Description of Plume (stack exit only)
☐Looping ☐Trapping ☐Looping ☐Fanning ☐Coning
☒No Plume Present

Emission Color: N/A

Plume Type ☒No Plume Present
☐Continuous ☐ Fugitive ☐Intermittent

Water Droplets Present?
☒NO ☐YES If YES, droplet plume is ☐Attached ☐Detached

At what point in the plume was opacity determined?
At 1 ft. above top of stack

Describe Background (i.e. blue sky, trees, etc.): Blue Sky

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 3-5 mph

Wind Direction (provide from-to, i.e. from North to South): From ENE

Ambient Temperature: 40 °F

Relative Humidity: 35 %

Additional Comments/Information:
All emission points clear

| Observation Date | Start Time | End Time |
|---|---|---|
| 2-4-09 | 0840 | 0846 |

| Min \ Sec | 0 | 15 | 30 | 45 | Comments |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |

Average 6-Minute Opacity: 0 %

Range of Opacity Readings: Min. 0% Max. 0%

OBSERVER (please print)

Name: Don Stone

Title: Engineer

Signature: Don Stone

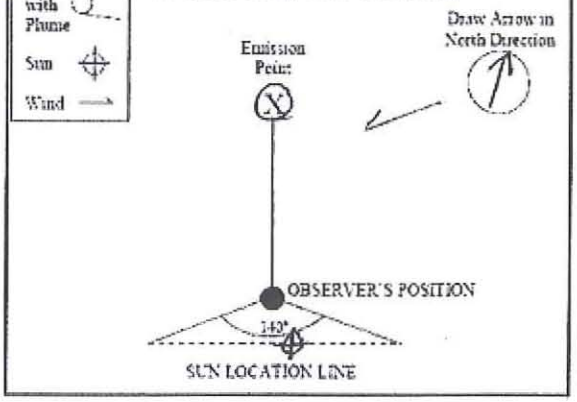
Date: 2-4-09

Observer Organization: ENV-EAQ

Certified by: ETA

Certification Date: 8-27-08

### SOURCE LAYOUT SKETCH




*THIS FORM IS FROM EAQ-307, R4*

Los Alamos

## LOS ALAMOS NATIONAL LABORATORY (LANL)
## VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name: LANL Asphalt Plant

Source Location: TA-60 Sigma Mesa

Type of Source: Asphalt Plant

Type of Control Equipment: Baghouse

Describe Emission Point (Top of stack, etc.): Top of Asphalt Plant stack

Height Above Ground Level: 45 Feet

Height Relative to Observer: 45 Feet

Distance From Observer: 60 Feet

Direction of Source From Observer: NW

Description of Plume (stack exit only)
☐Lofting ☐Trapping ☐Looping ☐Fanning ☐Coning
☑No Plume Present

Emission Color: N/A

Plume Type: ☑No Plume Present ☐Continuous ☐Fugitive ☐Intermittent

Water Droplets Present?
☑NO ☐YES If YES, droplet plume is ☐Attached ☐Detached

At what point in the plume was opacity determined?
1/ft. above top of stack

Describe Background (i.e. blue sky, trees, etc.): Blue Sky

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 15-25 mph

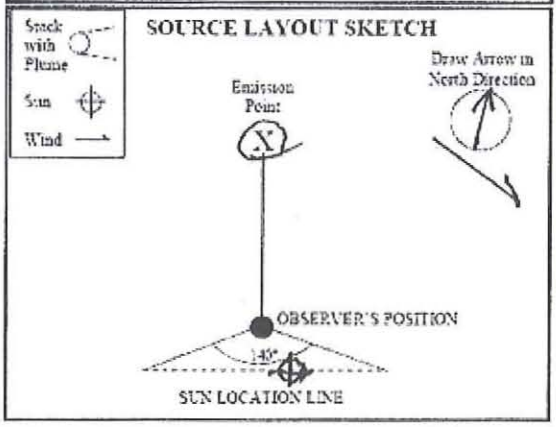
Wind Direction (provide from to, i.e. from North to South): From WNW

Ambient Temperature: 36 °F

Relative Humidity: 40 %

Additional Comments Information:
All emission points clear

SOURCE LAYOUT SKETCH




Observation Date: 4-9-09 | Start Time: 0840 | End Time: 0846

| Min \ Sec | 0 | 15 | 30 | 45 | Comments |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |

Average 6-Minute Opacity: 0 %

Range of Opacity Readings: Min 0% Max 0%

OBSERVER (please print)

Name: Don Stone | Title: Engineer

Signature: Don Stone | Date: 4-9-09

Observer Organization: ENV-EAQ

Certified by: ETA | Certification Date: 2-25-09

*THIS FORM IS FROM EAQ-307, R4*

Los Alamos

LOS ALAMOS NATIONAL LABORATORY (LANL)
VISIBLE EMISSION OBSERVATION FORM (6 MINUTE)

