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Title:	Semi-Annual Monitoring Report January 1 - June 30, 2007 Air Quality Title V Operating Permit P100M1 Los Alamos National Laboratory
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Intended for:	Ms. Debra McElroy Section Chief, Enforcement/Compliance New Mexico Environment Department Air Quality Bureau 2048 Galisteo St. Santa Fe. New Mexico 87505

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NATIONAL LABORATORY
EST. 1943

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Form 836 (7/06)

Los Alamos National Laboratory
Operating Permit P100M1
Semi-Annual Monitoring Report
January 1 – June 30, 2007

Identifying Information

Source Name: Los Alamos National Laboratory County: Los Alamos .

Source Address:
City: Los Alamos State: NM Zip Code: 87545

Responsible Official: Victoria A. George Ph No. (505) 667-2211 Fax No. (505) 665-8858
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. P100M1 {IDEA/Tempo ID No. 856} Permit Issued Date: April 30, 2004
M1 June 15, 2006

Certification of Truth, Accuracy, and Completeness

I, Victoria A. George certify that, based on information and belief formed after reasonable inquiry, the statements and information contained in the attached semi-annual monitoring report are true, accurate, and complete.

Signature Dianne Wilkinson for Victoria A. George Date: 8/3/2007 .

Title: Division Leader, Environmental Protection Division .

Sources (by permit section)

1. **Asphalt Production**
2. **Beryllium Activities**
3. **Boilers and Heaters**
4. **Carpenter Shops, TA-3-38 & TA-15-563**
5. **Chemical Usage**
6. **Degreasers**
7. **Internal Combustion Sources**
8. **Data Disintegrator, TA-52-11**
9. **Power Plant at Technical Area 3 (TA-3-22)**

Deviations

Attachments

- **A: Asphalt Plant Opacity Reports**
- **B: Beryllium HEPA Filter Tests Results**
- **C: Boilers and Heaters Natural Gas Usage**
- **D: Carpenter Shop Hours of Operation**
- **E: Degreaser Solvent Usage**
- **F: Internal Combustion Generator Hours of Operation**
- **G: Data Disintegrator Box Throughput**
- **H: Power Plant Natural Gas and Fuel Oil Usage**
- **I: Power Plant Opacity Reports**

1. Asphalt Production

Permit Section	Monitoring Required	Monitoring Performed
2.1.4.1	Perform monthly six (6) minute opacity readings for each emission point having opacity greater than zero as determined by EPA Method 22.	Monthly opacity reports are provided as Attachment A. Monthly six minute opacity readings are taken using the required EPA Methods.
2.1.4.2	Monitor the differential pressure (inches of water) across the baghouse by the use of a differential pressure gauge, in accordance with condition IV.C.2 of NSR permit number GCP-3-2195G.	A differential pressure gauge is in place to continuously monitor the differential pressure across the baghouse as required by NSR permit GCP-3-2195G condition IV.C.2. The differential pressure is recorded twice each day during operations, once at the beginning of the production run and once at the end. This is consistent with NSR permit GCP-3-2195G condition IV.D.2(e). Records are available on-site for NMED inspection.
2.1.4.3	40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.	LANL has certified opacity readers on-site who perform opacity readings using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

2. Beryllium Activities (Permit Section 2.2.4)

Source	Monitoring Required	Monitoring Performed
TA-3-29 Chemistry and Metallurgy Research Facility	A log shall be maintained during operations which indicate the number of Be samples processed.	The registration for this source has been cancelled. Beryllium work is no longer performed at this location. A letter was sent to NMED on June 5, 2007 making this request. A log with the number of Be samples processed during this six month reporting period is available on-site for NMED inspection.
TA-3-66 Sigma Facility	A log shall be maintained during operations which show the number of metallographic specimens used in the polishing operation and the weight of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations.	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.
TA-3-141 Beryllium Technology Facility (BTF)	Facility exhaust stack will be equipped with a continuous emission monitor used to measure beryllium emissions.	The BTF is equipped with a continuous emissions monitor to measure beryllium emissions. The monitoring system is operated in accordance with LANL Quality Assurance Project Plan ESH-17-BM and emission results are provided to NMED quarterly. Submissions for this period were provided to NMED in reports dated January 29, 2007 [ENV-EAQ:07-017] and May 8, 2007 [ENV-EAQ:07-085]
	Cartridge and HEPA filters will be	Cartridge and HEPA filters are

Source	Monitoring Required	Monitoring Performed
	equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.	equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation.
TA-16-207	Project files shall be maintained of components prepared for testing.	Project files are maintained of components prepared for testing. Files are available on-site for NMED inspection.
TA-35-87	A log shall be maintained during operations which show the number of beryllium filters cut.	A log is maintained showing the number of beryllium filters cut. The log is available on-site for NMED inspection.
TA-35-213 Target Fabrication Facility	Records of the stack emission test results (see Condition 2 of NSR Permit No. 632) and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Department.	Records of stack emission test results are maintained on-site and available for NMED inspection. Stack emission test results are used to determine total emissions from this facility.
TA-55-PF-4 Plutonium Facility	The HEPA filtration systems shall be equipped with a differential pressure gauge that measures the differential pressure (inches of water) across the HEPA filters while the exhaust fans are in operation.	The HEPA filtration systems are equipped with differential pressure gauges that measure the differential pressure across the HEPA filters while the exhaust fans are in operation.
	Control efficiency shall be verified by daily HEPA filter pressure drop tests and annual HEPA filter challenge tests of accessible filters.	Control efficiency is verified by daily HEPA filter pressure drop readings. Readings are recorded in the TA-55 Operations Center. Annual HEPA filter challenge tests of accessible filters are performed. Test results are summarized in Attachment B.

3. Boilers and Heaters

Permit Section	Monitoring Required	Monitoring Performed
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.	A volumetric flow meter is utilized to measure the total amount of natural gas being used on a monthly basis for emission units TA-21-357-1, TA-21-357-2 and TA-21-357-3. Natural gas usage is summarized in Attachment C.
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.	Volumetric flow meters are utilized to measure the total amount of natural gas being used on a monthly basis for emission units TA-55-6-BHW-1 and TA-55-6-BHW-2. Natural gas usage is summarized in Attachment C.
2.3.4.3	40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.	LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

4. Carpenter Shops, TA-3-38 & TA-15-563

Permit Section	Monitoring Required	Monitoring Performed
2.4.4.1	The permittee shall maintain logs of the hours the carpenter shops are in operation.	A log is maintained of the hours of operation at the TA-3-38 shop. During this reporting period, hour meters for the cyclone separators were utilized to monitor hours of shop operation. Readings are collected and recorded monthly. The TA-15-563 carpenter shop is equipped with an hour meter on the cyclone separator. The hour meter is read and recorded monthly. Hours of operation are provided in Attachment D.

5. Chemical Usage

Permit Section	Monitoring Required	Monitoring Performed
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 semi-annual basis in accordance with Condition 4.1.	Records are maintained in LANL's facility wide chemical tracking system (ChemLog). The data is used to calculate emissions and is submitted in the Semi-Annual Emission Report.

6. Degreasers

Permit Section	Monitoring Required	Monitoring Performed
2.6.4.1	Record the amount of solvent added to the degreaser, and calculate the emissions on a semi-annual basis in accordance with Condition 4.1.	Records are maintained of the amount of solvent added to the degreaser. This data is used to calculate emissions on a semi-annual basis. LANL's "Historical Solvent Usage Data" report for Jan. 1 – June. 30, 2007 is provided in Attachment E.
2.6.4.2	Complete checklist for work practice standards.	LANL completes work practice checklists for the degreaser operation. The checklists are available on-site for NMED inspection.

7. Internal Combustion Sources

Permit Section	Monitoring Required	Monitoring Performed
2.7.4 [Stationary Standby Generators]	Track and record hours of operation for stationary standby generators on a semi-annual basis.	LANL tracks and records generator hours of operation on a semi-annual basis. Stationary generator hours of operation for this reporting period are provided in Attachment F.
2.7.4 [TA-33-G-1]	Track hourly and 12-month rolling total kWh. Record hours of operation and the time operation begins and ends each day.	On May 18, 2006, LANL started the TA-33 diesel generator. Other than the start up test, the generator has not run. A form has been created and will be used for tracking generator start and stop times as well as hours of operation. These hourly readings will be used in tracking the 12-month rolling total of kWh.
2.7.4.1	40 CFR Part 60, Appendix A, Method 9 shall be used to determine compliance with the opacity limitation.	LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

8. Data Disintegrator, TA-52-11

Permit Section	Monitoring Required	Monitoring Performed
2.8.4.1	The permittee shall maintain a log of the number of boxes of media that are destroyed and calculate the emissions on a semi-annual basis in accordance with Condition 4.1.	LANL maintains a log of the number of boxes of media that are shredded and calculates the emissions on a semi-annual basis. The actual number of boxes shredded is included in Attachment G.
2.8.4.2	The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer's recommendations.	LANL maintains a log documenting all maintenance and repairs performed on the cyclone and cloth tube filters. The Data Disintegrator and associated pollution control devices are maintained under a preventative maintenance contract.

9. Power Plant at Technical Area 3 (TA-3-22)

Permit Section	Monitoring Required	Monitoring Performed
2.9.4.1	Total fuel oil consumption shall be monitored so that combined fuel oil usage of Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 can be calculated on a rolling 365-day total.	Total fuel oil consumption is monitored on a daily basis. These daily readings are used to calculate a 365-day rolling total. Attachment H contains a summary of monthly fuel oil consumption. Records of daily fuel oil use are available on-site for NMED inspection.
2.9.4.2	Natural gas consumption shall be monitored so that combined natural gas usage of Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 can be calculated on a rolling 365-day total.	A volumetric flow meter is used to measure the total amount of natural gas used on a daily basis. These daily readings are used to calculate a 365-day rolling total. Attachment H contains a summary of monthly natural gas usage. Daily totals are available on-site for NMED inspection.
2.9.4.3	Natural gas consumption shall be monitored so that natural gas usage for Unit TA-3-22 CT-1 can be calculated on a rolling 365-day total.	The Combustion Turbine has not started operations. No monitoring performed.
2.9.4.4	A certification of total sulfur content of the No. 2 fuel oil used by Units TA-3-22-1, TA-3-22-2 and TA-3-22-3 shall be obtained from the supplier whenever No. 2 fuel oil is delivered to the facility.	No fuel oil was purchased or delivered during this reporting period.
2.9.4.5	If the certification as specified by Condition 2.9.4.4 is not available at delivery, the permittee shall analyze the No. 2 fuel oil to determine the total sulfur content. The analysis shall be	No fuel oil was purchased or delivered during this reporting period.

Permit Section	Monitoring Required	Monitoring Performed
	conducted using Department approved methods and standards for determining total sulfur content of No. 2 fuel oil.	
2.9.4.6	The operating load of Unit TA-3-22 CT-1 specified by Condition 2.9.3.7 shall be monitored and recorded hourly during normal operations of that unit. Periods of startup and shutdown shall not be included in the hourly monitoring but shall be recorded separately.	The Combustion Turbine has not started operations. No monitoring performed.
2.9.4.7	Compliance with NOx pound per hour emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the daily total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.1029 pounds NOx per thousand SCF of gas burned (applicable for worst-case conditions of negative 18 degrees Fahrenheit) and divided by the number of hours of operation of the unit during that day as recorded pursuant to Condition 2.9.3.8. Compliance with NOx annual emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the 365 day total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.1029 pounds NOx per thousand SCF of gas burned (applicable for annual average conditions of 47.9 degrees Fahrenheit).	The Combustion Turbine has not started operations. No monitoring performed.

Permit Section	Monitoring Required	Monitoring Performed
2.9.4.8	Compliance with CO pound per hour emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the daily total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.731 pounds CO per thousand SCF of gas burned (applicable for worst-case conditions of negative 18 degrees Fahrenheit), and divided by the number of hours of operation of the unit during that day as recorded pursuant to Condition 2.9.3.8). Compliance with CO annual emission limits for Unit TA-3-22 CT-1 shall be determined by multiplying the 365 day total natural gas firing rate for the unit (expressed in thousands of SCF), as recorded pursuant to Condition 2.9.5.3, by the manufacturer's guaranteed emission rate of 0.0613 pounds CO per thousand SCF of gas burned (applicable for annual average conditions of 47.9 degrees Fahrenheit).	The Combustion Turbine has not started operations. No monitoring performed.
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.	The Combustion Turbine has not started operations. No monitoring performed.
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	LANL uses 40 CFR Part 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

Permit Section	Monitoring Required	Monitoring Performed
	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.	Delivery of pipeline quality natural gas is specified in the contract with the supplier (PNM). Opacity measurements performed at the TA-03 Power Plant are provided in Attachment I.
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.	The Combustion Turbine has not started operations. No monitoring performed.
2.9.4.12	The permittee shall comply with fuel sulfur monitoring requirements at 40 CFR 60.334(h) applicable to Unit TA-	The Combustion Turbine has not started operations. No Monitoring performed.

Permit Section	Monitoring Required	Monitoring Performed
	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).	

Deviations

Permit Section 4.2 requires that all instances of deviations from permit conditions, including emergencies, be clearly identified. Listed below are permit deviations this period:

1. On May 1, 2007, from 9:58am to 10:08am, the LANL Power Plant experienced an excess emission with an observed average opacity of 25%. This is a deviation from Operating Permit Condition 2.9.4.10, which states that visible emissions shall not equal or exceed 20% opacity. The excess emission occurred during a boiler startup exercise using fuel oil. During the startup exercise, operational problems were encountered and the unit was brought down quickly to minimize visible emissions. The startup exercise is performed weekly to verify readiness of the system should the commercial natural gas supply be interrupted. These periodic fuel oil startup exercises usually result in only minor opacity readings.

-------- Last Entry ----------

Attachment A
Asphalt Plant Opacity Reports

Summary Table, Reports Attached

	Source	Date	Time	Average Opacity*
Jan	Top of Shaker	01/16/07	10:32 am	0
	Baghouse Stack	01/16/07	10:38 am	0
	Conveyor Belt	01/16/07	10:45 am	0
Feb	Top of Shaker	02/08/07	12:50 pm	0
Mar	Top of Shaker	03/05/07	9:51 am	0
Apr	Top of Shaker	04/11/07	12:01 pm	0
May	Top of Shaker	05/08/07	8:27 am	0
June**	Entire Plant	06/20/07	1:01 pm	0

* 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 condition 2.1.4.1 of the Los Alamos National Laboratory (LANL) Operating Permit P100M1.

** EPA Method 9 was used for all readings except June. In June LANL began using EPA Method 22 to determine if any visible emissions greater than zero were present at the plant. If any emissions are observed using Method 22, a Method 9 observation will be performed on those points. Use of Method 22 is in accordance with condition 2.1.4.1 of the Los Alamos National Laboratory (LANL) Operating Permit P100M1.

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE	ASPHALT PLANT
OBSERVATION DATE	JAN 16 2007
START TIME	10:32 AM
STOP TIME	10:37 AM
LOCATION	TA-60
Type of Source	ASPHALT
Type of Control Equipment	BAGHOUSE
Describe Emission Point (top of stack, etc.)	TOP OF SHAKER
Height Above Ground Level	45 Feet
Height Relative to Observer	40 Feet
Distance from Observer	55 FEET
Direction from Observer	N. NW
Description of Plume (stack exit only)	NO EMISSIONS ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Lofting ☐ Trapping
Emission Color	NA
Plume Type	NA ☐ Continuous ☐ Fugitive ☐ Intermittent
Water Droplets Present?	☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached
At what point in the plume was opacity determined?	12 TO 14 INCH ABOVE POINT
Describe Background (i.e. blue sky, trees, etc.)	CLEAR BLUE
Background Color	BLUE
Sky Conditions	CLEAR
Wind Speed	0 TO 1 mph
Wind Direction (i.e. from North to South)	NNW
Ambient Temperature	12 °F
Wet Temperature	°F
Relative Humidity	29 %

Min.	Sec. 0	15	30	45	Min.	Sec. 0	15	30	45
32	1 0	0	0	0	13				
33	2 0	0	0	0	14				
34	3 0	0	0	0	15				
35	4 0	0	0	0	16				
36	5 0	0	0	0	17				
37	6 0	0	0	0	18				
	7				19				
	8				20				
	9				21				
	10				22				
	11				23				
	12				24				

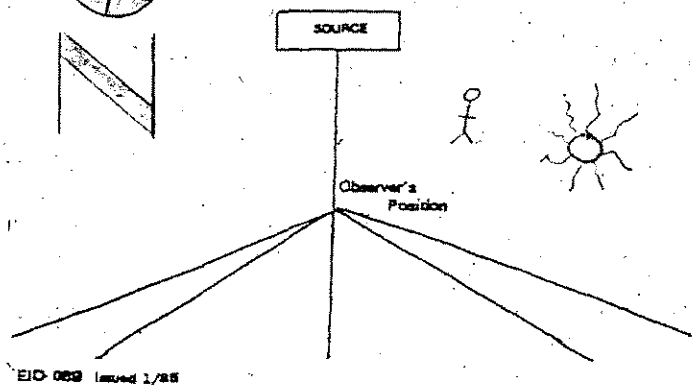
COMMENTS: NO EMISSIONS OBSERVED.

Average Opacity: 0

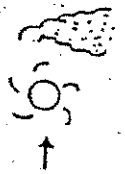
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER
Signature: R. Costa
Date: JAN 16 2007
Organization: RSL
Certification Date: 8-30-06

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:



I acknowledge receipt of a copy of these visible emissions observations.

Signature: [signature]

Title:

Date: 1-17-07

EID-069 Issued 1/85

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT	OBSERVATION DATE: JAN 16 2007
LOCATION: TA-60	START TIME: 10:38 AM
Type of Source: ASPHALT PLANT	STOP TIME: 10:43 AM
Type of Control Equipment: BAGHOUSE	
Describe Emission Point (top of stack, etc.): BAGHOUSE STACK	
Height Above Ground Level: 25 Feet	
Height Relative to Observer: 20 Feet	
Distance from Observer: 45 Feet/Yards	
Direction from Observer: N.W	
Description of Plume (stack exit only): NO EMISSIONS ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Lofting ☐ Trapping	
Emission Color: -NA-	
Plume Type: NO EMISSIONS ☐ Continuous ☐ Fugitive ☐ Intermittent	
Water Droplets Present? ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached	
At what point in the plume was opacity determined? 12 TO 14 INCH ABOVE POINT	
Describe Background (i.e. blue sky, trees, etc.): CLEAR BLUE	
Background Color: CLEAR BLUE	
Sky Conditions: CLEAR	
Wind Speed: CALM mph	
Wind Direction (i.e. from North to South): N.W	
Ambient Temperature: 12 °F	
Wet Temperature: °F	
Relative Humidity: 29 %	

Min. \ Sec.	0	15	30	45	Min. \ Sec.	0	15	30	45
1	0	0	0	0	13				
2	0	0	0	0	14				
3	0	0	0	0	15				
4	0	0	0	0	16				
5	0	0	0	0	17				
6	0	0	0	0	18				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

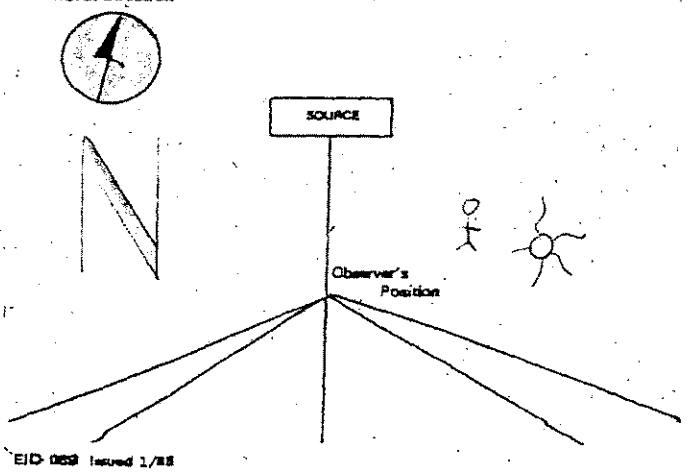
COMMENTS: NO EMISSIONS OBSERVED

Average Opacity: 0

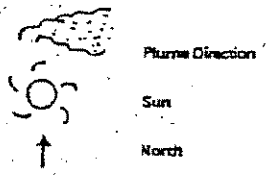
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER
Signature: [signature] Date: JAN 16 2007
Organization: KSL Certification Date: 2-30-06

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:



I acknowledge receipt of a copy of these visible emissions observations.

