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 New Mexico Environment Department - Air Quality Bureau 1301 Siler Road, Building B 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 ☐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

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind

Draw Arrow in North Direction

Emission Point

OBSERVER'S POSITION

140°

SUN LOCATION LINE

Observation Date: 2-4-09

Start Time: 0842

End Time: 0846

Sec / 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					
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

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)
☐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?
1/2 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

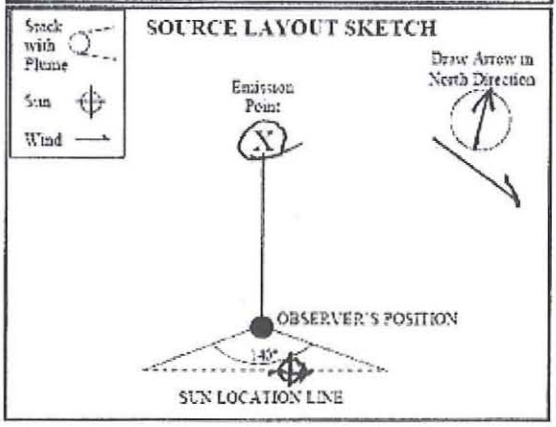
Wind Direction (provide from to, i.e. from North to South): From WNW

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): ☐Looping ☐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

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind
Draw Arrow in North Direction
Emission Point
1
OBSERVER'S POSITION
140°
SUN LOCATION LINE

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					
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: 6-5-09
Observer Organization: ENV-EAQ
Certified by: ETA
Certification Date: 2-25-09

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. 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 TA-35-213	See conditions 4.1 and 4.2.
Plutonium Facility TA-55-PF4	Stack emission test results and facility operating parameters will be made available to Department personnel upon request. 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 %

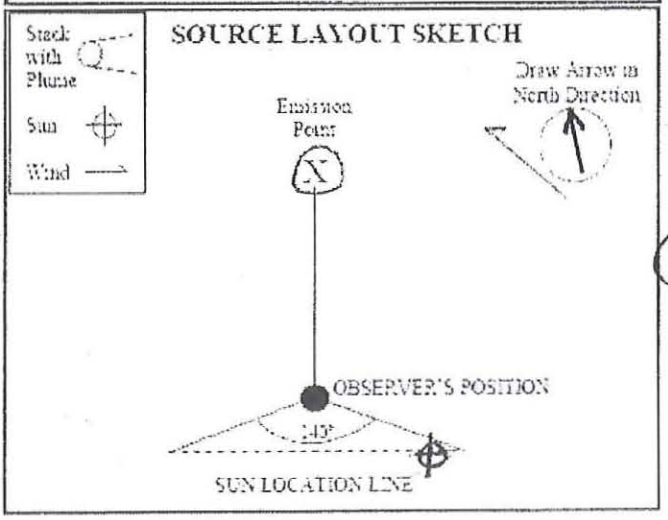
OBSERVER: (please print)
Name: Don Stone
Title: Engineer

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: 3/5 mph

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

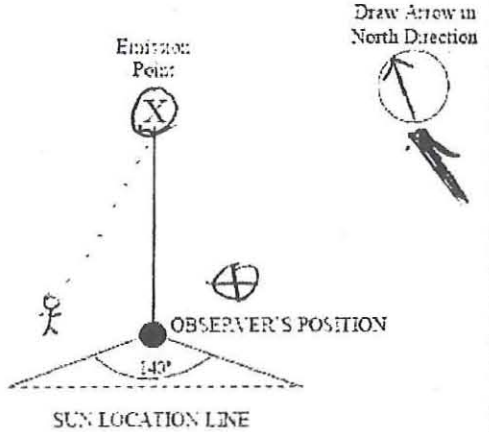
Signature: [signature]
Date: 3/17/09

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~~ 1335

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

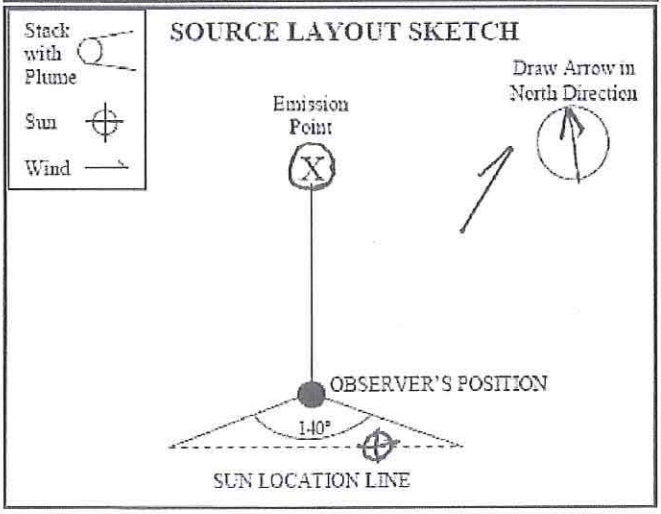
Date: 4-7-09

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

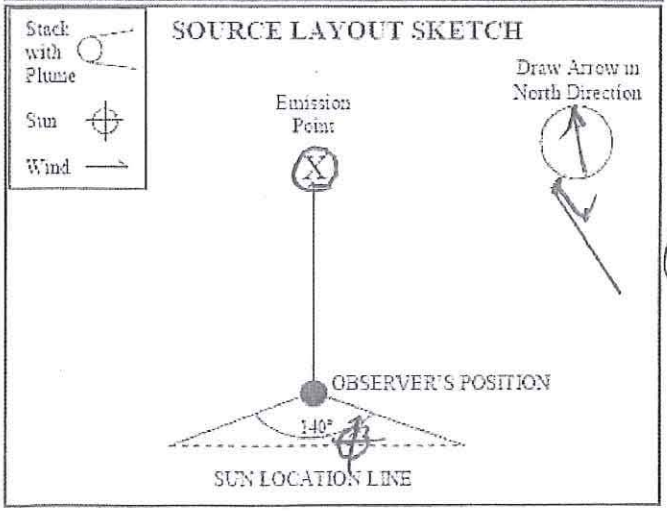
Wind Direction (provide from/to, i.e. from North to South): From SE

Ambient Temperature: 65 °F

Relative Humidity: 32 %

Additional Comments/Information: Fuel Oil burn exercise

SOURCE LAYOUT SKETCH



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