Source Name: LANL Asphalt Plant
Source Location: TA-60 Sigma Mesa
Type of Source: Asphalt Plant
Type of Control Equipment: Baghouse
Describe Emission Point (Top of stack, etc.): Top of Plant stack
Height Above Ground Level: 33 Feet
Height Relative to Observer: 40 Feet
Distance From Observer: 60 Feet
Direction of Source From Observer: NNW
Description of Plume (stack exit only): ☐Lofting ☐Trapping ☐Looping ☐Fanning ☐Coning ☒No Plume Present
Emission Color: N/A
Plume Type: ☒No Plume Present ☐Continuous ☐Fugitive ☐Intermittent
Water Droplets Present? ☒NO ☐YES If YES, droplet plume is ☐Attached ☐Detached
At what point in the plume was opacity determined? 4 ft. above top of stack
Describe Background (i.e. blue sky, trees, etc.): Gray sky
Background Color: Gray
Sky Conditions: Cloudy
Wind Speed: 5-10 mph
Wind Direction (provide from to, i.e. from North to South): From SW
Ambient Temperature: 65 °F
Relative Humidity: 34 %
Additional Comments/Information: All emission points clear

| Observation Date | Start Time | End Time |
|---|---|---|
| 6-5-09 | 0955 | 1001 |

| Min \ Sec | 0 | 15 | 30 | 45 | Comments |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
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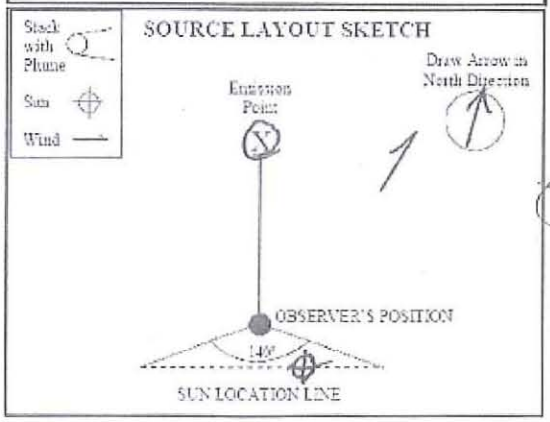
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |

Average 6-Minute Opacity: 0%
Range of Opacity Readings: Min. 0% Max. 0%

OBSERVER (please print)
Name: Don Stone
Title: Engineer
Signature: Don Stone
Date: 6-5-09
Observer Organization: ENV-EAQ
Certified by: ETA
Certification Date: 2-25-09

SOURCE LAYOUT SKETCH




*THIS FORM IS FROM EAQ-307, R4*

| | |
|---|---|
| | Notify the Department within 60 days after each calendar quarter of the facility's compliance status with the permitted emission rate from the continuous monitoring system.<br><br>Provide any data generated by activities described in the Quality Assurance Plan (QAP) that will assist the Air Quality Bureau's Enforcement Section in determining the reliability of the methodology used for demonstrating compliance with the permitted emission rate within 45 days of such a request. |
| TA-16-207 | See condition 4.2. |
| TA-35-87 | See condition 4.2. |
| Target Fabrication Facility<br>TA-35-213 | See conditions 4.1 and 4.2. |
| Plutonium Facility<br>TA-55-PF4 | Stack emission test results and facility operating parameters will be made available to Department personnel upon request.<br><br>Reports may be required to be submitted to the Department if inspections of the source indicate noncompliance with this permit or as a means of determining compliance. |

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 NOx, CO, $SO_2$, 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.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

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

☒ **Yes** **Date report submitted:** January 29, 2009 & April 22, 2009 (Beryllium Test Facility TA-3-141)
**Tracking Numbers:** SBR20090003, SBR20090005

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

**Comments:**

Chemistry and Metallurgy Research Facility (TA-3-29) – This beryllium source was removed from Operating Permit P100M1 as requested by LANL. A letter from NMED-AQB amending the permit was dated July 16, 2007. This amendment resulted in the assignment of Operating Permit No. P100M2.

Sigma Facility (TA-3-66) - A log is maintained showing the number of metallographic specimens used in the polishing operation. Logs are maintained showing the weight of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations. Logs are available on-site for NMED inspection.

## 2.3 Boilers and Heaters

2.3.4 Emissions Monitoring Requirements

2.3.4.1 Emission units TA-21-357-1, TA-21-357-2, and TA-21-357-3: A volumetric flow meter shall be utilized to measure the total amount of natural gas being used on a monthly basis.

2.3.4.2 Emission units TA-55-6-BHW-1 and TA-55-6-BHW-2: A volumetric flow meter shall be utilized to measure the total amount of natural gas being used on a monthly basis.

2.3.4.3 40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.