Signature: [signature]

Title: _____

Date: 1-17-07

EID 0658 Issued 1/88

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT	OBSERVATION DATE: JAN 16 2007
LOCATION: TA-60	START TIME: 10:45 AM
Type of Source: ASPHALT PLANT	STOP TIME: 10:50 AM
Type of Control Equipment: BAGHOUSE	
Describe Emission Point (top of stack, etc.): CONVEYOR BELT/HOPPER DROP POINT	
Height Above Ground Level: 5 Feet	
Height Relative to Observer: 5 Feet	
Distance from Observer: 35 TO 40 Feet/Yards/Etc.	
Direction from Observer: N.W.	
Description of Plume (stack exit only): NO EMISSIONS ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Fumigation ☐ Trapping	
Emission Color: N/A	
Plume Type: NO EMISSIONS ☐ Continuous ☐ Fugitive ☐ Intermittent	
Water Droplets Present? ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached	
At what point in the plume was opacity determined? 8 TO 12' ABOVE EMISSION POINT	
Describe Background (i.e. blue sky, trees, etc.): BLUE SKY	
Background Color: BLUE	Sky Conditions: CLOUDY
Wind Speed: 0 TO 1 mph	Wind Direction (i.e. from North to South):
Ambient Temperature: APPROX 12 °F	Wet Temperature: °F
	Relative Humidity: 29 %

Min.	Sec. 0	15	30	45	Min.	Sec. 0	15	30	45
1	0	0	0	0	13				
2	0	0	0	0	14				
3	0	0	0	0	15				
4	0	0	0	0	16				
5	0	0	0	0	17				
6	0	0	0	0	18				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

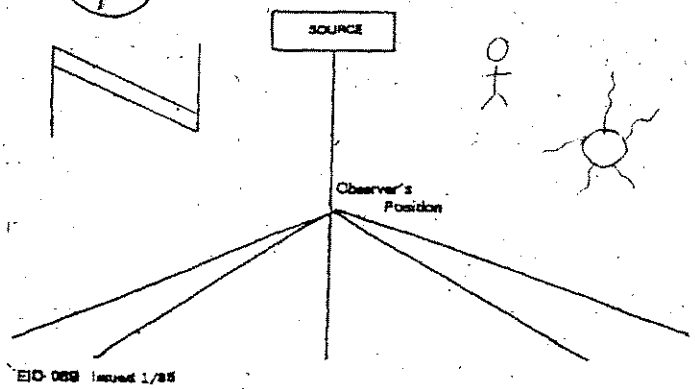
COMMENTS: NO EMISSION OBSERVED. TRANSFER POINT ON CONVEYER BELT IS COVERED.

Average Opacity: 0

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

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER
Signature: Date: JAN 16 2007
Organization: KSL Certification Date: 8-30-06

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

I acknowledge receipt of a copy of these visible emissions observations.

Signature:

Title:

Date: 1-17-07

EID-069 Issued 1/85

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT	OBSERVATION DATE: FEB 8 2007
LOCATION: TA-60	START TIME: 12:50 PM
Type of Source: ASPHALT	STOP TIME: 12:58 PM
Type of Control Equipment: BAGHOUSE	
Describe Emission Point (top of stack, etc.): TOP OF SHAKER	
Height Above Ground Level: 45 Feet	
Height Relative to Observer: 40 Feet	
Distance from Observer: 55 Feet / Yards / RC	
Direction from Observer: NNW	
Description of Plume (stack exit only): NO EMISSIONS ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation	
Emission Color: NO EMISSIONS (WHITE)	Plume Type: N/A ☐ Continuous ☐ Fugitive ☐ Intermittent
Water Droplets Present? ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached	
At what point in the plume was opacity determined? 12 TO 14 INCH ABOVE SOURCE	
Describe Background (i.e. blue sky, trees, etc.): PARTLY CLOUDY (PC)	
Background Color: CLEAR-BLUE-PC	Sky Conditions: PC
Wind Speed: 5 TO 16 mph	Wind Direction (i.e. from North to South): NNE
Ambient Temperature: 49 °F	Wet Temperature: ~~49~~ °F	Relative Humidity: 21 %

Min.	Sec. 0	15	30	45	Min.	Sec. 0	15	30	45
1	0	0	0	0	13				
2	0	0	0	0	14				
3	0	0	0	0	15				
4	0	0	0	0	16				
5	0	0	0	0	17				
6	0	0	0	0	18				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

COMMENTS: NO EMISSIONS WERE OBSERVED FROM ANY EMISSION POINT.

Average Opacity: -0-

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

OBSERVER (please print): Name: RICHARD COSTA Title: ENGINEER

Signature: R. Costa Date: 2-8-07

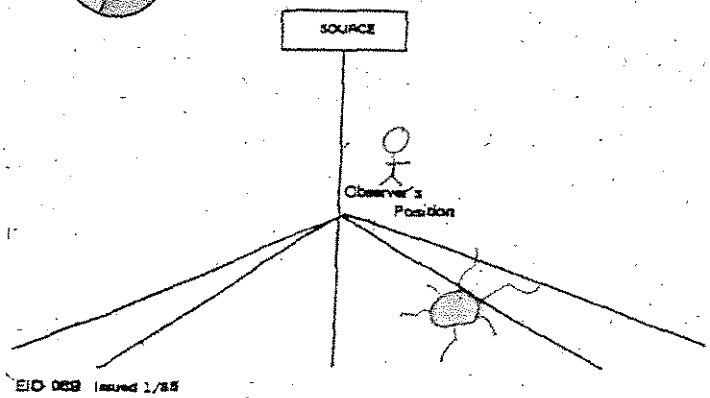
Organization: KSL Certification Date: 8-30-06

RCosta 2-20-07 11AM

RCosta 2200 11AM

R. Costa 2-19-07 9:20AM

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

I acknowledge receipt of a copy of these visible emissions observations.

Signature: _____

Title: _____

Date: _____

EID-068 Issued 1/88

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	Type of Control Equipment
Asphalt Plant	Baghouse

Describe Emission Point (Top of stack, etc.): TOP OF SHAKER

Height Above Ground Level	Height Relative to Observer
45 Feet	40 Feet

Distance From Observer	Direction of Source From Observer
50 Feet	N.W

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

Emission Color	Plume Type
NO EMISSION	☒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?
APPROX 12" TO 14" ABOVE SOURCE

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

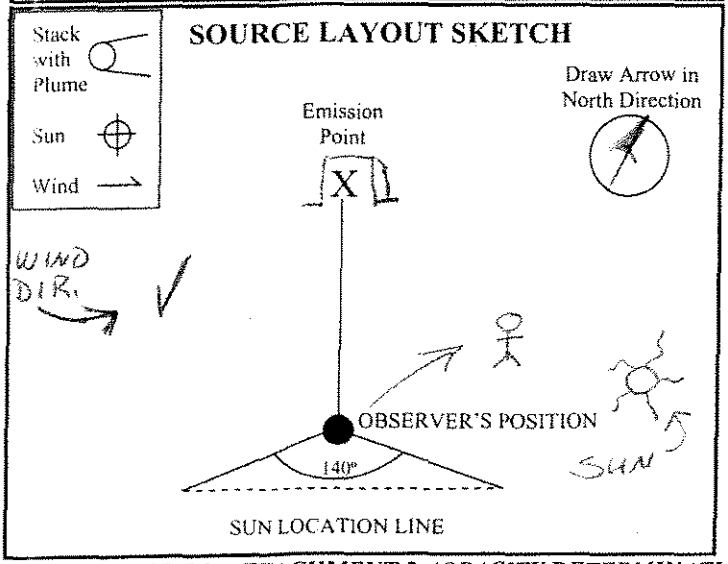
Background Color	Sky Conditions
BLUE	CLEAR

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
0 TO 5 mph	NNE TO SSW

Ambient Temperature	Relative Humidity
APPROX 45 °F	APPROX 10 %

Additional Comments/Information:
NO EMISSIONS WERE OBSERVED FROM ANY EMISSION POINT.

SOURCE LAYOUT SKETCH



Observation Date	Start Time	End Time
3-5-07	9:51 AM	9:57 AM

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

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

OBSERVER (please print)

Name:	Title:
RICHARD COSTA	ENGINEER

Signature	Date
R. Costa	3-5-07

Observer Organization: KSL

Certified by	Certification Date
ETA	3-28-07

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 SHAKER

Height Above Ground Level: 45 Feet

Height Relative to Observer: 40 Feet

Distance From Observer: 50 Feet

Direction of Source From Observer: NW

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

Emission Color: NO EMISSIONS

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?
APPROX. 12" TO 14" ABOVE SOURCE

Describe Background (i.e. blue sky, trees, etc.): BLUE SKY (PT)

Background Color: BLUE

Sky Conditions: PARTY CLOUDY (PT)

Wind Speed: 18 to 26 mph

Wind Direction (provide from/to, i.e. from North to South): WEST TO EAST

Ambient Temperature: 47 °F

Relative Humidity: 12 %

Additional Comments/Information:
NO EMISSIONS WERE OBSERVED FROM ANY EMISSION POINT. (ROADS, TRANSFER POINTS & STOCK PILES)

Observation Date: 4-11-07 Start Time: 12:01 PM End Time: 12:07 PM

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: RICHARD COSTA Title: ENGINEER

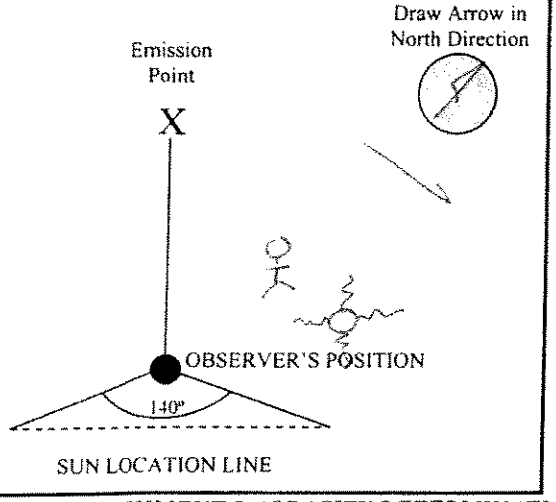
Signature: R. Costa Date: 4-12-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



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	Type of Control Equipment
Asphalt Plant	Baghouse

Describe Emission Point (Top of stack, etc.): TOP OF SHAKER

Height Above Ground Level	Height Relative to Observer
45 Feet	40 Feet

Distance From Observer	Direction of Source From Observer
APPROX 50 Feet	N.W.

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

Emission Color	Plume Type
NO EMISSIONS	☒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?
12" TO 14" ABOVE THE SOURCE

Describe Background (i.e. blue sky, trees, etc.)
PARTLY CLOUDY TO CLOUDY

Background Color	Sky Conditions
BLUE / GRAY	CLOUDY

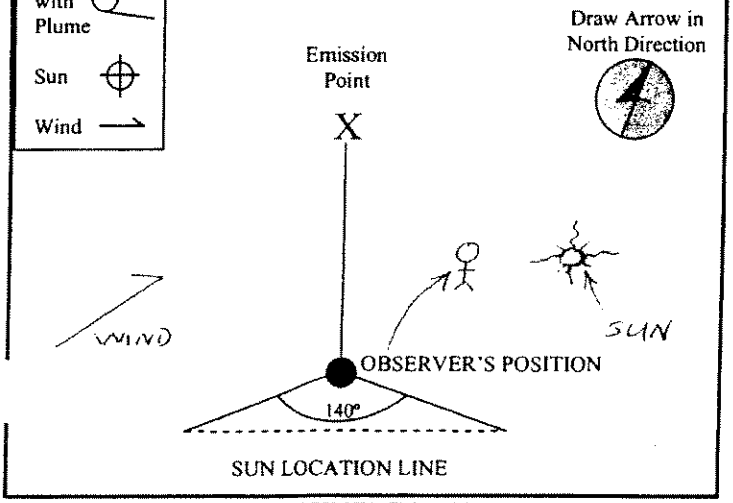
Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
5.8 mph	SW TO NE

Ambient Temperature	Relative Humidity
48.7 °F	61 %

Additional Comments/Information:
NO EMISSIONS WERE SEEN FROM ANY POINT AT THE ASPHALT PLANT. FACILITY IS COMPLIANT, AT THIS TIME.

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Observation Date	Start Time	End Time
MAY 8, 2007	8:27 AM	8:33 AM

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

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER

Signature	Date
R Costa	5-8-07

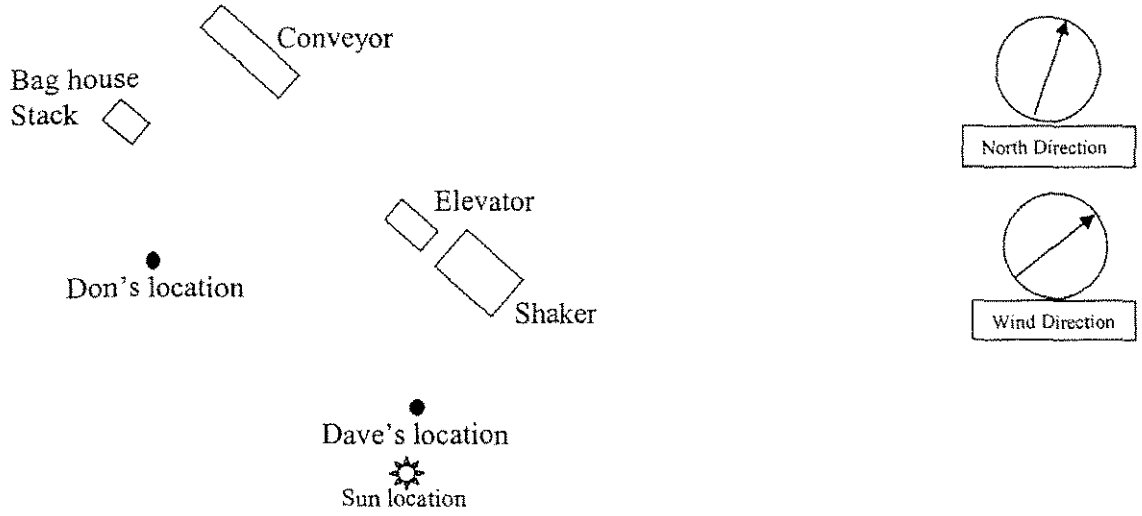
Observer Organization: KSL

Certified by	Certification Date
ETA	2-28-07

Los Alamos National Laboratory
METHOD 22 FUGITIVE OPACITY EMISSION INSPECTION FORM

Location: LANL Asphalt Plant – Sigma Mesa	Observer Affiliation: ENV-EAQ / LANL
Representative: David Paulson [1]	Date of Inspection: June 20, 2007
Sky Conditions: Partly Cloudy	Wind Direction: To the NE
Precipitation: None	Wind Speed: 5-10 mph
Industry: National Defense	Process Unit: All potential fugitive sources

Sketch of Process Unit:
Indicate:
* observer position relative to source
* potential emission and/or actual emission points
* sun location
* wind direction
* North direction



Observations: (see note [2] below)

	Clock Time	Observation period duration (min:sec)	Accumulated emission time (min:sec)
Begin	1:01 pm	8:04	0 [2]
End Observation	1:09 pm		

Notes:
[1] The observation was attended by both Dave Paulson (ENV-EAQ) and Don Stone (KSL Environmental). The observation was initiated by Dave at the location on the sketch. Don took a position further to the East to get a clearer view of the conveyor belt and any other potential fugitive emissions from that side of the plant.
[2] No visible emissions were observed at the plant. All probable fugitive sources at the plant were observed.

This form is used to document any fugitive emission with opacity greater than zero is observed. If an emission is observed during the Method 22 inspection/observation period (which must be at least 6 minutes for the Asphalt Plant and 10 minutes for all other LANL sources), a Method 9 visible emission test may need to be performed.

SIGNATURE OF OBSERVER/INSPECTOR: David Paulson

DATE: 6-20-07

Attachment B
Beryllium HEPA Filter Tests Results

Summary Table, Reports Attached

Unit	Date	Pass/Fail
TA-55 (H-5-1430) (FF-852)	4/11/2007	Pass
TA-55 (H-5-1440) (FF-853)	4/11/2007	Pass

ATTACHMENT A
100 Area Glovebox Exhaust FF-852 Data Sheet

Date: 04-11-07 (8.4.1) LAS Calibration **Expiration** Date: 03-06-08 (8.4.3) Diluter Calibration **Expiration** Date: 06-18-07 (8.4.4) Dilution Ratio: 2064 (8.4.2)

Step Number	Item	FF-852 H-5-1430
9.1.12.2	Background concentration (part./cc)	1.412×10^{-2} part. concentration
9.1.12.3	Upstream concentration (part./cc)	2.188×10^{6} part. concentration
9.1.12.4	Challenge aerosol concentration between 2.00×10^6 and 2.71×10^6 part./cc	[initials] Initials
9.1.12.5	1st stage downstream concentration (part./cc)	6.161×10^{1} part. concentration
9.1.12.6	2nd/3rd stage downstream concentration (part./cc)	1.412×10^{-2} part. concentration
9.1.12.7	1st stage Penetration $\leq 5.0 \times 10^{-4}$ (efficiency $\geq$ 99.95%)	2.816×10^{-5}
9.1.12.8	2nd/3rd stage Penetration $\leq 2.5 \times 10^{-7}$ (efficiency $\geq$ 99.999975%)	0.00
9.1.13.3 9.1.13.4	Ensure all test port ball valves are closed	[initials] Initials / MMT Independent Verification

Valve	Required Position	Initials	Independent Verification
HV-852-H	Closed and Locked	[initials]	MMT
HV-852-G	Closed	[initials]	MMT
HV-852-F	Closed	[initials]	MMT
HV-852-D	Closed	[initials]	MMT
HV-852-C	Closed	[initials]	MMT
HV-852-B	Closed	[initials]	MMT
HV-852-A	Closed	[initials]	MMT
HV-852-AA	Closed	[initials]	MMT

FOR INFORMATION ONLY

Comments:

Surveillance Personnel [signature] Signature 4-11-07 Date

OC On-duty Supervisor [signature] Signature 4/11/07 Date

100 AREA GLOVEBOX EXHAUST IN-PLACE HEPA FILTER TESTING

ATTACHMENT B
100 Area Glovebox Exhaust FF-853 Data Sheet

Date: 04-11-07 (8.4.1) LAS Calibration Expiration Date: 03-26-08 (8.4.3) Diluter Calibration Expiration Date: 06-18-07 (8.4.4) Dilution Ratio: 2064 (8.4.2)