## Reporting Requirement

2.3.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

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 NOx, CO, $SO_2$, 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.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

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

☐ **Yes** **Date report submitted:** **Tracking Number:**

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

**Comments:**

2.3.4.1 The TA-21 Steam Plant was officially and permanently shut-down as of September 28, 2007. This information was communicated to NMED in a letter dated October 16, 2007.

2.3.4.2 Volumetric flow meters are utilized to measure the total amount of natural gas being used by units TA-55-6-BHW-1 and TA-55-6-BHW-2 on a monthly basis. Natural gas usage is summarized in **Attachment 2**.

2.3.4.3 LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

## 2.4 Carpenter Shops

2.4.4 Emissions Monitoring

2.4.4.1 The permittee shall maintain logs of the hours the carpenter shops are in operation.

## Reporting Requirement

2.4.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

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 NOx, CO, $SO_2$, 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.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

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

☐ **Yes** **Date report submitted:** **Tracking Number:**

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

**Comments:**

2.4.4.1 A log is maintained of the hours of operation for each of the permitted carpenter shops. Hour readings are collected and recorded monthly from hour meters installed on each of the cyclone separators. Hours of operation are provided in **Attachment 3**.

## 2.5 Chemical Usage

2.5.4 Emissions Monitoring/Recordkeeping Requirements

2.5.4.1 Maintain records of chemical purchasing through facility-wide chemical tracking system, and use the data to calculate the emissions on a semiannual basis in accordance with Condition 4.1.

## Reporting Requirement

2.5.5 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

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 NOx, CO, $SO_2$, 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.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

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

☐ **Yes** **Date report submitted:** **Tracking Number:**

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

**Comments:**

2.5.4.1 Records of chemical purchases are maintained through LANL's facility wide chemical tracking system (ChemLog). The data is used to calculate emissions which are submitted in the Semi-Annual Emission Reports.

**Attachment 4**
**Degreaser Solvent Usage**

## General Degreaser Information

| Degreaser | Type | TA | Solvent |
|---|---|---|---|
| TA-55-DG-1 | Cold Batch | 55 | Trichloroethylene |

| Date Measured | Initial Solvent Level (inches) | Volume Added (liters) | Level Added (inches) | Volume Removed (liters) | Level Removed (inches) |
|---|---|---|---|---|---|
| Jan-28-2009 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Feb-26-2009 | 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mar-17-2009 | 5.75 | 3.44 | 1.75 | 0.00 | 0.00 |
| Apr-07-2009 | 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| Apr-28-2009 | 7.00 | 0.00 | 0.00 | 13.76 | 7.00 |
| May-21-2009 | 0.00 | 15.73 | 8.00 | 0.00 | 0.00 |
| Jun-22-2009 | 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |

# Attachment 5
# Internal Combustion Generator Hours of Operation

2009 Standby Generator Hours

| | | | | | | | | First 6 Month Readings | | | Second 6 Month Readings | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TA | Bldg | Manufacturer | MODEL | KW | Fuel Type | Previous Reading Date | Previous Reading | 6 Month Reading Date | Reading | Hours Run | 12 Month Reading Date | Reading | Hours Run |
| 3 | 40 | Onan Sons | 1500DVE15R31374B | 150 | Diesel | Dec-08 | 12.8 | Jun-09 | 12.8 | 0.0 | | | |
| 3 | 223 | Onan Sons | 45.OEM-15R/10742D | 45 | Propane | Dec-08 | 492.5 | Jun-09 | 492.5 | 0.0 | | | |
| 3 | 440 | Cummins | 500FDR5051 | 260 | Diesel | Dec-08 | 121.8 | Jun-09 | 121.8 | 0.0 | | | |
| 3 | 440 | Cummins | DFGA-5005210 | 500 | Diesel | Dec-08 | 99.9 | Jun-09 | 107.5 | 7.6 | | | |
| 3 | 1076 | Cummins | DGBB-5601289 | 35 | Diesel | Dec-08 | 181.1 | Jun-09 | 195.1 | 14.0 | | | |
| 3 | 1400 | Cummins | DFEH-5699616 | 400 | Diesel | Dec-08 | 44 | Jun-09 | 63 | 19.0 | | | |
| 3 | 1404 | Cummins | DFLC-5554001 | 1250 | Diesel | Dec-08 | 393.5 | Jun-09 | 417.6 | 24.1 | | | |
| 3 | 1498 | Caterpillar | SR-4 | 600 | Diesel | Dec-08 | 337 | Jun-09 | 347.0 | 10.0 | | | |
| 3 | 2322 | Onan Sons | DGDA-5005757 | 80 | Diesel | Dec-08 | 358.6 | Jun-09 | 364.8 | 6.2 | | | |
| 16 | 980 | Cummins | KTA50-G2 | 1100 | Diesel | Dec-08 | 318.6 | Jun-09 | 321 | 2.4 | | | |
| 16 | 1374 | Onan Sons | 60ENA | 60 | Nat. Gas | Dec-08 | 1125 | Jun-09 | 1161 | 36.0 | | | |
| 35 | 2 | Onan Sons | 100DGDB | 100 | Diesel | Dec-08 | 115.5 | Jun-09 | 115.5 | 0.0 | | | |
| 35 | 402 | Cummins | DGCB-5674244 | 60 | Diesel | Dec-08 | 175 | Jun-09 | 216.0 | 41.0 | | | |
| 43 | 1 | Cummins | 4BT3.9-GC | 50 | Diesel | Dec-08 | 392.9 | Jun-09 | 401.3 | 8.4 | | | |
| 43 | 1 | Onan Sons | DVE | 150 | Diesel | Dec-08 | 671.9 | Jun-09 | 700.0 | 28.1 | | | |
| 46 | 335 | Onan Sons | 300DEFCB | 300 | Diesel | Dec-08 | 1020 | Jun-09 | 1063.1 | 43.1 | | | |
| 48 | 45 | Onan Sons | DFCB-5740130 | 300 | Diesel | Dec-08 | 78.5 | Jun-09 | 103.6 | 25.1 | | | |
| 50 | 37 | Cummins | 680FDR5059FF | 500 | Diesel | Dec-08 | 502.9 | Jun-09 | 502.9 | 0.0 | | | |
| 50 | 184 | Onan Sons | DGFA-568741 | 150 | Diesel | Dec-08 | 256 | Jun-09 | 291.0 | 35.0 | | | |
| 50 | 188 | Onan Sons | L940563879 | 1250 | Diesel | Dec-08 | 149 | Jun-09 | 149.0 | 0.0 | | | |
| 53 | 1 | Onan Sons | 60ENA | 60 | Nat. Gas | Dec-08 | 1271 | Jun-09 | 1289.0 | 18.0 | | | |
| 53 | 2 | Kato Eng. | Kamag-14 | 50 | Diesel | Dec-08 | 194.6 | Jun-09 | 194.6 | 0.0 | | | |
| 53 | 3N | Onan | 15.0JC-18R | 15 | Propane | Dec-08 | 362.3 | Jun-09 | 362.6 | 0.3 | | | |
| 54 | 412 | Olympian | 95M-07874-F | 500 | Diesel | Dec-08 | 331.7 | Jun-09 | 372.4 | 40.7 | | | |
| 55 | 5 | Kohler | 100RZ71 | 100 | Propane | Dec-08 | 98.3 | Jun-09 | 115.0 | 16.7 | | | |
| 55 | 8 | Delco/Detroit | E7014DD | 600 | Diesel | Dec-08 | 840.6 | Jun-09 | 848.9 | 8.3 | | | |
| 55 | 364 | Onan Sons | 1250DFLC-4987 | 1250 | Diesel | Dec-08 | 134.3 | Jun-09 | 147.8 | 13.5 | | | |
| 55 | 28 | Onan Sons | 40DL6T | 40 | Diesel | Dec-08 | 84.6 | Jun-09 | 89.0 | 4.4 | | | |
| 55 | 47 | Onan Sons | 1465 | 200 | Diesel | Dec-08 | 569 | Jun-09 | 575.0 | 6.0 | | | |
| 55 | 142 | Cummins | DFEB-4963414 | 400 | Diesel | Dec-08 | 122.1 | Jun-09 | 137.0 | 14.9 | | | |
| 59 | 1 | Allis Chalmers | 2884-0703 | 90 | Diesel | Dec-08 | 750 | Jun-09 | 750.0 | 0.0 | | | |
| 60 | yard | Cummins | DFHD-4964979 | 1000 | Diesel | Dec-08 | 650 | Jun-09 | 657 | 7.0 | | | |
| 63 | 93 | Murphy | 3166-0084 | 30 | Diesel | Dec-08 | 716 | Jun-09 | 716.0 | 0.0 | | | |
| 64 | 1 | Onan Sons | 250DVG | 250 | Diesel | Dec-08 | 178 | Jun-09 | 184.6 | 6.6 | | | |
| 69 | 33 | Cummins | DFLC-5568730 | 1250 | Diesel | Dec-08 | 85 | Jun-09 | 100.0 | 15.0 | | | |
| | 35 Generators in use | | | | | | | | TOTAL | 451.4 | | TOTAL | 0.0 |