Step Number	Item	FF-853 H-5-1440
9.2.12.2	Background concentration (part./cc)	3.531×10^{-3} part. concentration
9.2.12.3	Upstream concentration (part./cc)	$2.400 \times 10^{+6}$ part. concentration
9.2.12.4	Challenge aerosol concentration between 2.00×10^6 and $2.71 \times \times 10^6$ part./cc)	PO Initials
9.2.12.5	1st stage downstream concentration (part./cc)	7.536×10^{1} part. concentration
9.2.12.6	2nd/3rd stage downstream concentration (part./cc)	1.059×10^{-2} part. concentration
9.2.12.7	1st stage Penetration ≤ 5.0×10^{-4} (efficiency ≥ 99.95%)	3.14×10^{-5}
9.2.12.8	2nd/3rd stage Penetration ≤ 2.5×10^{-7} (efficiency ≥ 99.999975%)	2.943×10^{-9}
9.2.13.3 9.2.13.4	Ensure all test port ball valves are closed	PO Initials / MMT Independent Verification

Valve	Required Position	Initials	Independent Verification
HV-853-H	Closed and Locked	PO	MMT
HV-853-G	Closed	PO	MMT
HV-853-F	Closed	PO	MMT
HV-853-D	Closed	PO	MMT
HV-853-C	Closed	PO	MMT
HV-853-B	Closed	PO	MMT
HV-853-A	Closed	PO	MMT
HV-852-AA	Closed	PO	MMT

FOR INFORMATION ONLY

Comments:

Surveillance Personnel Signature 4-11-07 Date

OC On-duty Supervisor Signature 4/11/07 Date

Attachment C
Boilers and Heaters Natural Gas Usage

2007 TA-21 Steam Plant Data Entry / Fuel Use

	DATA ENTRY					
	Monthly Fuel Use					
	TA-21-357		Converted		Natural Gas Use 12-Month Rolling Total (MMscf)	Fuel Oil Use 12-Month Rolling Total (Gallons)
Month	Natural Gas (MCF)	Fuel Oil (gallons)	Natural Gas (MMscf)	Month		
January	3184	0	3.184	January	29.16	402
February	2895	9	2.895	February	28.58	411
March	2853	10	2.853	March	27.87	421
April	2297	6	2.297	April	27.65	427
May	2172	3	2.172	May	27.82	430
June	1803	41	1.803	June	27.91	471
July				July		
August				August		
September				September		
October				October		
November				November		
December				December		
Annual Totals:	15204	69	15.204			
Jan. - June	15204	69	15.204			
July - Dec.	0	0	0.000			

Permit Limit = 60 MMScf/yr natural gas (12 month rolling total)
and 10,000 gal/yr fuel oil (12 month rolling total)

2007 Small Boilers Data Entry / Gas Use

Data Entry

Month	Metered Boilers: TA-55 Boiler Gas Use (MSCF) BHW-1B (B-602)	Metered Boilers: TA-55 Boiler Gas Use (MSCF) BHW-2B (B-603)	Metered Boilers: TA-50-2 (MSCF) BS-1	Total Gas Use (MSCF)	Total Gas Use (MMSCF)	Non-Metered Gas Use (MMSCF)	12-Month Rolling Total for all Small Boilers (MMSCF)
January	1	2657		81,782	81.78	79.12	502.42
February	676	1261		66,101	66.10	64.16	508.94
March	1609	1		54,352	54.35	52.74	505.10
April	1248	797		44,215	44.22	42.17	513.53
May	1379	1836		29,468	29.47	26.25	521.07
June	0	379	0.1	13,530	13.53	13.15	518.20
July							
August							
September							
October							
November							
December							
TOTAL	4913	6931	0.1	289,448	289.45	277.60	Permit Limit = 870

2006 Non Metered Boiler Pool Capacity:	**308.7**	MMBTU/hr
Estimated Gas-Use per MMBtu rating Jan-June:	0.90	MMscf/MMBtu/hr
Estimated Gas-Use per MMBtu rating July-Dec:	0.00	MMscf/MMBtu/hr
Estimated Gas-Use per MMBtu - Annual	0.90	MMscf/MMBtu/hr

Definitions:

MMSCF= Million Standard Cubic Feet
MSCF = Thousand Standard Cubic Feet

Metered/Non-metered: Metered boilers are those units that have unit specific volumetric flow meters for the boiler(s) only.

	Gas Use Non-Metered (MMSCF)								
AIRS Stack #	015	016	017	018	019	020	021	024	Insignificant Units
Location:	TA-48-1	TA-48-1	TA-48-1	TA-53-365	TA-53-365	TA-59-1	TA-59-1	TA-16-1484	Lab Wide
ID:	BS-1	BS-2	BS-6	BHW-1	BHW-2	BHW-1	BHW-2	Plant 5	Various
Design Rate (MMBTU/hr)	**5.336**	**5.335**	**7.140**	**7.115**	**7.115**	**5.335**	**5.335**	**12.700**	**253**
Calculated Gas Use-Jan-June	4.799	4.798	6.421	6.398	6.398	4.798	4.798	11.421	227.774
Calculated Gas Use-July-Dec	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Calculated Gas Use-Annual	4.799	4.798	6.421	6.398	6.398	4.798	4.798	11.421	227.774

Attachment D
Carpenter Shop Hours of Operation

2007 TA-3 & TA-15 Carpenter Shops

TA-3	Data Entry
	Hours of Operation[1]
Month	TA-3
January	3.1
February	4.3
March	25.6
April	4.6
May	3.4
June	2.3
6 mo. Total	43.30

TA-3	Data Entry
	Hours of Operation[1]
Month	TA-3
July	
August	
September	
October	
November	
December	
6 mo. Total:	0.00

TA-15	Data Entry
	Hours of Operation[1]
Month	TA-15
January	9.4
February	17.4
March	47.2
April	13.6
May	20.6
June	8.9
6 mo. Total	117.1

TA-15	Data Entry
	Hours of Operation[1]
Month	TA-15
July	
August	
September	
October	
November	
December	
6 mo. Total:	0.0

Saws, drills, shaping and sanding equipment shall each not operate in excess of 4368 hours per year.

Reference
1. Based on information provided monthly by the shop foreman from each shop.

Attachment E
Degreaser Solvent Usage

Historical Solvent Usage Data

The usage information for UT Bath degreaser from Jan-01-2007 through Jun-30-2007 is displayed below.

General Degreaser Information

TA: 55
Solvent: Trichloroethylene

Date Measured	Initial Solvent Level (inches)	Volume Added (liters)	Level Added (inches)	Volume Removed (liters)	Level Removed (inches)
Jan-17-2007	7.0	0.98	0.50	0.0	0.0
Feb-06-2007	7.5	0.00	0.00	14.74	7.5
Feb-14-2007	0.0	14.74	7.50	0.0	0.0
Mar-21-2007	7.2	0.30	0.15	0.0	0.0
Apr-04-2007	7.0	0.98	0.50	0.0	0.0
Apr-18-2007	7.5	0.00	0.00	14.74	7.5
Apr-30-2007	0.0	15.73	8.00	0.0	0.0
May-30-2007	8.0	0.00	0.00	0.0	0.0
Jun-26-2007	7.2	15.53	7.90	14.15	7.2

Attachment F
Internal Combustion Generator Hours of Operation

2007 Generator Hours

								First 6 Month Readings 2007			Second 6 Month Readings 2007		
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	38	Onan Sons	H1750DSG15	175	Diesel	Dec-06	3054.4	May-07	3057.0	2.6			
3	38	Onan Sons	350DFCC	350	Diesel	Dec-06	2619.4	May-07	2629.4	10.0			
3	38	Cummins	150DGFA	150	Diesel	Dec-06	1147.0	May-07	1158.9	11.9			
3	40	Onan Sons	1500DVE15R31374B	150	Diesel	Dec-06	3.2	May-07	6.1	2.9			
3	223	Onan Sons	45.OEM-15R/10742D	45	Nat. Gas	Dec-06	478.0	May-07	481.1	3.1			
3	440	Cummins	500FDR5051	150	Diesel	Dec-06	121.8	May-07	121.8	0.0			
3	440	Cummins	DFGA-5005210	500	Diesel	Dec-06	69.5	May-07	74.8	5.3			
3	1076	Cummins	DGBB-5601289	35	Diesel	Dec-06	101.2	Jun-07	116.7	15.5			
3	1400	Cummins	DFEH-5699616	400	Diesel	Apr-07	14.0	May-07	14.1	0.1			
3	1404	Cummins	DFLC-5554001	1250	Diesel	Dec-05	287.9	Jun-07	324.2	36.3			
3	1498	Caterpillar	SR-4	600	Diesel	Nov-05	303.0	May-07	315.0	12.0			
3	2322	Onan Sons	DGDA-5005757	80	Diesel	Nov-05	329.1	May-07	336.8	7.7			
16	980	Cummins	KTA50-G2	1100	Diesel	Dec-05	226.3	Jun-07	276.2	49.9			
16	1374	Onan Sons	60ENA	60	Nat. Gas	Nov-05	1039.4	May-07	1058.9	19.5			
18	31	Onan Sons	275DFML29807N	275	Diesel	Dec-05	173.4	Jun-07	180.8	7.4			
21	357	Caterpillar	SR-4	125	Diesel	Nov-05	497.5	May-07	541.0	43.5			
33	20	Kohler	30ROZ	30	Diesel	Nov-05	919.0	Jun-07	919.0	0.0			
33	87	Kurz & Root	MEP 006A	60	Diesel	Jun-07	1555.0	Jun-07	1555.0	0.0			
33	151	Caterpillar	XQ225	225	Diesel	Nov-05	2944.0	Jun-07	2944.0	0.0			
33	208	Kohler	1600ROZD	1600	Diesel	Nov-05	9.3	Jun-07	9.3	0.0			
60	yard	Cummins	DFHD-4964979	1000	Diesel	Feb-07	272.4	Jul-07	293.9	21.5			
33	Point	Onan Sons	80DG10A	80	Diesel	Nov-05	7643.1	Jun-07	7643.1	0.0			
35	2	Onan Sons	100DGDB	100	Diesel	Dec-05	115.5	Jun-07	115.3	0.0			
35	402	Cummins	DGCB-5674244	60	Diesel	Jun-07	107.4	Jun-07	107.4	0.0			
43	1	Cummins	4BT3.9-GC	50	Diesel	Nov-05	369.4	May-07	379.0	9.6			
43	1	Onan Sons	DVE	150	Diesel	Nov-05	562.6	May-07	589.1	26.5			
46	335	Onan Sons	300DEFCB	300	Diesel	Nov-05	873.8	May-07	900.4	26.6			
48	45	Onan Sons	DFCB-5740130	300	Diesel	Nov-05	16.0	May-07	24.9	8.9			
50	37	Cummins	680FDR5059FF	500	Diesel	Nov-05	485.1	May-07	489.1	4.0			
50	184	Onan Sons	DGFA-568741	150	Nat. Gas	Nov-05	153.6	May-07	209.7	56.1			
50	188	Onan Sons	L940563879	1250	Diesel	Nov-05	149.0	Jun-07	149.0	0.0			
53	1	Onan Sons	60ENA	60	Nat. Gas	Nov-05	1165.4	May-07	1195.1	29.7			
53	2	Kato Eng.	Kamag-14	50	Diesel	Nov-05	194.3	May-07	194.3	0.0			
53	M	Onan Sons	12.5JC-18R/16095AA	12.5	Nat. Gas	Nov-05	581.5	May-07	581.5	0.0			
54	412	Olympian	95M-07874-F	500	Diesel	Nov-05	292.0	May-07	306.1	14.1			
55	5	Kohler	100RZ71	100	Nat. Gas	Dec-05	71.3	May-07	74.4	3.1			
55	8	Delco/Detroit	E7014DD	600	Diesel	Dec-05	805.3	Jun-07	814.3	9.0			
55	364	Onan Sons	1250DFLC-4987	1250	Diesel	Dec-05	52.6	Jun-07	62.0	9.4			
55	28	Onan Sons	40DL6T	40	Diesel	Dec-05	47.3	Jun-07	47.3	0.0			
55	47	Onan Sons	1465	200	Diesel	Nov-05	515.6	May-07	526.6	11.0			
55	142	Cummins	DFEB-4963414	400	Diesel	Dec-05	88.8	May-07	96.1	7.3			
59	1	Allis Chalmers	2884-0703	90	Diesel	Nov-05	749.3	Jun-07	750.0	0.7			
63	Yard	Murphy	3166-0084	20	Diesel	Nov-05	715.9	Jun-07	715.9	0.0			
64	1	Onan Sons	250DVG	250	Diesel	Nov-05	148.0	May-07	153.1	5.1			
64	39	Onan Sons	20.0DL4-15R	20	Diesel	Dec-05	189.9	Jun-07	189.9	0.0			
69	33	Cummins	DFLC-5568730	1250	Diesel	Nov-05	53.2	May-07	62.5	9.3			
	46 Generators in use								**TOTAL**	455.1		**TOTAL**	0.0

N/R = Not Read

First half average hours per unit	10.4	Second half average hours per unit

Annual Average of hours per unit	10.4

Attachment G
Data Disintegrator Box Throughput

2007 TA-52 Data Disintegrator

Month	Data Entry Boxes[(c)] Shredded	12-Month Rolling Total	Month	Data Entry Boxes[(c)] Shredded	12-Month Rolling Total
January	484	9257	**July**		
February	542	8759	**August**		
March	2206	10199	**September**		
April	799	10293	**October**		
May	1719	10989	**November**		
June	992	10602	**December**		
6 mo. Total	6,742		**6 mo. Total:**	0	

Annual Boxes (2007):	**6,742**

Attachment H
Power Plant Natural Gas and Fuel Oil Usage

TA-3 Power Plant Fuel Use Totals 2007 (Data Entry)

	DATA ENTRY							
	TA-3-22 Power Plant Boiler # 1 (Edgemoor Iron Works, 210 MMBTU/hr)		TA-3-22 Power Plant Boiler # 2 (Edgemoor Iron Works, 210 MMBTU/hr)		TA-3-22 Power Plant Boiler # 3 (Union Iron Works, 210 MMBTU/hr)		Monthly Totals	
Month	Natural Gas (MCF)	Fuel Oil (gallons)	Natural Gas (MCF)	Fuel Oil (gallons)	Natural Gas (MCF)	Fuel Oil (gallons)	Natural Gas (MMCF)	Fuel Oil (gallons)
January	11,719	319	31,832	0	31,733	0	75.284	319
February	36,598	0	21,940	347	611	0	59.149	347
March	38,858	438	4,328	212	8,387	406	51.573	1056
April	9,160	0	3,101	603	29,807	0	42.068	603
May	362	27,893	10,074	438	24,198	50,133	34.634	78464
June	0	0	0	0	0	0	0.000	0
July								
August								
September								
October								
November								
December								
Annual Totals:	96,697	28,650	71,275	1,600	94,736	50,539	262.708	80789
Jan. - June	96,697	28,650	71,275	1,600	94,736	50,539	262.708	80789
July - Dec.	0	0	0	0	0	0	0.000	0

Month	12-Mo. Rolling Total Natural Gas (MMscf)	12-Mo. Rolling Total Fuel Oil (gallons)
January	615.3	21463
February	616.0	21097
March	609.8	21231
April	601.9	21456
May	602.6	99269
June	573.2	98611
July		
August		
September		
October		
November		
December		

Permit Limits:	2000 MMscf	500,000 gallons

	Totals by Fuel Type	
	Natural Gas (MMscf)	Fuel Oil (Gallons)
Annual Totals:	262.71	80789.00
Jan. - June	262.71	80789.00
July - Dec.	0.00	0.00

Attachment I
Power Plant Opacity Reports

Summary Table, Reports Attached

Source	Date	Time	*Average Opacity
TA-3-22 Power Plant	01-11-07	10:22 am	0%
	01-11-07	10:32 am	0%
	01-11-07	10:42 am	0%
	01-11-07	10:52 am	0%
	01-11-07	11:02 am	0%
	01-11-07	11:12 am	0%
	01-11-07	11:22 am	0%
	01-11-07	12:11 pm	18.25%
	01-11-07	12:21 pm	0%
	01-11-07	12:31 pm	0%
	01-11-07	12:47 pm	0%
	01-11-07	12:57 pm	0%
	01-25-07	11:10 am	0%
	01-25-07	11:48 am	0%
	02-08-07	11:12 am	0%
	02-08-07	11:22 am	0%
	02-08-07	11:32 am	0%
	02-22-07	10:37 am	0%
	02-22-07	10:47 am	0%
	02-22-07	11:30 am	4.625%
	02-22-07	12:12 pm	0.875%
	02-22-07	12:22 pm	0.375%
	02-22-07	12:32 pm	0%
	02-22-07	12:46 pm	0%
	02-22-07	12:56 pm	0%
	03-06-07	10:39 am	2.75%
	03-06-07	10:49 am	0%
	03-06-07	10:59 am	0%
	03-20-07	10:35 am	0%
	03-20-07	10:45 am	0%
	03-20-07	10:55 am	0%
	03-27-07	9:52 am	3.5%
	03-27-07	10:02 am	0%
	03-27-07	10:12 am	0.5%
	03-27-07	10:22 am	0%

TA-3-22 Power Plant	03-27-07	10:32 am	0%
	03-27-07	10:42 am	0%
	03-27-07	10:52 am	0%
	04-10-07	8:00 am	0%
	04-10-07	8:33 am	0%
	04-24-07	10:38 am	0%
	04-24-07	10:48 am	11%
	04-24-07	10:58 am	0%
	04-24-07	11:08 am	0%
	05-01-07	9:48 am	1.25%
	05-01-07	9:58 am	25%
	05-01-07	10:32 am	0.875%
	05-01-07	10:42 am	0%
	05-01-07	10:52 am	0%
	05-11-07	8:35 am	2.0%
	05-11-07	8:45 am	0.875%
	05-11-07	8:55 am	0%
	05-11-07	9:05 am	0%
	05-11-07	9:15 am	0%
	05-11-07	9:25 am	0%
	05-11-07	9:35 am	0%
	05-11-07	9:45 am	0%
	05-11-07	10:12 am	0%
	05-11-07	10:22 am	0.875%
	05-15-07	13:24 pm	10.375%
	05-15-07	13:34 pm	6.25%
	05-15-07	13:44 pm	0.25%
	05-15-07	13:54 pm	0%
	05-15-07	14:04 pm	0%
	05-15-07	14:14 pm	0%
	05-15-07	14:24 pm	0%
	05-15-07	14:34 pm	0%
	05-15-07	14:44 pm	0%

* Average opacity for the Power Plant is the sum of the highest consecutive 40 readings divided by 40 (10 minutes of readings). The method is in accordance with 20.2.61 NMAC.