N/R = Not Read

| First half average hours per unit | 12.9 | Second half average hours per unit |
|---|---|---|

| Permitted Generators | | | | | | | | | First Half 2009 | | | Second Half 2009 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TA | Bldg | Manufacturer | Serial # | MODEL | KW | Fuel Type | Reading 2nd half of previous year | | 6 Month Reading Date | Reading | Hours Run | 12 Month Reading Date | Reading | Hours Run | * Total Run Hours |
| 33 | 290 | Kohler | 375801 | 1600ROZD | 1600 | Diesel | Dec. 08 | 34.3 | Jun-09 | 35.4 | 1.1 | Dec-09 | | 0 | 1.1 |
| 33 | 151 | Caterpillar | 6PK01065 | XQ225 | 225 | Diesel | Dec. 08 | 3307.0 | Jun-09 | 3365.0 | 58.0 | Dec-09 | | 0 | 58.0 |
| 33 | 209 | Kohler | 2025460 | 20EORZ | 20 | Diesel | Dec. 08 | 384.1 | Jul-09 | 384.1 | 0.0 | Dec-09 | | 0 | 0.0 |
| 33 | 280 | Kohler | 2025461 | 20EORZ | 20 | Diesel | Dec. 08 | 175.9 | Jun-09 | 176.1 | 0.2 | Dec-09 | | 0 | 0.2 |

* The 225 kW and the two 20 kW generators have a limit of 500 hours of operation per year. The 1600 kW unit is limited to 900 hours per year.

**Attachment 6**
**Data Disintegrator Box Throughput**

## 2009 TA-52 Data Disintegrator

| | Data Entry | | Data Entry |
|---|---|---|---|
| **Month** | Boxes Shredded | **Month** | Boxes Shredded |
| **January** | 92 | **July** | |
| **February** | 55 | **August** | |
| **March** | 116 | **September** | |
| **April** | 87 | **October** | |
| **May** | 157 | **November** | |
| **June** | 117 | **December** | |
| **6 mo. Total:** | 624 | **6 mo. Total:** | 0 |

| | |
|---|---|
| **Annual Boxes:** | 624 |

No. 2195BM1, Condition 3.h.

2.9.4.9 At least once each calendar quarter the permittee shall use the method specified in Conditions 2.9.4.7 and 2.9.4.8 to determine compliance of Unit TA-3-22 CT-1 with the hourly and annual emission limits specified in this permit. This condition was brought forward from NSR Permit No. 2195BM1, Condition 3.i.

2.9.4.10 Visible emissions from stationary combustion equipment shall not equal or exceed an opacity of 20%. Use of pipeline quality natural gas fuel as defined in Conditions 2.9.3.1 and 2.9.3.4 constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20%. At such time as No. 2 fuel oil as defined in Condition 2.9.3.1 is used, opacity shall be measured in accordance with the procedures at 40 CFR 60, Appendix A, Method 9. Opacity measurements shall continue on a quarterly basis per calendar year for each effected unit until such time as pipeline quality natural gas is used. This condition is pursuant to 20.2.61 NMAC and NSR Permit No. 2195BM1, Condition 2.c.

2.9.4.11 Initial compliance tests are required on Unit TA-3-22 CT-1 for NOx and CO. These tests shall be conducted within sixty (60) days after the unit achieves the maximum normal production. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source. The tests shall be conducted in accordance with EPA Reference Methods 1 through 4, Method 7E for NOx, and Method 10 for CO contained in CFR Title 40, Part 60, Appendix A, and with the requirements of Subpart A, General Provisions, 60.8(f). Alternative test method(s) may be used if the Department approves the change. The permittee shall submit a testing protocol to the Department at least thirty (30) days prior to the test date, and provide notification to the Department at least thirty (30) days prior to the test date. This condition was brought forward from NSR Permit No. 2195BM1, Condition 6.b and General Condition 13.

2.9.4.12 The permittee shall comply with fuel sulfur monitoring requirements at 40 CFR 60.334(h) applicable to Unit TA-3-22 CT-1 by making the required demonstration which shows the fuel combusted in the turbine meets the definition of natural gas at 40 CFR 60.331(u).

The conditions of Section 2.9.4 are pursuant to 20.2.70.302.C NMAC.

## Reporting Requirement

2.9.6 Reports shall be submitted in accordance with conditions 4.1 and 4.2.

This condition is pursuant to 20.2.60.302.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 NOx, CO, $SO_2$, 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.

4.2 Reports of all required monitoring activities shall be submitted on a semiannual basis. All instances of deviation from permit requirements, including emergencies, shall be clearly identified in these reports. The conditions of 4.1 and 4.2 are pursuant to 20.2.70.302.E.1 NMAC.

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

production rate on September 27, 2007, and the compliance test was performed on October 5, 2007. The test report was provided to NMED on October 22, 2007. The test consisted of the EPA test methods identified in this permit condition.

2.9.4.12 The natural gas used by the combustion turbine meets the definition of natural gas in 60.331(u). The sulfur monitoring requirement is met under 40 CFR 60.334(h)(3)(i), which allows the use of a current and valid transportation contract that specifies the maximum total sulfur content is 20 grains per 100 scf or less. The transportation contract specifies a sulfur content not to exceed 2 grains of total sulfur per 100 scf. A copy of the transportation contract is available at the facility for NMED inspection.