Los Alamos NATIONAL LABORATORY

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

Source Name: #1 Boiler Fuel Oil

Source Location: TA 3 SM 22 Steam Plant

Type of Source: Diesel Fuel

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): Top of West Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: S E

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

Emission Color: None Black

Plume Type: ☑No Plume Present ☐Continuous ☐Fugitive ~~☐Intermittent~~ 1-11-07

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

At what point in the plume was opacity determined? Top of West Stack

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

Background Color: Blue-White

Sky Conditions: Scattered

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): E to West

Ambient Temperature: °F

Relative Humidity: %

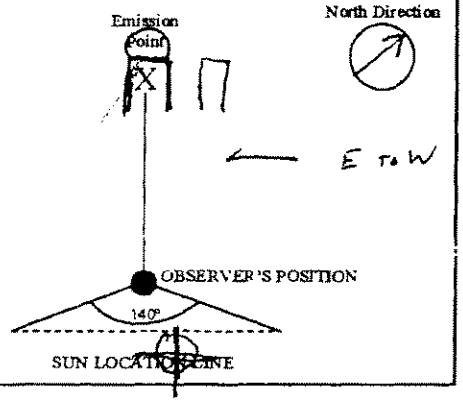
Additional Comments/Information:

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Observation Date	Start Time	End Time
1-11-07	1022	1031

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	Range of Opacity Readings
0	Min. 0 Max. 0

OBSERVER (please print)
Name: Leonard Pacheco
Title: Operator

Signature: [signature]
Date: 1-11-07

Observer Organization: KSL - UPPS

Certified by: ETA
Certification Date: 8-29-06

Los Alamos

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

Source Name: #1 BOILER FUEL OIL

Source Location: TA 3 SM 22 POWER PLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: SE

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

Emission Color: BLACK/NONE

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? TOP OF WEST STACK

Describe Background (i.e. blue sky, trees, etc.): BLUE SKY, WHITE CLOUDS

Background Color: BLUE-WHITE

Sky Conditions: SCATTERED

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): E-W

Ambient Temperature: °F

Relative Humidity: %

Additional Comments/Information:

Observation Date: 1-11-07

Start Time: 1032

End Time: 1041

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: LEONARD PACHECO Title:

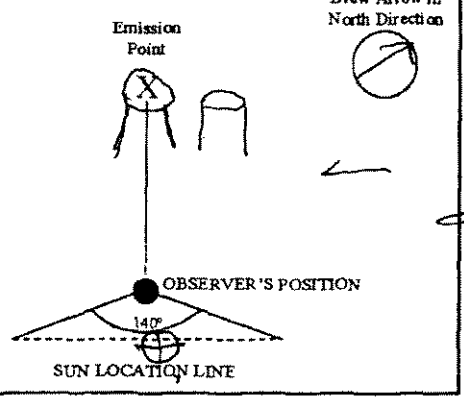
Signature: [signature] Date: 1-11-07

Observer Organization: KSL UPPS

Certified by: ETA Certification Date:

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name: BOILER #1 DIESEL FUEL

Source Location: TA 3 SM 22 POWER PLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: S-E

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

Emission Color: NONE

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? TOP OF WEST STACK

Describe Background (i.e. blue sky, trees, etc.): BLUE SKY - WHITE CLOUDS

Background Color: BLUE-WHITE

Sky Conditions: SCATTERED

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): S-N

Ambient Temperature: °F

Relative Humidity: %

Additional Comments/Information:

Observation Date	Start Time	End Time
1-11-07	1012	1052

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: LEONARD PACHECO Title: OPERATOR

Signature: [signature] Date: 1-11-07

Observer Organization: UPPS XSL

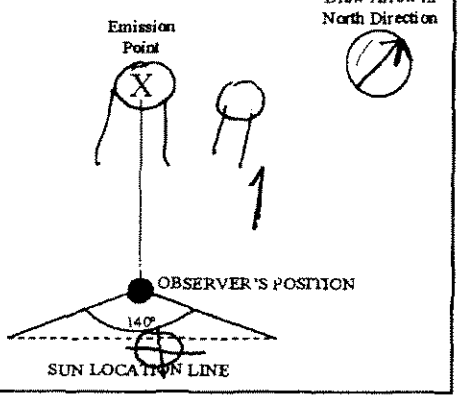
Certified by: EVA Certification Date: 8-06

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Los Alamos

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

Source Name: BOILER #1 FUEL OIL

Source Location: TA 3 SM 22 POWERPLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: S E

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

Emission Color: NONE

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? TOP OF WEST STACK

Describe Background (i.e. blue sky, trees, etc.): BLUE SKY - WHITE CLOUDS

Background Color: BLUE-WHITE

Sky Conditions: SCATTERED

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): S. W.

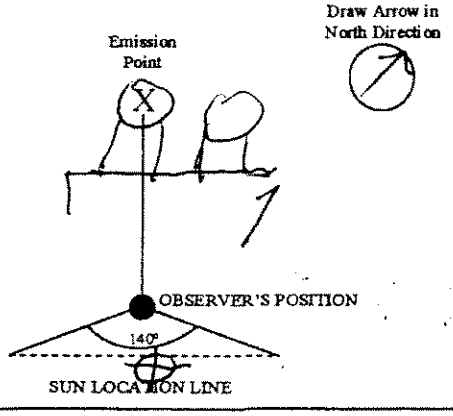
Ambient Temperature: °F

Relative Humidity: %

Additional Comments/Information:

Stack with Plume
Sun
Wind

SOURCE LAYOUT SKETCH



Observation Date: 1-11-07

Start Time: 1052

End Time: 1101

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: EDWARD PACHECO Title: OPERATOR

Signature: [signature] Date: 1-11-07

Observer Organization: KSL UPPS

Certified by: STA Certification Date: 8-06

Los Alamos

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

Source Name: BOILER #1 DIESEL FUEL

Source Location: TA 3 SM 22 POWER PLANT

Type of Source: DIESEL FUEL | Type of Control Equipment: N/A

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet | Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards | Direction of Source From Observer: S-E

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

Emission Color: NONE | 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? TOP OF WEST STACK

Describe Background (i.e. blue sky, trees, etc.): BLUE SKY - WHITE CLOUDS

Background Color: BLUE-WHITE | Sky Conditions: SCATTERED

Wind Speed: 2-7 mph | Wind Direction (provide from/to, i.e. from North to South): S-N

Ambient Temperature: °F | Relative Humidity: %

Additional Comments/Information:

Observation Date: 1-11-07 | Start Time: 1102 | End Time: 1111

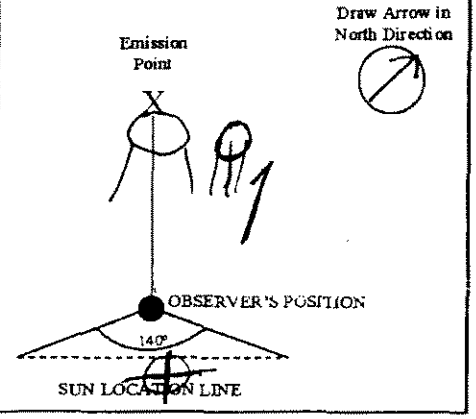
Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity: 0 | Range of Opacity Readings: Min. 0 Max. 0

OBSERVER (please print)
Name: LEONARD PACHECO | Title: OPERATOR
Signature | Date: 1-11-07
Observer Organization: KSL - UPS
Certified by: ETA | Certification Date: 8-06

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name: BOILER #1 DIESEL FUEL

Source Location: TA 3 SM 22 POWER PLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: SE

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

Emission Color: NONE

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? TOP OF WEST STACK

Describe Background (i.e. blue sky, trees, etc.): BLUE SKY - WHITE CLOUDS

Background Color: BLUE-WHITE

Sky Conditions: SCATTERED

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): S - N

Ambient Temperature: °F

Relative Humidity: %

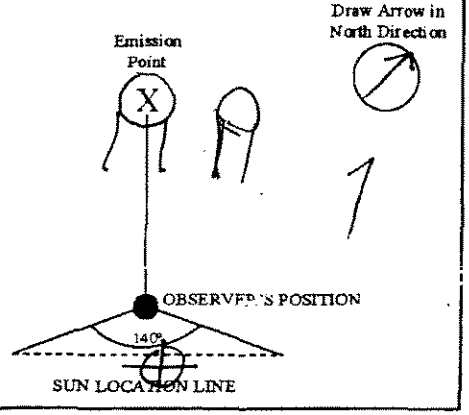
Additional Comments/Information:

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Observation Date	Start Time	End Time
1-11-07	1112	1121

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: LEONARD PALACIOS Title: OPERATOR

Signature

Date: 1-11-07

Observer Organization: KSL - UPPS

Certified by: ETA

Certification Date: 8-06

Los Alamos

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

Source Name: BOILER #1 DIESEL FUEL

Source Location: TA-3 SM-32 POWER PLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: S.E.

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

Emission Color: NONE

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? TOP OF WEST STACK

Describe Background (i.e. blue sky, trees, etc.): BLUE SKY - WHITE CLOUDS

Background Color: BLUE-WHITE

Sky Conditions: SCATTERED

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): S. N

Ambient Temperature: °F

Relative Humidity: %

Additional Comments/Information:
BOILER STABLE - STOPPED TAKING READINGS BUT STAYED OUT OBSERVING

Observation Date: 1-11-07

Start Time: 1122

End Time: 1131

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: LEONARD PACHECO Title: OPERATOR

Signature: [signature] Date: 1-11-07

Observer Organization: ESL - UPPS

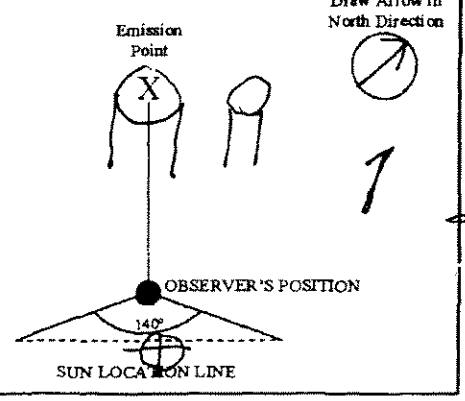
Certified by: ETA Certification Date: 8-06

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Los Alamos

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

Source Name: BOILER #1 DIESEL FUEL

Source Location: TA3 SM-22 POWER PLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: SE

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

Emission Color: BLACK

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? TOP OF WEST STACK

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

Background Color: BLUE

Sky Conditions: CLEAR

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): S N

Ambient Temperature: °F

Relative Humidity: %

Additional Comments/Information:
AIR TO CASCADE SWITCHED 1-11-07 LP FROM MANUAL TO AUTO
(OIL VALVE STUCK)

Observation Date	Start Time	End Time
1-11-07	1211	1224

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	100	← 100 11-7-06 LP
9	100	100	100	100	
10	100	100	25	5	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Average 60-Minute Opacity: ~~18.75~~ 19.37 11-7-06 LP

Range of Opacity Readings: Min. 0 Max. 100

OBSERVER (please print)
Name: EDWARD PACHECO Title: OPERATOR

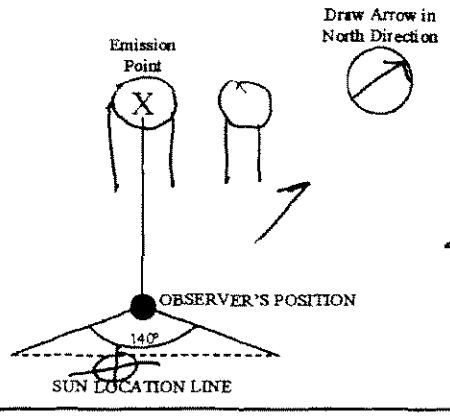
Signature: [signature] Date: 1-11-07

Observer Organization: KSL VPKS

Certified by: ETA Certification Date: 8-06

Stack with Plume
Sun
Wind

SOURCE LAYOUT SKETCH



Los Alamos

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

Source Name: BOILER #1 DIESEL FUEL

Source Location: TA 3 SM 22 POWER PLANT

Type of Source: DIESEL FUEL | Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet | Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards | Direction of Source From Observer: S E

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

Emission Color: NONE | 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? TOP OF WEST STACK

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

Background Color: BLUE | Sky Conditions: CLEAR

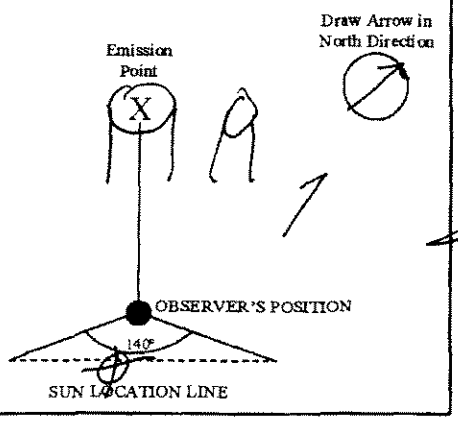
Wind Speed: 2-7 mph | Wind Direction (provide from/to, i.e. from North to South): S - N

Ambient Temperature: °F | Relative Humidity: %

Additional Comments/Information:

Stack with Plume
Sun
Wind

SOURCE LAYOUT SKETCH



Observation Date: 1-11-07 | Start Time: 1221 | End Time: 1230

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: LEONARD PACHECO | Title: OPERATOR

Signature | Date: 1-11-07

Observer Organization: KSL - UPPS

Certified by: ETA | Certification Date: 8-06

Los Alamos

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

Source Name: BOILER #1 DIESEL FUEL

Source Location: TA 3 SM 22 POWER PLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: SE

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

Emission Color: NONE

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? TOP OF WEST STACK

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

Background Color: BLUE

Sky Conditions: CLEAR

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): S-NE

Ambient Temperature: °F

Relative Humidity: %

Additional Comments/Information:

Observation Date: 1-11-07

Start Time: 1231

End Time: 1240

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

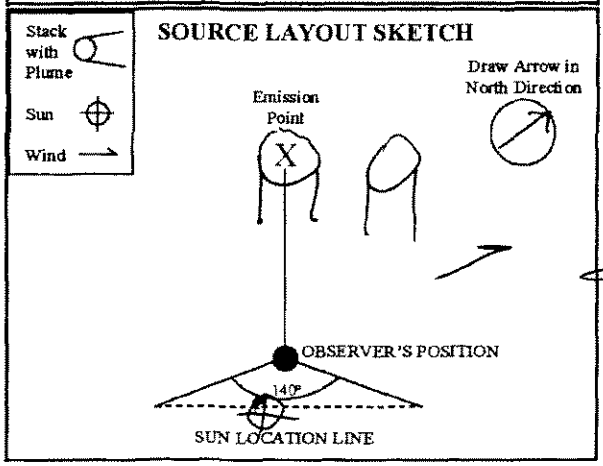
OBSERVER (please print)
Name: EDWARD PACHECO Title: OPERATOR

Signature: [signature] Date: 1-11-07

Observer Organization: KSL - UPPS

Certified by: ETA Certification Date: 8-06

SOURCE LAYOUT SKETCH



Los Alamos

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

1-11-07 LP

Source Name: BOILER #1 DIESEL FUEL

Source Location: TA 3 SM-22 POWER PLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: SE

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

Emission Color: NONE

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? TOP OF WEST STACK

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

Background Color: BLUE

Sky Conditions: CLEAR

Wind Speed: 2-7 mph

Wind Direction (provide from/to, i.e. from North to South): W - E

Ambient Temperature: °F

Relative Humidity: %

Additional Comments/Information:
BRINGING UP LOAD ON #1 BOILER
1247

Observation Date: 1-11-07

Start Time: 1246

End Time: 1256

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: LEONARD PACHECO Title: OPERATOR

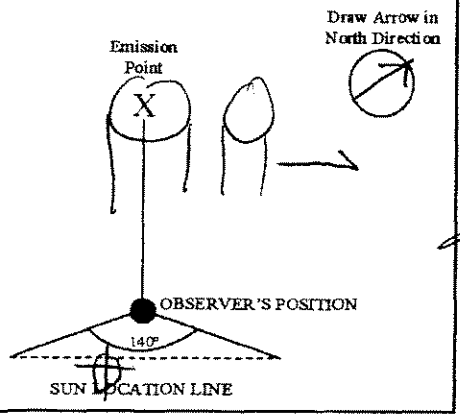
Signature: [signature] Date: 1-11-07

Observer Organization: KSL-UPPS

Certified by: EJA Certification Date: 8-06

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name: BOILER #1 DIESEL # FUEL

Source Location: TA 3 SM 22 POWER PLANT

Type of Source: DIESEL FUEL

Type of Control Equipment: NA

Describe Emission Point (Top of stack, etc.): TOP OF WEST STACK

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 72 Yards

Direction of Source From Observer: SE

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

Emission Color: NONE

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? TOP OF WEST STACK

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

Background Color: BLUE

Sky Conditions: CLEAR

Wind Speed: 2.7 mph

Wind Direction (provide from/to, i.e. from North to South): W-E

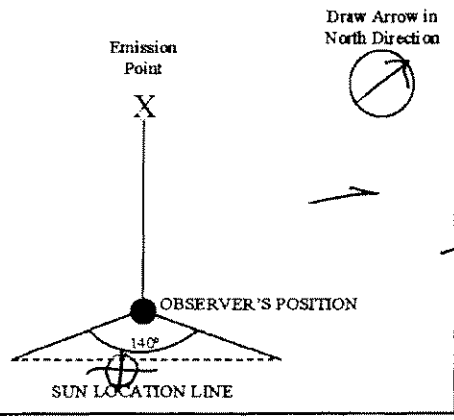
Ambient Temperature: °F

Relative Humidity: %

Additional Comments/Information: 1301 OFF OF FUEL OIL

Stack with Plume
Sun
Wind

SOURCE LAYOUT SKETCH



Observation Date: 1-11-07

Start Time: 1257

End Time: 1301

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					
7					
8					
9					
10					
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: LEONARD PACHECO Title: OPERATOR

Signature: [signature] Date: 1-11-07

Observer Organization: YSL - OPS

Certified by: ETA Certification Date: 8-06

Los Alamos NATIONAL LABORATORY

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

Source Name: Fuel oil # 1 Boiler

Source Location: TA 3 SM 22 Power Plant

Type of Source: Fuel Oil

Type of Control Equipment: N/A

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 ~~Yards~~ Feet

Direction of Source From Observer: NE

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

Emission Color: Black

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?
Approx. 1 Foot Above Stack

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

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 0-5 mph

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

Ambient Temperature: N/A °F

Relative Humidity: N/A %

Additional Comments/Information:

Observation Date	Start Time	End Time
1-25-07	11:10	11:40

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	#4 Burned
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	

Average 10-Minute Opacity: 0.0%

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print)
Name: BRIAN ORTIZ Title: Maint. Lead Man

Signature: Brian Ortiz Date: 1-25-07

Observer Organization: KSL

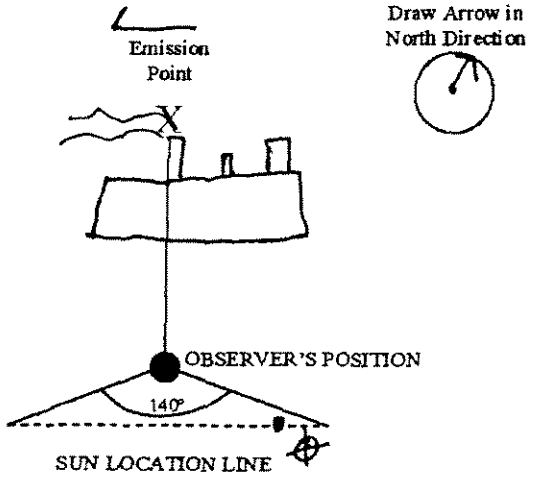
Certified by: ETA Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Los Alamos NATIONAL LABORATORY

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

Source Name:	
Source Location:	
Type of Source	Type of Control Equipment
Describe Emission Point (Top of stack, etc.)	
Height Above Ground Level Feet	Height Relative to Observer Feet
Distance From Observer Yards	Direction of Source From Observer
Description of Plume (stack exit only) ☐Lofting ☐Trapping ☐Looping ☐Fanning ☐Coning ☐No Plume Present	
Emission Color	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?	
Describe Background (i.e. blue sky, trees, etc.)	
Background Color	Sky Conditions
Wind Speed mph	Wind Direction (provide from/to, i.e. from North to South)
Ambient Temperature °F	Relative Humidity %
Additional Comments/Information:	

Observation Date	Start Time	End Time

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					

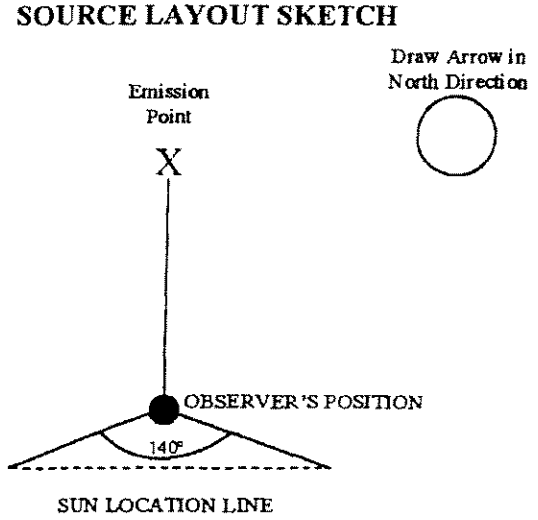
Average 10-Minute Opacity	Range of Opacity Readings Min. Max.