# Attachment 8
# Combustion Turbine Daily and 12-Month Rolling Natural Gas Use

**2009 Daily Turbine Gas Use (MCF), 12 Month Rolling Total Gas Use, & Hours of Operation**

| | Jan | | Feb | | Mar | | Apr | | May | | Jun | | July | | Aug | | Sept | | Oct | | Nov | | Dec | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Day | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs | Gas Use | Hrs |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 295 | 0.9 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 4 | 0 | 0 | 0 | 0 | 13 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 6 | 3 | 0 | 127 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 8 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | | | | | | | | | | | | |
| 9 | 0 | 0 | 0 | 0 | 81 | 0.9 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 210 | 1 | | | | | | | | | | | | |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 13 | 0 | 0 | 0 | 0 | 325 | 2.4 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 104 | 1 | 0 | 0 | | | | | | | | | | | | |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0.1 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 16 | 21 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 19 | 0 | 0 | 0 | 0 | 565 | 3 | 0 | 0 | 7 | 0 | 0 | 0 | | | | | | | | | | | | |
| 20 | 62 | 1.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 21 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 0.2 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | | | | | | | | | | | |
| 26 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 27 | 0 | 0 | 80 | 0.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 29 | 0 | 0 | | | 0 | 0 | 75 | 0.4 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 30 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | | | | | | |
| 31 | 0 | 0 | | | 0 | 0 | | | 0 | 0 | | | | | | | | | | | | | | |
| SUM | 116 | 2.1 | 207 | 0.6 | 984 | 6.8 | 492 | 1.6 | 114 | 1 | 211 | 1 | | | | | | | | | | | | |
| 12-Mo. Rolling Gas Use (MCF) | 17039 | | 17246 | | 18201 | | 18693 | | 18689 | | 18485 | | | | | | | | | | | | | |

**First Half Gas Use: 2124 MCF** | **Second Half Gas Use: 0 MCF** | **Annual Gas Use: 2124 MCF**

**Permit Limit (12 mo rolling): 646 MMSCF or 646,000 MCF**

Los Alamos

# LOS ALAMOS NATIONAL LABORATORY (LANL)
# VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Name: LANL Power Plant

Source Location: TA-3-22

Type of Source: Boiler #1

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Boiler #1 stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 140 Feet

Distance From Observer: 200 Feet

Direction of Source From Observer: E

Description of Plume (stack exit only)
☐Lofting ☐Trapping ☐Looping ☐Fanning ☐Coning
☒No Plume Present

Emission Color: N/A

Plume Type ☒No Plume Present
☐Continuous ☐Fugitive ☐Intermittent

Water Droplets Present?
☒NO ☐YES If YES, droplet plume is ☐Attached ☐Detached

At what point in the plume was opacity determined?
≈1ft. above top of stack

Describe Background (i.e. blue sky, trees, etc.): Blue sky

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 4-6 mph

Wind Direction (provide from-to, i.e. from North to South): From SE

Ambient Temperature: 31 °F

Relative Humidity: 45 %

Additional Comments Information: Fuel Oil Burn Exercise

Observation Date: 1-13-09

Start Time: 1008

End Time: 1018

| Min \ Sec | 0 | 15 | 30 | 45 | Comments |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |

Average 10-Minute Opacity: 0%

Range of Opacity Readings: Min 0% Max 0%

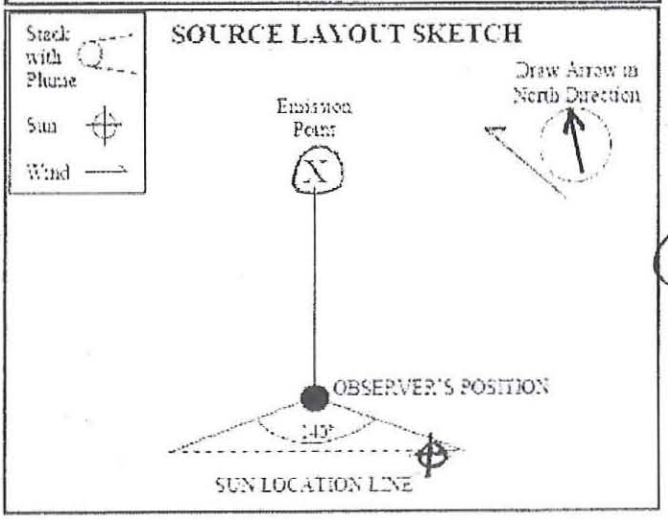
OBSERVER: (please print)
Name: Don Stone
Title: Engineer

Signature: Don Stone
Date: 1-13-09

Observer Organization: ENV-EAQ/UEI

Certified by: ETA
Certification Date: 8-27-08

SOURCE LAYOUT SKETCH




THIS FORM IS FROM EAQ-307, R4

Los Alamos

# LOS ALAMOS NATIONAL LABORATORY (LANL)
## VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Name: Fuel Oil # 3 Boiler (Power Plant)