OBSERVER (please print)
Name: Title:

Signature	Date
Observer Organization	
Certified by	Certification Date

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name:	
Source Location:	
Type of Source	Type of Control Equipment
Describe Emission Point (Top of stack, etc.)	
Height Above Ground Level Feet	Height Relative to Observer Feet
Distance From Observer Yards	Direction of Source From Observer
Description of Plume (stack exit only) ☐Lofting ☐Trapping ☐Looping ☐Fanning ☐Coning ☐No Plume Present	
Emission Color	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?	
Describe Background (i.e. blue sky, trees, etc.)	
Background Color	Sky Conditions
Wind Speed mph	Wind Direction (provide from/to, i.e. from North to South)
Ambient Temperature °F	Relative Humidity %
Additional Comments/Information:	

Observation Date	Start Time	End Time
		11:40

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	Stopped Reading Boiler Tripped
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity	Range of Opacity Readings Min. Max.

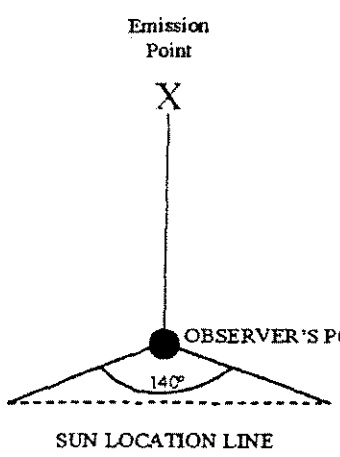
OBSERVER (please print)
Name: Title:

Signature	Date
Observer Organization	
Certified by	Certification Date

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind

Draw Arrow in North Direction



Los Alamos NATIONAL LABORATORY

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

Source Name: Fuel oil #1 Boiler

Source Location: TA 3 SM 22 Power Plant

Type of Source: Fuel oil

Type of Control Equipment: N/A

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 ~~Yards~~ Ft

Direction of Source From Observer: NE

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

Emission Color: Black

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? Approx. 1 Foot Above stack

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

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 0-5 mph

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

Ambient Temperature: N/A °F

Relative Humidity: N/A %

Additional Comments/Information:

Observation Date: 1-25-07

Start Time: 11:48

End Time: 11:58

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	

Average 10-Minute Opacity: 0.0%

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print)
Name: BRIAN ORTIZ Title: Maint Head Man

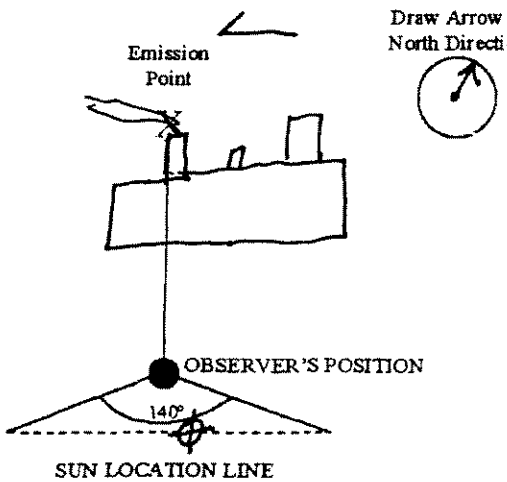
Signature: Brian Ortiz Date: 1/25/07

Observer Organization: KSL

Certified by: ETA Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos NATIONAL LABORATORY

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

Source Name: Fuel oil #2 Boiler

Source Location: TA3 SM22 Power Plant

Type of Source: Fuel oil

Type of Control Equipment: None

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

Height Above Ground Level: 150' Feet

Height Relative to Observer: 100 Feet

Distance From Observer: 97 Yards

Direction of Source From Observer: NE

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

Emission Color: Black

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? One foot Above Stack

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

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 0-3 mph

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

Ambient Temperature: 19.9 °F

Relative Humidity: 38 %

Additional Comments/Information:

Observation Date: 2-8-2007

Start Time: 11:12

End Time: 11:22

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	#3 Burner
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: 0.0 %

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print)
Name: Brian Ogle Title: Lead Maint. Man

Signature: Brian Ogle Date: 2-8-07

Observer Organization: ASL

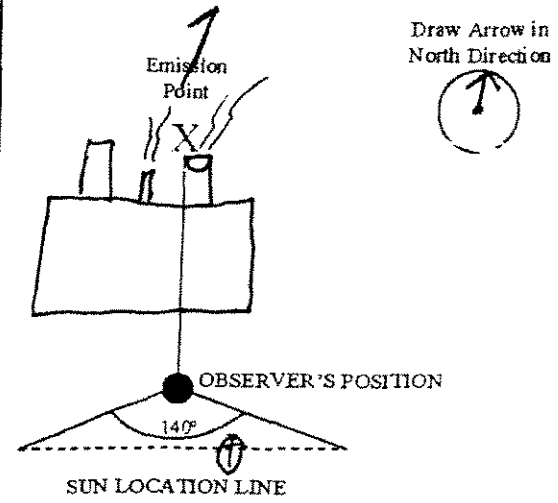
Certified by: ETA Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Los Alamos

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

Source Name: Fueloil #2 Boiler

Source Location: TA3 SM22 Power Plant

Type of Source: Fueloil

Type of Control Equipment: none

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 100 Feet

Distance From Observer: 97 Yards

Direction of Source From Observer: NE

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

Emission Color: Black

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? One foot Above Stack

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

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 0-3 mph

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

Ambient Temperature: 19.9 °F

Relative Humidity: 38 %

Additional Comments/Information:

Observation Date	Start Time	End Time
2-8-07	11:22	11:32

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: 0.0%

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print)
Name: BRIAN ORTIZ Title: Lead Maint Mon

Signature: Brian Ortiz Date: 2-8-07

Observer Organization: KSL

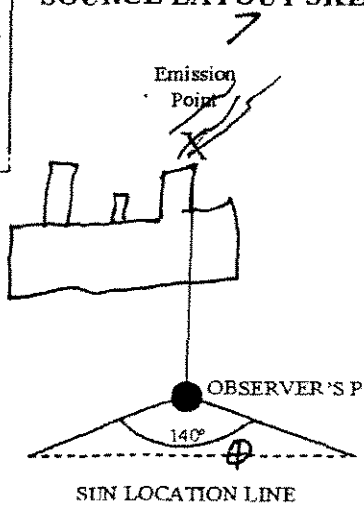
Certified by: ETA Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Draw Arrow in North Direction

Los Alamos NATIONAL LABORATORY

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

Source Name: Fuel oil #2 Boiler

Source Location: TA 3 SM22 Power Plant

Type of Source: Fuel oil

Type of Control Equipment: NONE

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 100 Feet

Distance From Observer: 97 Yards

Direction of Source From Observer: NE

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

Emission Color: Black

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?: one foot Above Stack

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

Background Color: Blue

Sky Conditions: Cloud

Wind Speed: 0-3 mph

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

Ambient Temperature: 19.9 °F

Relative Humidity: 38 %

Additional Comments/Information:

Observation Date: 2-8-07

Start Time: 11:32

End Time: 11:42

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: 0.0

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print)
Name: BRIAN OLTZ Title: Lead Maint Man

Signature: Brian Oltz Date: 2-8-07

Observer Organization: ESL

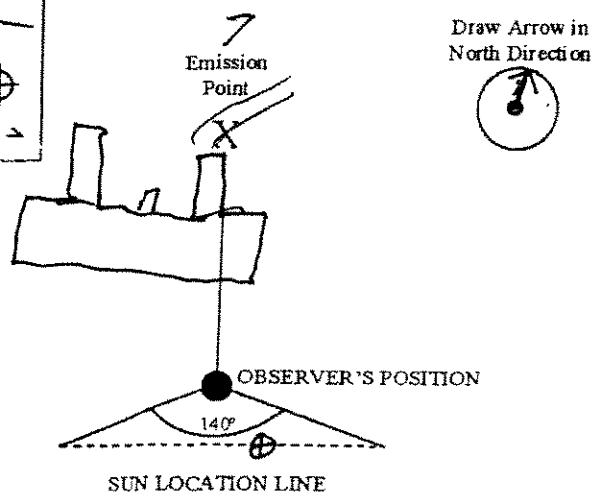
Certified by: ETA Certification Date: 8-29-06

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind →



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel Oil

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most West Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 Feet

Direction of Source From Observer: NW

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

Emission Color: Black

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? One Foot Above Stack

Describe Background (i.e. blue sky, trees, etc.): Partly Cloudy Skies

Background Color: Blue sky - white clouds

Sky Conditions: Partly Cloudy

Wind Speed: 0-3 mph

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

Ambient Temperature: 42° °F

Relative Humidity: 45% %

Additional Comments/Information:

Observation Date	Start Time	End Time
2/22/07	10:37	10:47

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	#3 Burner
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: 0.0%

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print)
Name: Brian Ortiz Title: Maint Leadman

Signature: Brian Ortiz Date: 2/22/07

Observer Organization: KSL

Certified by: ETA Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

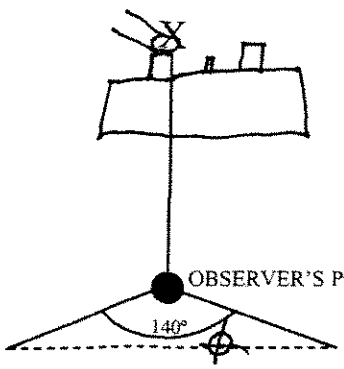
Stack with Plume

Sun

Wind

Emission Point 1

Draw Arrow in North Direction



SUN LOCATION LINE

Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel oil

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most Western Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 Feet

Direction of Source From Observer: NW

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

Emission Color: Black

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? One Foot Above Stack

Describe Background (i.e. blue sky, trees, etc.): Partly Cloudy Skies

Background Color: Blue/whit

Sky Conditions: Partly Cloudy

Wind Speed: 0-3 mph

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

Ambient Temperature: 42° °F

Relative Humidity: 45% %

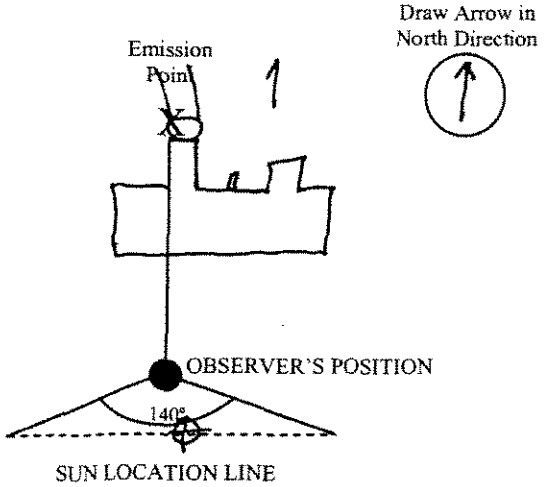
Additional Comments/Information:

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Observation Date	Start Time	End Time
2/28/07	10:47	10:57

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	Range of Opacity Readings Min.	Max.
0.0%	0.0	0.0

OBSERVER (please print)
Name: Brian Ortiz Title: Maint. Leadman

Signature: Brian Ortiz Date: 2/28/07

Observer Organization: KSL

Certified by: ETA Certification Date: 8/29/06

Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel oil

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most. Western Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 Feet

Direction of Source From Observer: N W

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

Emission Color: Black

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?
One foot Above Stack

Describe Background (i.e. blue sky, trees, etc.): Partly Cloudy skies

Background Color: Blue/white

Sky Conditions: Partly Cloudy

Wind Speed: 0-3 mph

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

Ambient Temperature: 43 °F

Relative Humidity: 45% %

Additional Comments/Information:
Attempted to put Air on Cascade
Had to take It off Cause of smoke

Observation Date	Start Time	End Time
2/22/07	11:30	11:40

Min \ Sec	0	15	30	45	Comments
1	0	5	5	5	Put Air on cascade
2	5	15	40	50	
3	30	25	5	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: 4.625%

Range of Opacity Readings: Min. 0.0 Max. 50

OBSERVER (please print)
Name: Brian Ortiz Title: Maint Lead Man

Signature: Brian Ortiz Date: 2/22/07

Observer Organization: KSL

Certified by: EIA Certification Date: 8/29/06

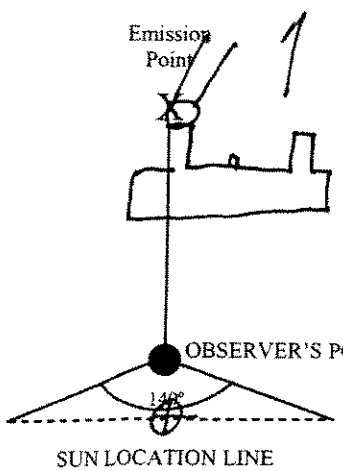
SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind

Draw Arrow in North Direction



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel oil

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most Western Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 Feet

Direction of Source From Observer: NW

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

Emission Color: Black

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? One Foot Above stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 0-3 mph

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

Ambient Temperature: 43 °F

Relative Humidity: 45 %

Additional Comments/Information:

Observation Date	Start Time	End Time
2/22/07	12:12	12:22

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	Paul Parker Running
2	0	0	0	0	Test on Cascade mode
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	5	
9	5	5	5	5	
10	5	5	0	0	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity: 0.875%

Range of Opacity Readings: Min. 0.0 Max. 5%

OBSERVER (please print)
Name: Brian Ortega Title: Maint Leadman

Signature: Brian Ortega Date: 2/22/07

Observer Organization: KSL

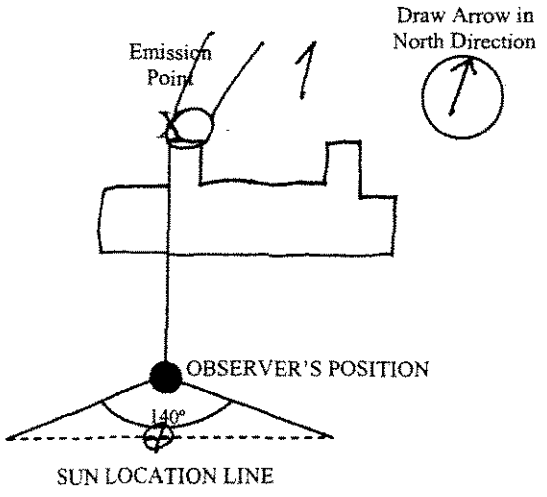
Certified by: ETA Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind →



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel oil

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most Western Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 Feet

Direction of Source From Observer: NW

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

Emission Color: Black

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? One Foot Above Stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 0-3 mph

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

Ambient Temperature: 45 °F

Relative Humidity: 45 %

Additional Comments/Information:

Observation Date: 2/22/07

Start Time: 12:12

End Time: 12:32

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	5	5	5	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: 0.375 %

Range of Opacity Readings: Min 0.0 Max. 5%

OBSERVER (please print)
Name: Brian Ortiz Title: Maint Leadman

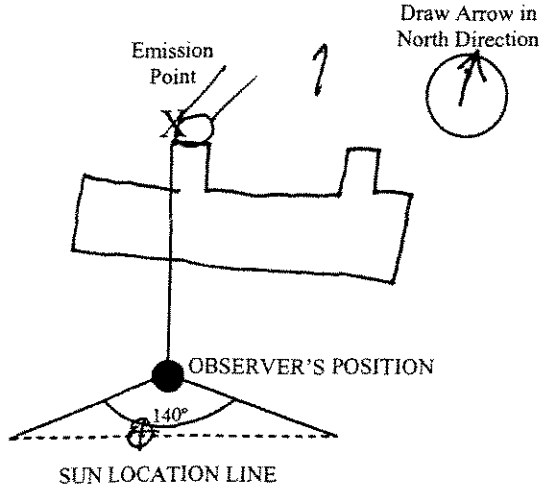
Signature: Brian Ortiz Date: 2/22/07

Observer Organization: KSL

Certified by: ETA Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel Oil

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): top of most Western Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 Feet

Direction of Source From Observer: NW

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

Emission Color: Black

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? One Foot Above Stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 0-3 mph

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

Ambient Temperature: 45 °F

Relative Humidity: 45 %

Additional Comments/Information:

Observation Date	Start Time	End Time
2-22-07	12:32	12:42

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: 0.0%

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print) Name: Brian Ortiz Title: Maint. Leadman

Signature: Brian Ortiz Date: 2/22/07

Observer Organization: KSL

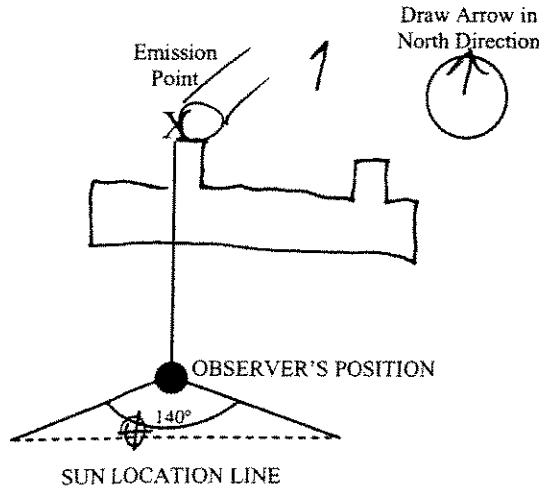
Certified by: ETA Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel Oil

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most Western Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 Feet

Direction of Source From Observer: NW

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

Emission Color: Black

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? One Foot Above Stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 0-3 mph

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

Ambient Temperature: 45 °F

Relative Humidity: 45 %

Additional Comments/Information:

Observation Date: 2/22/07

Start Time: 12:46

End Time: 12:56

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	Running Tests
2	0	0	0	0	on Cascade
3	0	0	0	0	mode
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: 0.0 %

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print)
Name: Brian Ortiz
Title: Maint Leadman

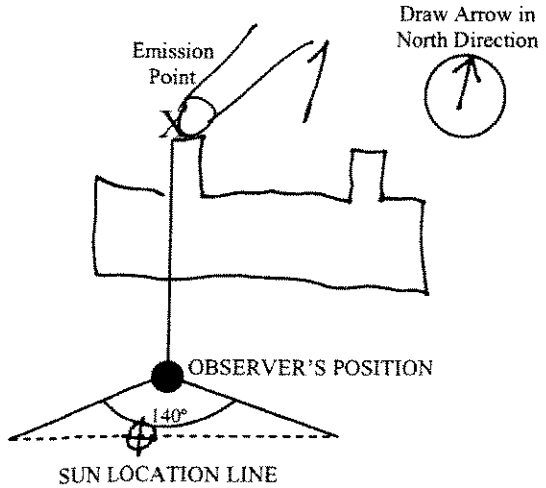
Signature: Brian Ortiz
Date: 2/22/07

Observer Organization: KSL

Certified by: ETA
Certification Date: 8/29/06

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel oil

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most Western Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 170 Feet

Distance From Observer: 250 Feet

Direction of Source From Observer: NW

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

Emission Color: Black

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? One Foot Above Stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 0-3 mph

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

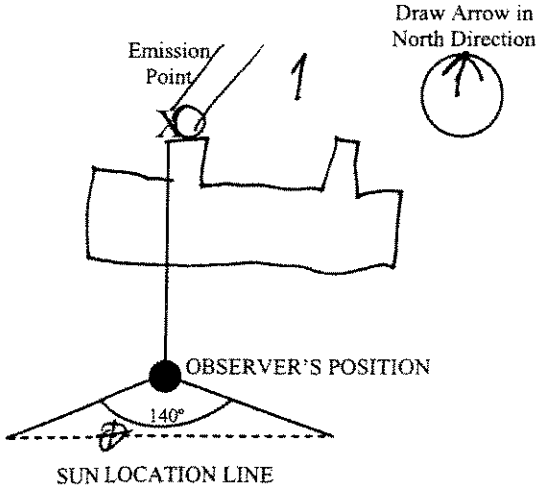
Ambient Temperature: 45 °F

Relative ~~Humidity~~: 45 %

Additional Comments/Information:

Stack with Plume
Sun
Wind

SOURCE LAYOUT SKETCH



Observation Date	Start Time	End Time
2-22-07	12:56	1:06

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: 0.0

Range of Opacity Readings: Min. 0.0 Max. 0.0

OBSERVER (please print)
Name: Brian Oker Title: Maint. Leadman

Signature: Brian Oker Date: 2/22/07

Observer Organization: KSL

Certified by: ETA Certification Date: 8/29/06

Los Alamos NATIONAL LABORATORY Est. 1943 — The World's Greatest Science Protecting America

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

Source Name: Power Plant at TA-3 Boiler #2

Source Location: TA-3-22

Type of Source: Fuel oil (Boiler #2) — 3-6-07 LP

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): West Stack

Height Above Ground Level: Feet 150

Height Relative to Observer: Feet 170 Same

Distance From Observer: 71 yards ~~Feet~~

Direction of Source From Observer: ~~East~~ NW 4-11-07 East winds

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

Emission Color: ~~Black~~ Dark & Black no color — 3-6-07 LP

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? Top of Stack

Describe Background (i.e. blue sky, trees, etc.): Blue skys & wite clouds

Background Color: Blue & wite

Sky Conditions: Clear

Wind Speed: 3-5 mph

Wind Direction (provide from/to, i.e. from North to South): ~~SE~~ from SE — LP 3-6-07

Ambient Temperature: °F 40

Relative Humidity: % 15

Additional Comments/Information: Fuel oil test

Observation Date	Start Time	End Time
3-6-07	LP 3-6-07 10:39 AM	LP 3-6-07 10:49 AM

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	
2	0	0	0	0	
3	0	20	25	30	
4	25	10	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: ~~2.5%~~ 2.75 LP

Range of Opacity Readings: Min. 0 Max. 30

OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

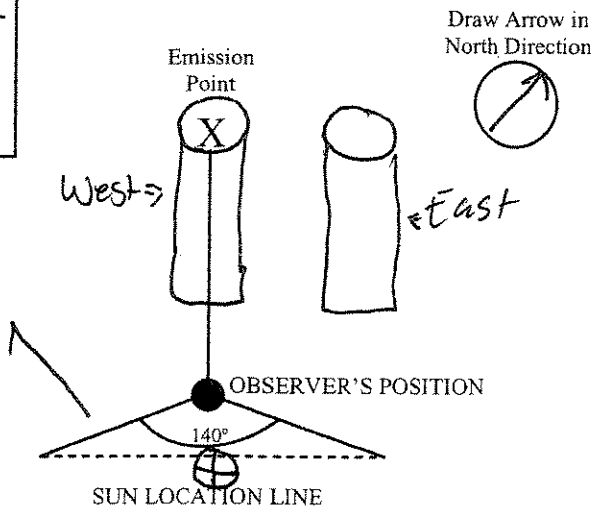
Signature: Lucas M. Miller Date: 3-6-07

Observer Organization: KSL

Certified by: EPA Certification Date: 3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3 Boiler #2

Source Location: TA-3-22

Type of Source: Fuel oil (Boiler #2) 3-6-07 AP

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): West Stack

Height Above Ground Level: Feet 150

Height Relative to Observer: Feet 170

Distance From Observer: 71 yards ~~Feet~~

Direction of Source From Observer: ~~East~~ NW ~~toward~~ 305 4-11-07

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

Emission Color: ~~Black~~ No color 3-6-07 AP

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? Top of stack

Describe Background (i.e. blue sky, trees, etc.): Blue sky's & wite Clouds

Background Color: Blue & wite

Sky Conditions: Clear

Wind Speed: 3-5 mph

Wind Direction (provide from/to, i.e. from North to South): ~~SE~~ From SE 3-6-07 AP

Ambient Temperature: °F 40

Relative Humidity: % 15

Additional Comments/Information: Fuel Oil test

Observation Date	Start Time	End Time
3-6-07	10:49 AM 3-6-07 AP	10:59 AM 3-6-07 AP

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

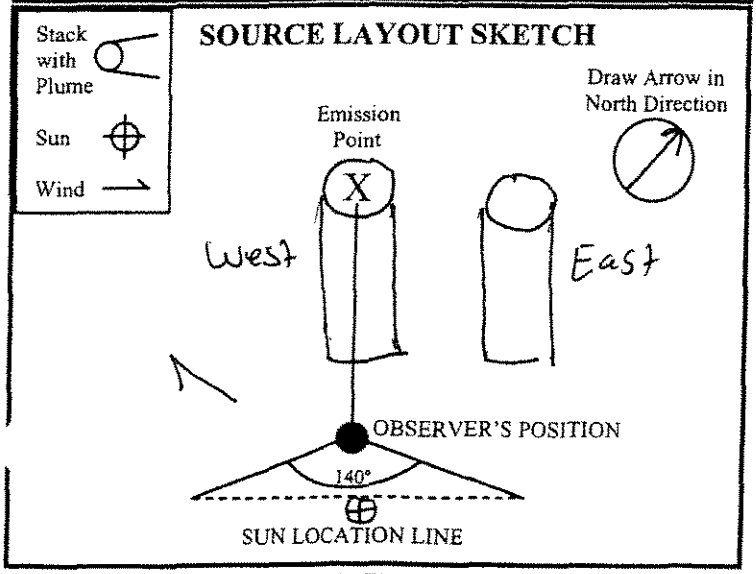
OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

Signature: Lucas M. Miller Date: 3-6-07

Observer Organization: ESL

Certified by: EPA Certification Date: 3-01-07

SOURCE LAYOUT SKETCH



Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3 Boiler #2

Source Location: TA-3-22

Type of Source: Fuel oil (Boiler) 3-6-07 LP

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): West Stacks

Height Above Ground Level: Feet 150

Height Relative to Observer: Feet 70

Distance From Observer: 7 Yards ~~Feet~~

Direction of Source From Observer: ~~West~~ NW 3-6-07 4-11-07

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

Emission Color: ~~Black~~ N/O 3-6-07 LP

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? Top of stack

Describe Background (i.e. blue sky, trees, etc.): Blue Sky's & Wite Clouds

Background Color: Blue & Wite

Sky Conditions: Clear

Wind Speed: 3-5 mph

Wind Direction (provide from/to, i.e. from North to South): ~~East~~ From SE 3-6-07 LP

Ambient Temperature °F: 40

Relative Humidity: % 15

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3-6-07	3-6-07 LP 10:59 AM	3-6-07 11:09 AM

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: Lucas M. Miller Title: Operator

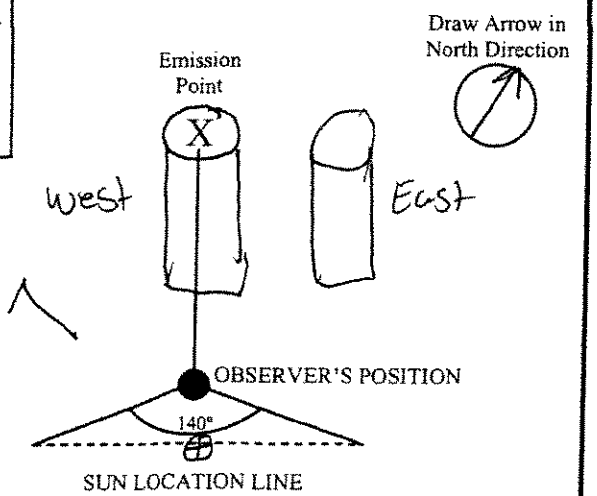
Signature: [signature] Date: 3-6-07

Observer Organization: ESL

Certified by: EH Certification Date: 3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel oil (Boiler #3) The Boiler | Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): East Stack 1 Ft above Stack

Height Above Ground Level: Feet 150 | Height Relative to Observer: Feet 170

Distance From Observer: 71 yards Feet | Direction of Source From Observer: SE/NW 4-11-07

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

Emission Color: Black 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? Top of Stack

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

Background Color: Blue | Sky Conditions: Clear

Wind Speed: mph 6-10 | Wind Direction (provide from/to, i.e. from North to South): NWest to East

Ambient Temperature: °F 53 | Relative Humidity: % 26

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3-20-07	10:35 am	10:45 am

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: Lucas M. Miller | Title: Operator

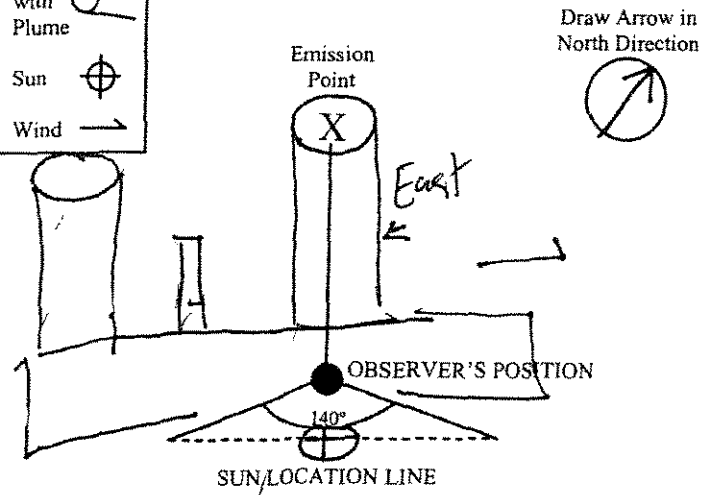
Signature | Date: 3-20-07

Observer Organization: KSL

Certified by: EPA | Certification Date: 3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Fuel oil (Boiler #3)	No Particulate Control

Describe Emission Point (Top of stack, etc.): East Stack 1Ft above Stack

Height Above Ground Level	Height Relative to Observer
Feet 150	Feet 170

Distance From Observer	Direction of Source From Observer
Feet 7 yards	SE NW 4-11-07

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

Emission Color	Plume Type
Black Clear 3-20-07	☒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?
Top of Stack

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

Background Color	Sky Conditions
Blue	Clear

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
mph 6-10	W West to E East 4-11-07

Ambient Temperature	Relative Humidity
°F 53	% 26

Additional Comments/Information:
Fuel Oil Test

Observation Date	Start Time	End Time
3-20-07	10:45 Am	10:55 Am

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	Range of Opacity Readings
0	Min. 0 Max. 0

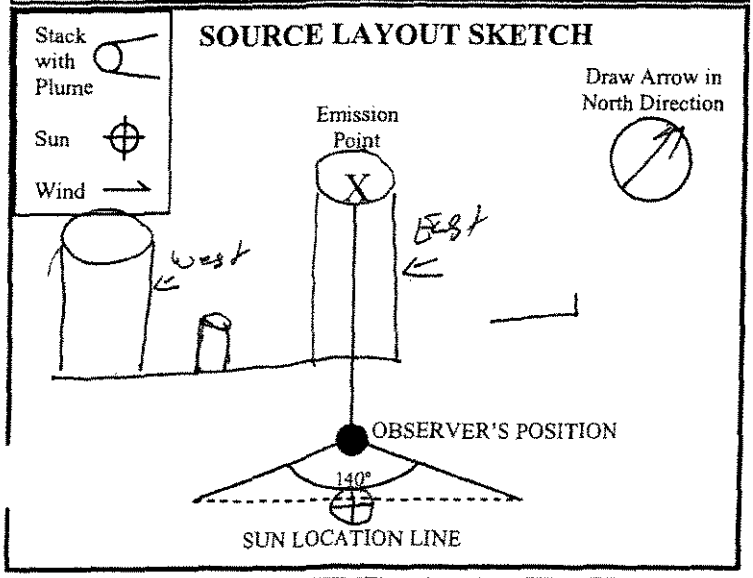
OBSERVER (please print)
Name: Loren M. Miller Title: Operator

Signature	Date
	5-20-07

Observer Organization: KSL

Certified by	Certification Date
EAP	3-1-07

SOURCE LAYOUT SKETCH



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Fuel oil Boiler #3	No Particulate Control

Describe Emission Point (Top of stack, etc.): East stack left above stack

Height Above Ground Level	Height Relative to Observer
Feet 150	Feet 176

Distance From Observer	Direction of Source From Observer
Feet 71 yards	SE NW NE 4-11-07

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

Emission Color: Black 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? Top of Stack

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

Background Color	Sky Conditions
Blue	Clear

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
6-10 mph	West to East

Ambient Temperature	Relative Humidity
°F 53	% 25

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3-20-07	10:55 Am	11:05 Am

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	Range of Opacity Readings Min.	Max.
0	0	0

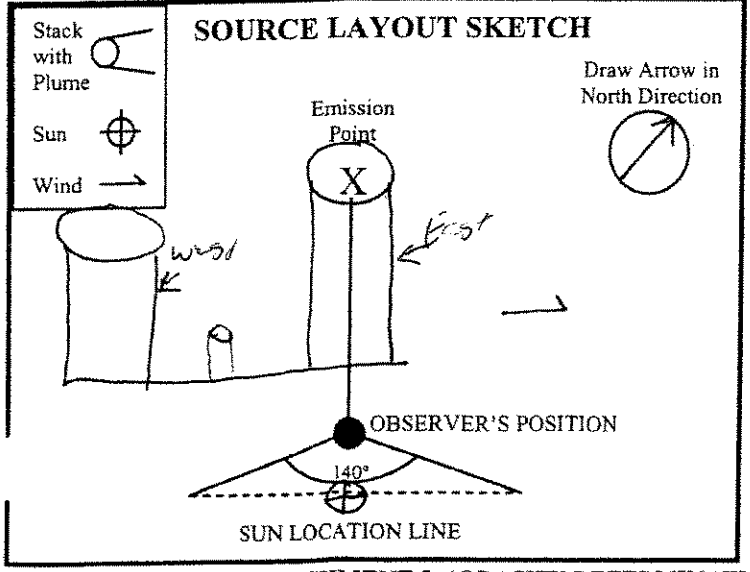
OBSERVER (please print)
Name: Louis M. Miller Title: Operator

Signature	Date
	3-20-07

Observer Organization: KSL

Certified by	Certification Date
ETM	3-1-07

SOURCE LAYOUT SKETCH



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
fuel oil (Boiler #1)	No Particulate Control

Describe Emission Point (Top of stack, etc.): West Stack 1ft above Stack

Height Above Ground Level	Height Relative to Observer
Feet 150	Feet 170

Distance From Observer	Direction of Source From Observer
71 yards Feet	SE NW 4-11-07

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

Emission Color	Plume Type
Black	☐ 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? Top of Stack

Describe Background (i.e. blue sky, trees, etc.): Blue sky's & Stratus

Background Color	Sky Conditions
Blue	Stratus

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
5-10 mph	From SW to Southeast 4-11-07

Ambient Temperature	Relative Humidity
°F 48.2	% 54

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3-27-07	9:52 AM	10:02 AM

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	
2	20	25	30	30	
3	20	10	5	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	Range of Opacity Readings
3.5	Min. 0 Max. 30

OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

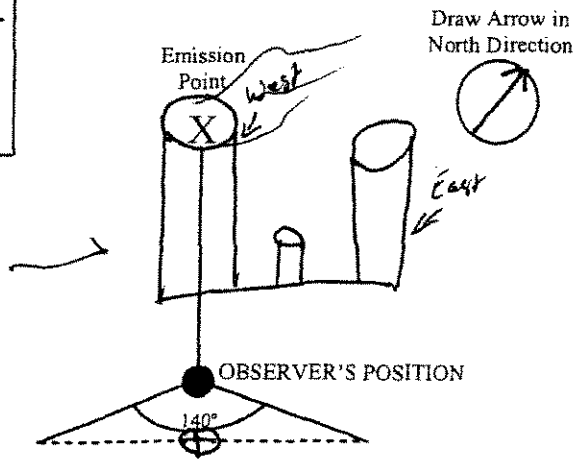
Signature	Date
Lucas M. Miller	3-27-07

Observer Organization: KSL

Certified by	Certification Date
E+A	3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
fuel oil (Boiler #1)	No Particulate Control

Describe Emission Point (Top of stack, etc.): West Stack 1ft above stack

Height Above Ground Level	Height Relative to Observer
Feet 156	Feet 176

Distance From Observer	Direction of Source From Observer
71 yards Feet	SE NW 4-11-07

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

Emission Color	Plume Type
Black 3-27-07 Clear	☐Continuous ☐Fugitive ☐Intermittent

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

At what point in the plume was opacity determined? Top of stack

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

Background Color	Sky Conditions
Blue & White	Scattered

Wind Speed	Wind Direction (provide from/to, i.e. from North to Southeast)
5-10 mph	from SW 3-27-07

Ambient Temperature	Relative Humidity
°F 48.2	% 54

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3-27-07	10:02 AM	10:12 AM

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	Range of Opacity Readings
0	Min. 0 Max 0

OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

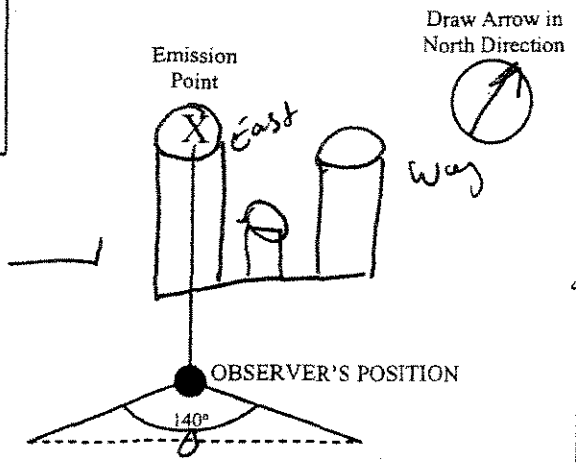
Signature	Date
	3-27-07

Observer Organization: KSL

Certified by	Certification Date
CTR	3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel oil (Boiler #1)

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): West stack 15 ft above stack

Height Above Ground Level: Feet 150

Height Relative to Observer: Feet 170

Distance From Observer: 71 yard Feet

Direction of Source From Observer: SE NW 4-11-07

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

Emission Color: Black

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? Top of stack

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

Background Color: Blue & white

Sky Conditions: Scattered

Wind Speed: 5-10 mph

Wind Direction (provide from/to, i.e. from North to South): ~~Southeast~~ from SW 3-27-07

Ambient Temperature: °F 48.2

Relative Humidity: % 54

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3-27-07	10:12 AM	10:22 AM

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	5	
9	5	5	5	0	
10	0	0	0	0	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity: 0.5

Range of Opacity Readings: Min. 0 Max. 5

OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

Signature: [signature] Date: 3-27-07

Observer Organization: KSL

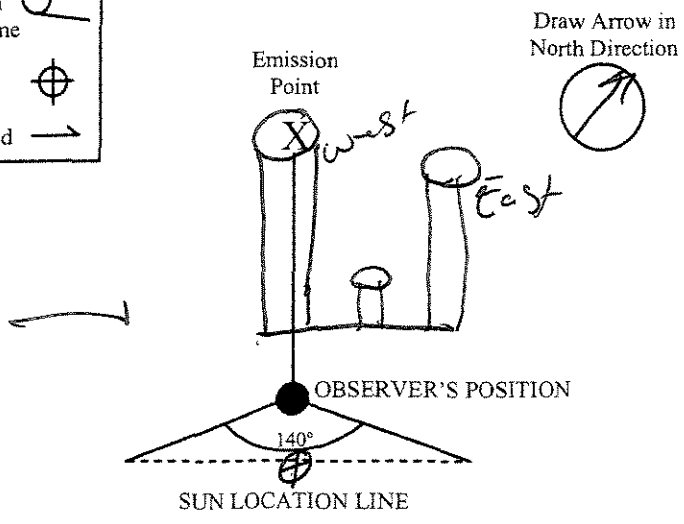
Certified by: ETA Certification Date: 3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: ~~East of~~ TA-3-22