Source Location: TA-3 SM-22 Power Plant

Type of Source: #2 Fuel Oil

Type of Control Equipment: N/A

Describe Emission Point (Top of stack, etc.): 1 FT. Above STACK

Height Above Ground Level: 110 Feet

Height Relative to Observer: 110 Feet

Distance From Observer: 200 Feet

Direction of Source From Observer: North

Description of Plume (stack exit only)
☐Lofting ☐Trapping ☐Looping ☐Fanning ☐Coning
☒No Plume Present

Emission Color: Clear

Plume Type ☒No Plume Present
☐Continuous ☐Fugitive ☐Intermittent

Water Droplets Present?
☒NO ☐YES If YES, droplet plume is ☐Attached ☐Detached

At what point in the plume was opacity determined?: 1 FT Above STACK

Describe Background (i.e. blue sky, trees, etc.): Blue Sky

Background Color: Blue

Sky Condition: Clear

Wind Speed mph: 3/5

Wind Direction (provide from: to, i.e. from North to South): From South TO North West

Ambient Temperature: 52 °F

Relative Humidity: 27 %

Additional Comments/Information: Fuel Oil burn exercise

| Observation Date | Start Time | End Time |
|---|---|---|
| 3-17-09 | 1047 | 1057 |

| Min \ Sec | 0 | 15 | 30 | 45 | Comments |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |

Average 10-Minute Opacity: 0

Range of Opacity Readings: Min. 0 Max. 0

OBSERVER (please print)
Name: Joe V. ORTIZ
Title: Engineering Technologist

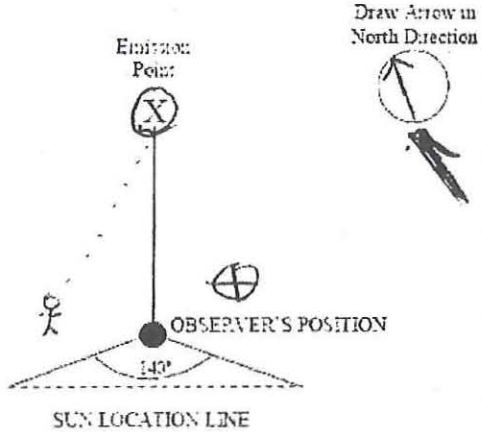
Signature: [signature]
Date: 3/17/09

Observer Organization: LANS

Certified by: ETA
Certification Date: 2-26-09

## SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind




*THIS FORM IS FROM EAQ-307, R4*

Los Alamos NATIONAL LABORATORY

## LOS ALAMOS NATIONAL LABORATORY (LANL)
## VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Name: LANL Power Plant

Source Location: TA-3-22

Type of Source: Boiler #1

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Boiler #1 Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 140 Feet

Distance From Observer: 200 Feet

Direction of Source From Observer: E

Description of Plume (stack exit only)
☐Lofting ☐Trapping ☐Looping ☐Fanning ☐Coning
☑No Plume Present

Emission Color: N/A

Plume Type ☑No Plume Present ☐Continuous ☐Fugitive ☐Intermittent

Water Droplets Present?
☑NO ☐YES If YES, droplet plume is ☐Attached ☐Detached

At what point in the plume was opacity determined? ≈1ft. above top of stack

Describe Background (i.e. blue sky, trees, etc.): Blue Sky

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 5-10 mph

Wind Direction (provide from/to, i.e. from North to South): From SW

Ambient Temperature: 64 °F

Relative Humidity: 17 %

Additional Comments/Information: Burner Management

Observation Date: 4-7-09

Start Time: 1327

End Time: 1337

| Min \ Sec | 0 | 15 | 30 | 45 | Comments |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |

Average 10-Minute Opacity: 0%

Range of Opacity Readings: Min. 0% Max. 0%

OBSERVER (please print)

Name: Don Stone

Title: Engineer

Signature: Don Stone

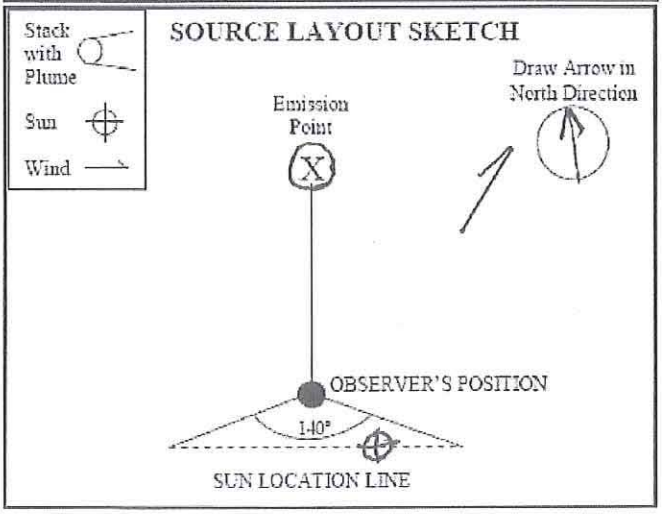
Date: 4-7-09

Observer Organization: ENV-EAQ

Certified by: ETA

Certification Date: 2-25-09

### SOURCE LAYOUT SKETCH




*THIS FORM IS FROM EAQ-307, R4*

Los Alamos

# LOS ALAMOS NATIONAL LABORATORY (LANL)
# VISIBLE EMISSION OBSERVATION FORM (10 MINUTE)

Source Name: LANL Power Plant

Source Location: TA-3-22

Type of Source: Boiler #1

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of boiler #1 stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 140 Feet