Type of Source: Fuel oil (Boiler #1)

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): West Stack 1Ft above stack

Height Above Ground Level: ~~7 feet~~ Feet 156

Height Relative to Observer: Feet 170

Distance From Observer: 71 yards Feet

Direction of Source From Observer: SE NW BS 4-11-07

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

Emission Color: ~~BS 3-27-07~~ Black 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? Top of stack

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

Background Color: Blue & white

Sky Conditions: Scattered

Wind Speed: 5-10 mph

Wind Direction (provide from/to, i.e. from North to South): ~~South east~~ from SW 3-27-07

Ambient Temperature: °F 48.2

Relative Humidity: % 54

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3-27-07	10:22 Am	10:32 am

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: Lucas M. Miller Title: Operator

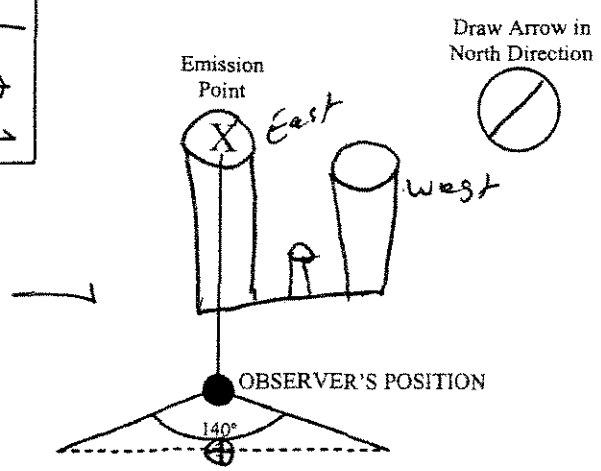
Signature: [signature] Date: 3-27-07

Observer Organization: KSL

Certified by: ETA Certification Date: 3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: fuel oil (Boiler #1)

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): west stack 15ft above stack

Height Above Ground Level: Feet 15

Height Relative to Observer: Feet 170

Distance From Observer: Feet 71 yards

Direction of Source From Observer: see NW 4-11-07

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

Emission Color: Black Clear 3-27-07

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

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

At what point in the plume was opacity determined? TOP of stack

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

Background Color: Blue & White

Sky Conditions: Scatted

Wind Speed: mph 5-10

Wind Direction (provide from/to, i.e. from North to South): some SW South East 3-27-07

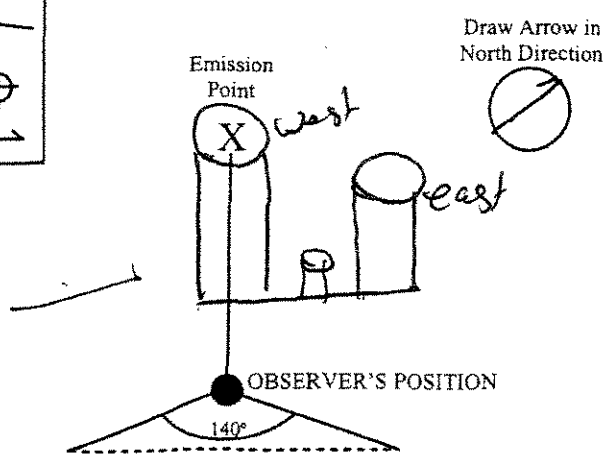
Ambient Temperature: °F 49.2

Relative Humidity: % 54

Additional Comments/Information: fuel Oil #1

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Observation Date	Start Time	End Time
3-27-07	10:32	10:42

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: Lucy M. Mike Title: Observer

Signature: [signature] Date: 3-27-07

Observer Organization: HSL

Certified by: EHN Certification Date: 3-1-07

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Fuel oil C Boiler #1	No Particulate Control

Describe Emission Point (Top of stack, etc.): west stack 1ft above stack

Height Above Ground Level	Height Relative to Observer
Feet 150	Feet 170

Distance From Observer	Direction of Source From Observer
Feet Flagpole	SE NW 4-11-07

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

Emission Color: Black clear 3-27-07 | 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? Top of Stack

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

Background Color	Sky Conditions
Blue & white	Scattered

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
mph 5-10	from SW to East 3-27-07

Ambient Temperature	Relative Humidity
°F 48.2	% 54

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3/27/07 BH	10:42 AM	10:52 AM

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	Range of Opacity Readings
0	Min. 0 Max. 0

OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

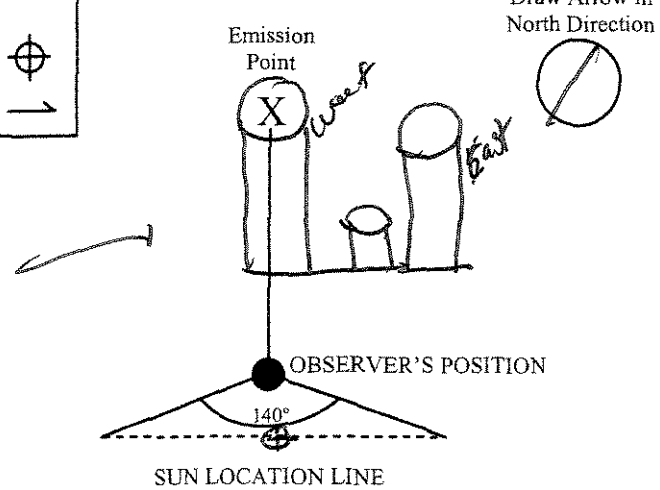
Signature	Date
	3-27-07

Observer Organization: HSL

Certified by	Certification Date
ETA	3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Fuel Oil Boiler #1

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): West Stack 15 ft above Stack

Height Above Ground Level Feet: 150

Height Relative to Observer Feet: 170

Distance From Observer Feet: 7 Yards

Direction of Source From Observer: SE S/W 4-11-07

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

Emission Color: 3-27-07 Black 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? Top of Stack

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

Background Color: Blue & White

Sky Conditions: Scattered

Wind Speed mph: 5-10

Wind Direction (provide from/to, i.e. from North to South): South Then SW East 3-27-07

Ambient Temperature °F: 48.2

Relative Humidity %: 54

Additional Comments/Information: Fuel Oil Test

Observation Date	Start Time	End Time
3-27-07	10.52	11.02

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: Lucas M. Miller Title: Operator

Signature: [signature] Date: 3-27-07

Observer Organization: KSL

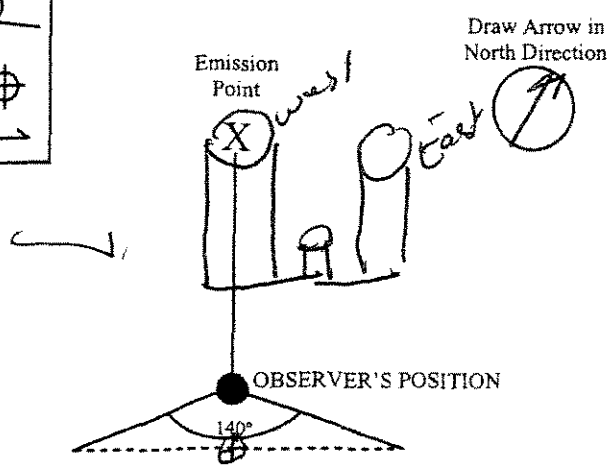
Certified by: ETA Certification Date: 3-1-07

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 152 Feet

Height Relative to Observer: 174 Feet

Distance From Observer: 73 Yards

Direction of Source From Observer: NW

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 top of stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 13 mph

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

Ambient Temperature: 32.5 °F

Relative Humidity: 61 %

Additional Comments/Information:
Fuel Oil Test
Unit tripped - came back at 8:30 a.m

Observation Date: 4-10-07

Start Time: 8:00 a.m.

End Time: 8:10 a.m.

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%

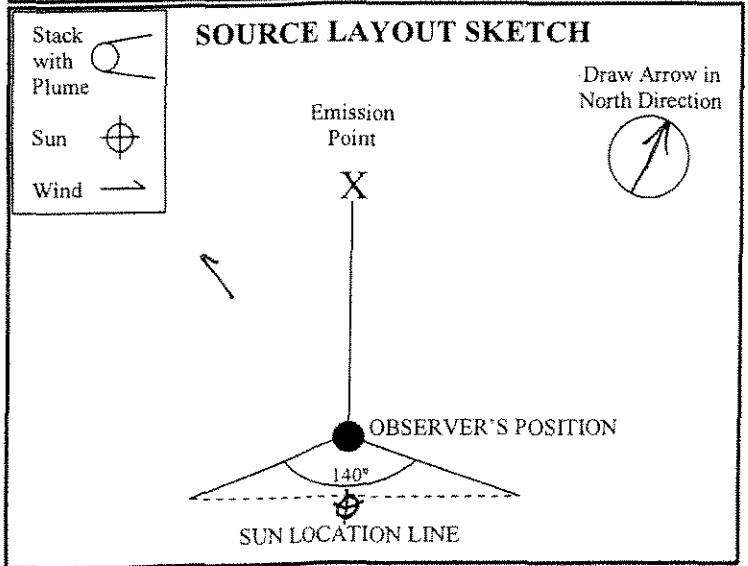
OBSERVER (please print)
Name: Lucas Miller Title: Operator

Signature: [signature] Date: 4-10-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

SOURCE LAYOUT SKETCH



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 152 Feet

Height Relative to Observer: 174 Feet

Distance From Observer: 73 Yards

Direction of Source From Observer: NW

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 top of stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 13 mph

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

Ambient Temperature: 32.5 °F

Relative Humidity: 61 %

Additional Comments/Information:
Fuel Oil Test
Unit tripped - came back at 8:30 a.m

Observation Date: 4-10-07

Start Time: 8:33 a.m.

End Time: 8:43 a.m.

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: Lucas Miller Title: Operator

Signature

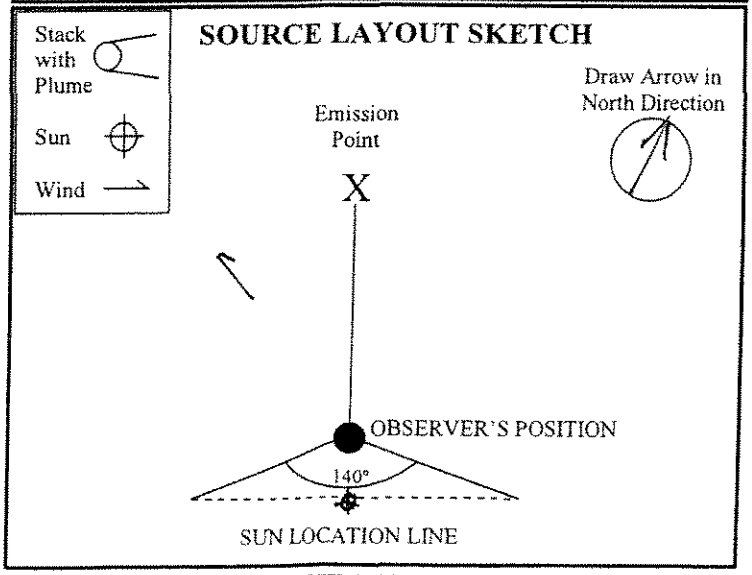
Date: 4-10-07

Observer Organization: KSL

Certified by: ETA

Certification Date: 2-28-07

SOURCE LAYOUT SKETCH



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 175 Feet

Distance From Observer: 71 Yards

Direction of Source From Observer: NW

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 top of stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 5-10 mph

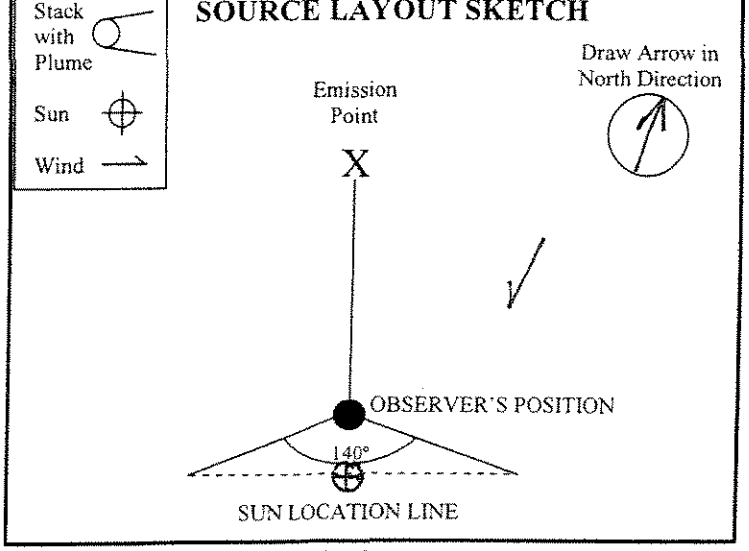
Wind Direction (provide from/to, i.e. from North to South): From North to South

Ambient Temperature: 37.4 °F

Relative Humidity: 64 %

Additional Comments/Information:
Fuel Oil Test

SOURCE LAYOUT SKETCH



Observation Date: 4-24-07

Start Time: 10:38 a.m.

End Time: 10:48 a.m.

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: Lucas Miller Title: Operator

Signature: [signature] Date: 4-24-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 175 Feet

Distance From Observer: 71 Yards

Direction of Source From Observer: NW

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

Emission Color: Clear/Black/Clear

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

PS 5-3-07

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.): Cloudy

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 5-10 mph

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

Ambient Temperature: 37.4 °F

Relative Humidity: 64 %

Additional Comments/Information:
Fuel Oil Test

Observation Date: 4-24-07

Start Time: 10:48 a.m.

End Time: 10:58 a.m.

Min \ Sec	0	15	30	45	Comments
1	0	100	100	100	
2	50	50	30	10	
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: 11.0% ~~8.5%~~

Range of Opacity Readings: Min. 0% Max. 100%

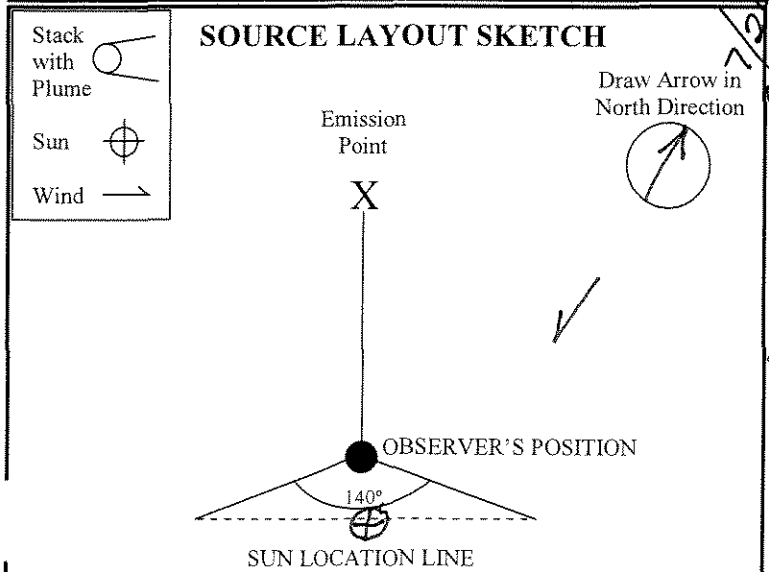
OBSERVER (please print)
Name: Lucas Miller Title: Operator

Signature: [signature] Date: 4-24-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

SOURCE LAYOUT SKETCH



Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 175 Feet

Distance From Observer: 71 Yards

Direction of Source From Observer: NW

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 top of stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 5-10 mph

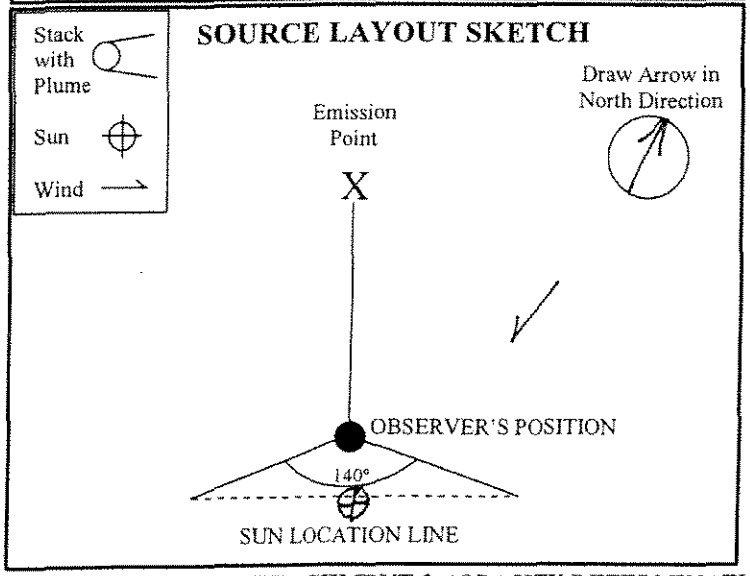
Wind Direction (provide from/to, i.e. from North to South): From North to South

Ambient Temperature: 37.4 °F

Relative Humidity: 64 %

Additional Comments/Information:
Fuel Oil Test

SOURCE LAYOUT SKETCH



Observation Date: 4-24-07

Start Time: 10:58 a.m.

End Time: 11:08 a.m.

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: Lucas Miller Title: Operator

Signature: [signature] Date: 4-24-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 175 Feet

Distance From Observer: 71 Yards

Direction of Source From Observer: NW

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 top of stack

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

Background Color: Grey

Sky Conditions: Cloudy

Wind Speed: 5-10 mph

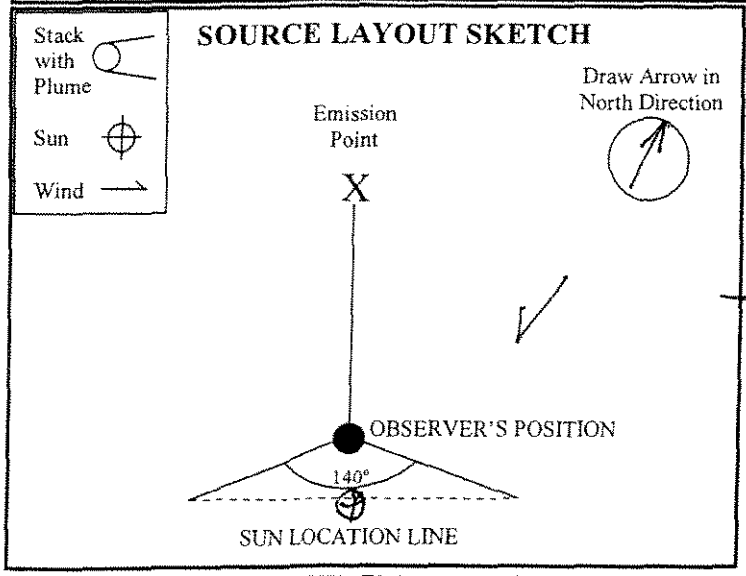
Wind Direction (provide from/to, i.e. from North to South): From North to South

Ambient Temperature: 37.4 °F

Relative Humidity: 64 %

Additional Comments/Information:
Fuel Oil Test

SOURCE LAYOUT SKETCH



Observation Date: 4-24-07

Start Time: 11:08 a.m.

End Time: 11:18 a.m.