Distance From Observer: 200 Feet

Direction of Source From Observer: NE

Description of Plume (stack exit only)
☐Lofting ☐Trapping ☐Looping ☐Fanning ☐Coning
☒No Plume Present

Emission Color: N/A

Plume Type ☒NO Plume Present ☐Continuous ☐Fugitive ☐Intermittent

Water Droplets Present?
☒NO ☐YES If YES, droplet plume is ☐Attached ☐Detached

At what point in the plume was opacity determined? 4ft. above top of stack

Describe Background (i.e. blue sky, trees, etc.): Blue Sky

Background Color: Blue

Sky Conditions: Scattered clouds

Wind Speed: 3-6 mph

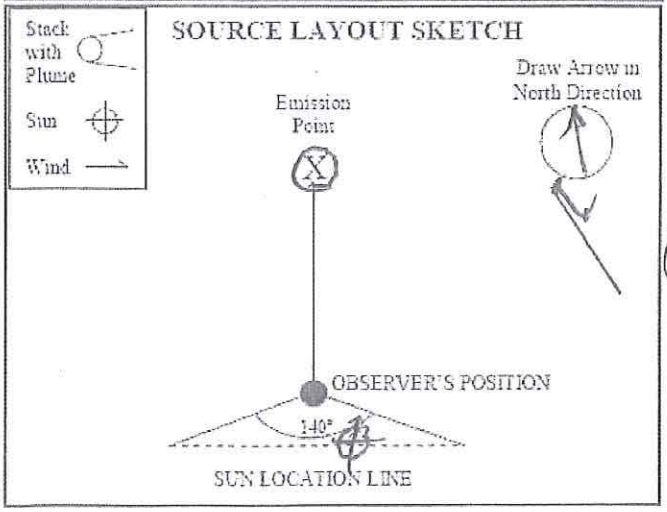
Wind Direction (provide from/to, i.e. from North to South): From SE

Ambient Temperature: 65 °F

Relative Humidity: 32 %

Additional Comments/Information: Fuel Oil burn exercise

SOURCE LAYOUT SKETCH




Observation Date: 5-12-09 Start Time: 1120 End Time: 1130

| See Min | 0 | 15 | 30 | 45 | Comments |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | |
| 2 | 0 | 0 | 0 | 0 | |
| 3 | 0 | 0 | 0 | 0 | |
| 4 | 0 | 0 | 0 | 0 | |
| 5 | 0 | 0 | 0 | 0 | |
| 6 | 0 | 0 | 0 | 0 | |
| 7 | 0 | 0 | 0 | 0 | |
| 8 | 0 | 0 | 0 | 0 | |
| 9 | 0 | 0 | 0 | 0 | |
| 10 | 0 | 0 | 0 | 0 | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | | | |

Average 10-Minute Opacity: 0%

Range of Opacity Readings Min. 0% Max. 0%

OBSERVER (please print)
Name: Don Stone Title: Engineer

Signature: Don Stone Date: 5-12-09

Observer Organization: ENV-EAQ

Certified by: ETA Certification Date: 2-25-09

*THIS FORM IS FROM EAQ-307, R4*

| | | |
|---|---|---|
| 2. Are there any deviations not yet reported? If No, no further information is required on the Deviation Summary Report. If Yes, answer question 3 below and enter the required information in the Deviation Summary Table. | ☐ Yes | ☒ No |
| 3. Did any of the deviations result in excess emissions? For deviations resulting in excess emissions a completed Excess Emission Form for each deviation must be attached to this report. | ☐ Yes | ☐ No |

## Deviation Summary Table for deviations not yet reported.

| No. | Applicable Requirement (Include Rule Citation) | Emission Unit ID(s) | Cause of Deviation | Corrective Action Taken |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

## Deviation Summary Table (cont.)

| | Deviation Started | | Deviation Ended | | | | | Did you attach an excess emission form? |
|---|---|---|---|---|---|---|---|---|
| No. | Date | Time | Date | Time | Pollutant | Monitoring Method | Amount of Emissions | |
| 1 | | | | | | | | ☐ Yes ☐ No |
| 2 | | | | | | | | ☐ Yes ☐ No |
| 3 | | | | | | | | ☐ Yes ☐ No |
| 4 | | | | | | | | ☐ Yes ☐ No |