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: Lucas Miller Title: Operator

Signature: [signature] Date: 4-24-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 200 Feet

Distance From Observer: 75 Yards

Direction of Source From Observer: NW

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

1
5-1-07

Emission Color: black/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.)
Clear skys

Background Color: blue

Sky Conditions: clear

Wind Speed: 3-5 mph

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

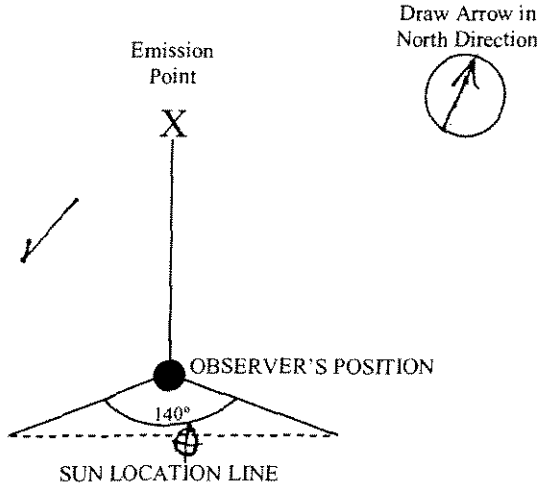
Ambient Temperature: 61 °F

Relative Humidity: 51 %

Additional Comments/Information:
Boiler #2 Fuel Oil Testing

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Observation Date: 5-1-07

Start Time: 9:48 a.m.

End Time: 9:58 a.m.

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	
2	0	0	0	5	
3	5	0	0	0	
4	0	0	0	0	
5	0	0	0	0	
6	0	0	0	10	
7	10	5	5	0	
8	0	5	5	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: 1.25%

Range of Opacity Readings: Min. 0% Max. 10%

OBSERVER (please print)
Name: Lucas Miller Title: Operator

Signature: [signature] Date: 5-1-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 200 Feet

Distance From Observer: 75 Yards

Direction of Source From Observer: NW

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

Emission Color: black/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.)
Clear skys

Background Color: blue

Sky Conditions: clear

Wind Speed: 3-5 mph

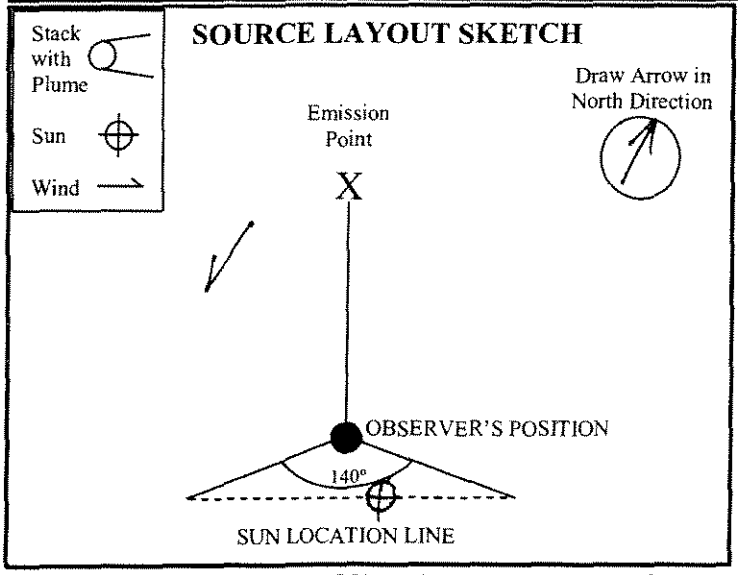
Wind Direction (provide from/to, i.e. from North to South)
From North to South

Ambient Temperature: 61 °F

Relative Humidity: 51 %

Additional Comments/Information:
Boiler #2 Fuel Oil Testing
Told by James to standby - having problems with valves.

SOURCE LAYOUT SKETCH



Observation Date: 5-1-07 | Start Time: 9:58 a.m. | End Time: 10:08 a.m.

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	
2	100	100	100	100	
3	100	100	50	50	
4	25	20	15	10	
5	10	10	5	0	
6	0	5	25	50	
7	20	15	5	0	
8	0	0	0	0	
9	0	50	25	10	
10	0	0	0	0	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity: 25%

Range of Opacity Readings: Min. 0% Max. 100%

OBSERVER (please print)
Name: Lucas Miller Title: Operator

Signature: [signature] Date: 5-1-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 200 Feet

Distance From Observer: 75 Yards

Direction of Source From Observer: NW

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

Emission Color: black/clear

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

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.)
Clear skys

Background Color: blue

Sky Conditions: clear

Wind Speed: 3-5 mph

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

Ambient Temperature: 61 °F

Relative Humidity: 51 %

Additional Comments/Information:
Boiler #2 Fuel Oil Testing

Observation Date	Start Time	End Time
5-1-07	10:32 a.m.	10:42 a.m.

Min \ Sec	0	15	30	45	Comments
1	20	10	5	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: 0.875%

Range of Opacity Readings: Min. 0% Max. 20%

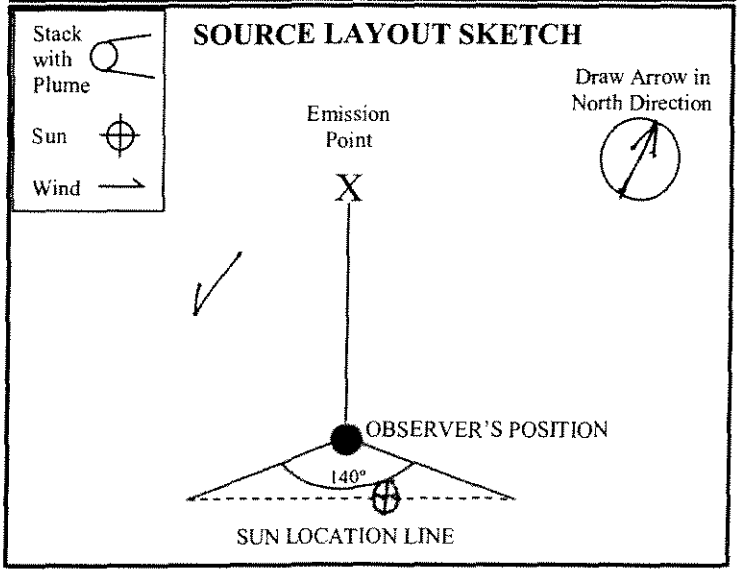
OBSERVER (please print)
Name: Lucas Miller Title: Operator

Signature: [signature] Date: 5-1-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

SOURCE LAYOUT SKETCH



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 200 Feet

Distance From Observer: 75 Yards

Direction of Source From Observer: NW

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.): Clear skys

Background Color: blue

Sky Conditions: clear

Wind Speed: 3-5 mph

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

Ambient Temperature: 61 F

Relative Humidity: 51 %

Additional Comments/Information: Boiler #2 Fuel Oil Testing

Observation Date: 5-1-07 | Start Time: 10:42 a.m. | End Time: 10:52 a.m.

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%

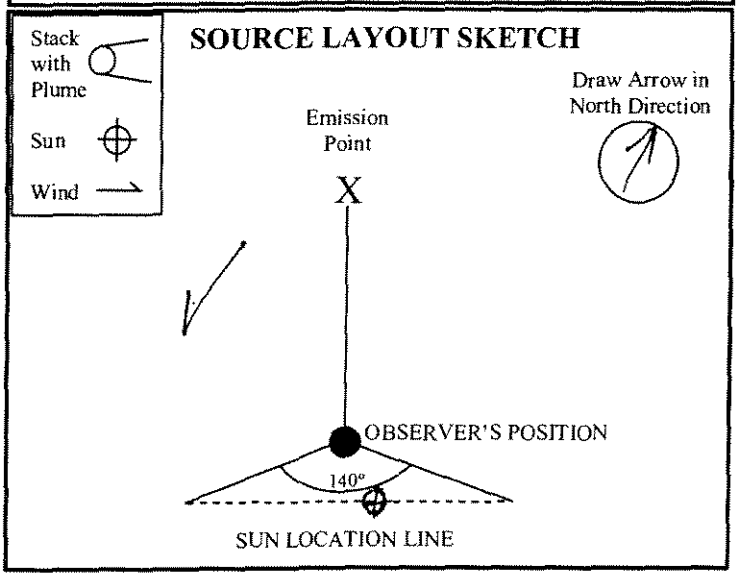
OBSERVER (please print) Name: Lucas Miller Title: Operator

Signature: [signature] Date: 5-1-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

SOURCE LAYOUT SKETCH



Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler # 2

Type of Control Equipment: No Particulate Control

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 200 Feet

Distance From Observer: 75 Yards

Direction of Source From Observer: NW

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.): Clear skys

Background Color: blue

Sky Conditions: clear

Wind Speed: 3-5 mph

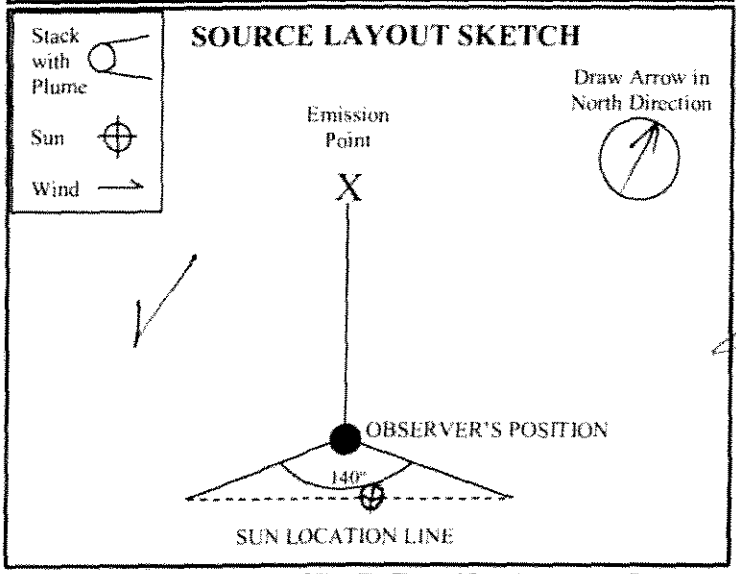
Wind Direction (provide from/to, i.e. from North to South): From North to South

Ambient Temperature: 61 F

Relative Humidity: 51 %

Additional Comments/Information: Boiler #2 Fuel Oil Testing

SOURCE LAYOUT SKETCH



Observation Date: 5-1-07

Start Time: 10:52 a.m.

End Time: 11:02 a.m.

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: Lucas Miller Title: Operator

Signature: [signature] Date: 5-1-07

Observer Organization: KSL

Certified by: ETA Certification Date: 2-28-07

Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler #3	No Particulate Control

Describe Emission Point (Top of stack, etc.): ~~1ft above Stack~~ Top of Boiler Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	200 Feet

Distance From Observer	Direction of Source From Observer
75 ~~Feet~~ yards	North West

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

Emission Color	Plume Type
Black to clear	☐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 Stack

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

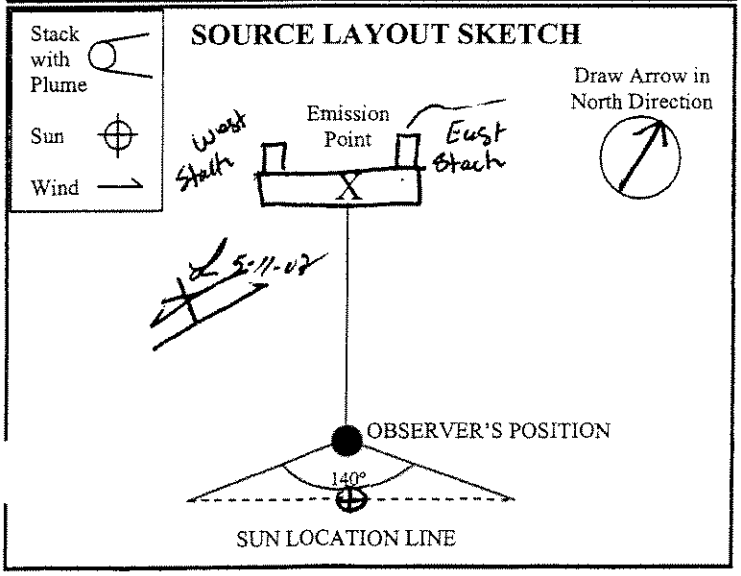
Background Color	Sky Conditions
Blue Sky's	Clear

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
6.9 mph	~~From~~ West South west

Ambient Temperature	Relative Humidity
47.3 °F	62. %

Additional Comments/Information:
Start up on Boiler #3

SOURCE LAYOUT SKETCH



Observation Date	Start Time	End Time
5-11-07	8:35 Am	8:45 Am

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	25	
6	25	25	5	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	Range of Opacity Readings
2.0 %	Min. 0% Max. 25%

OBSERVER (please print)

Name:	Title:
Lucas A. Miller	Operator

Signature	Date
	5-11-07

Observer Organization: HSL

Certified by	Certification Date
EHR	2-28-07

Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler #3	No Particulate Control

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

Height Above Ground Level	Height Relative to Observer
150 Feet	200 Feet

Distance From Observer	Direction of Source From Observer
75 ~~Feet~~ yards	North west

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

Emission Color	Plume Type
Black to clear	☐ 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 stack

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

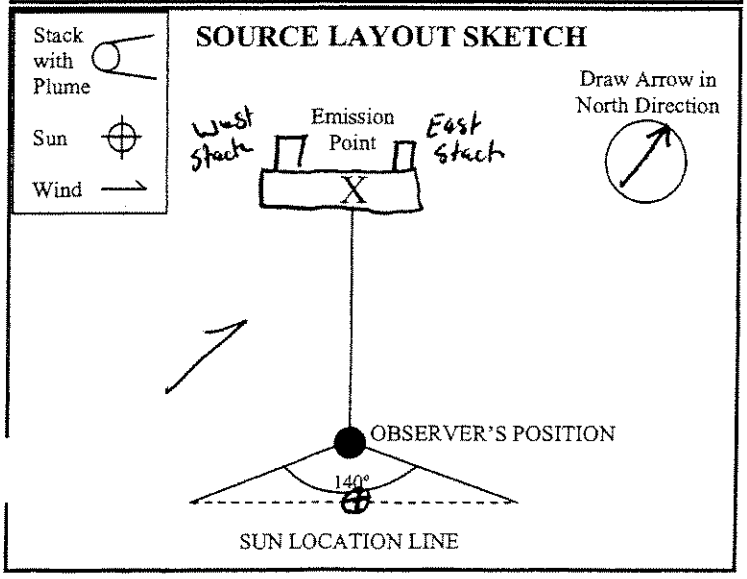
Background Color	Sky Conditions
Blue skys	Clear

Wind Speed mph	Wind Direction (provide from/to, i.e. from North to South)
6.9	west sout west

Ambient Temperature	Relative Humidity
47.3 °F	62 %

Additional Comments/Information: adding more fuel to Burners

SOURCE LAYOUT SKETCH



Observation Date	Start Time	End Time
5-11-07	8:45 Am	8:55 Am

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

Average 10-Minute Opacity	Range of Opacity Readings
0.8%	Min. 0% Max. 5%

OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

Signature: [signature] Date: 5-11-07

Observer Organization: KSL

Certified by	Certification Date
ETA	2-28-07

Los Alamos

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler #3	No Particulate Control

Describe Emission Point (Top of stack, etc.): 5-11-07 Boiler Ft. above Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	200 Feet

Distance From Observer	Direction of Source From Observer
75 ~~Feet~~ yards	North West

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

Emission Color	Plume Type
Clear	☒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 stack

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

Background Color	Sky Conditions
Blue Sky	Clear

Wind Speed	Wind Direction (provide from to, i.e. from North to South)
6.9 mph	West South west

Ambient Temperature	Relative Humidity
47.3 °F	62 %

Additional Comments/Information:
Fuel oil Burn

Observation Date	Start Time	End Time
5-11-07	8:55 AM	9:05 AM

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

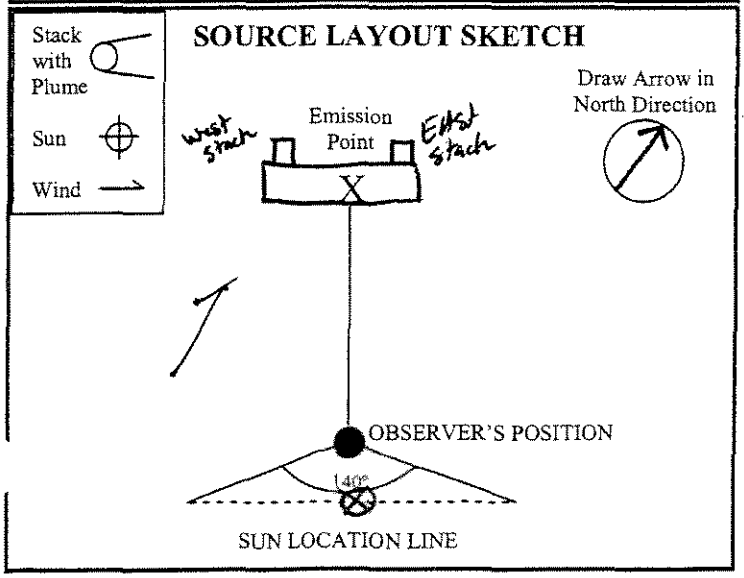
OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

Signature	Date
	5-11-07

Observer Organization: KSL

Certified by	Certification Date
ETA	2-28-07

SOURCE LAYOUT SKETCH



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler #3

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): 5-11-07 1ft above Boiler Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 200 Feet

Distance From Observer: 75 ~~Feet~~ yards

Direction of Source From Observer: North west

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

Emission Color: Clr

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 stack

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

Background Color: Blue

Sky Conditions: Clr

Speed: 6.9 mph

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

Ambient Temperature: 47.3 °F

Relative Humidity: 62 %

Additional Comments/Information: fuel oil #3 Boiler

Observation Date	Start Time	End Time
5-11-07	9:05 AM	9:15 AM

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: Lucas M. Miller Title: Operator

Signature: [signature] Date: 5-11-07

Observer Organization: KSL

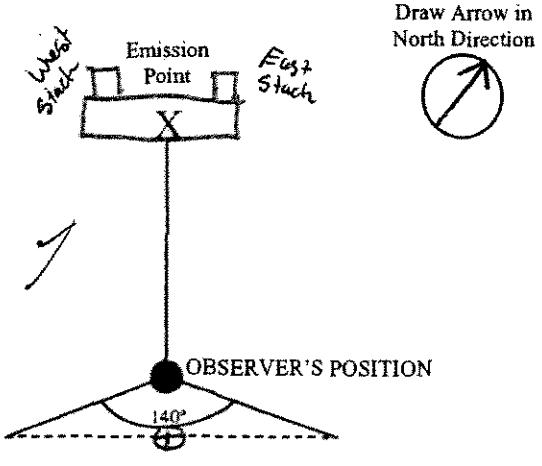
Certified by: ETA Certification Date: 2-28-07

SOURCE LAYOUT SKETCH

Stack with Plume

Sun

Wind



ENV-EAQ-307, R3, ATTACHMENT 3 (*OPACITY DETERMINATION AND EXCESS EMISSIONS REPORTING*)

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

Los Alamos National Laboratory

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source: Boiler #3

Type of Control Equipment: No Particulate Control

Describe Emission Point (Top of stack, etc.): TOP of Boiler #3 Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 200 Feet

Distance From Observer: 75 yard Feet

Direction of Source From Observer: North ways

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? 1ft above stack

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

Background Color: Blue

Sky Conditions: Clear

Wind Speed: 6.9 mph

Wind Direction (provide from/to, i.e. from North to South): West South way

Ambient Temperature: 47.3 °F

Relative Humidity: 62 %

Additional Comments/Information:

Observation Date: 5-11-07

Start Time: 9:15 Am

End Time: 9:25 Am

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: Lucas M. Mill Title: Operat

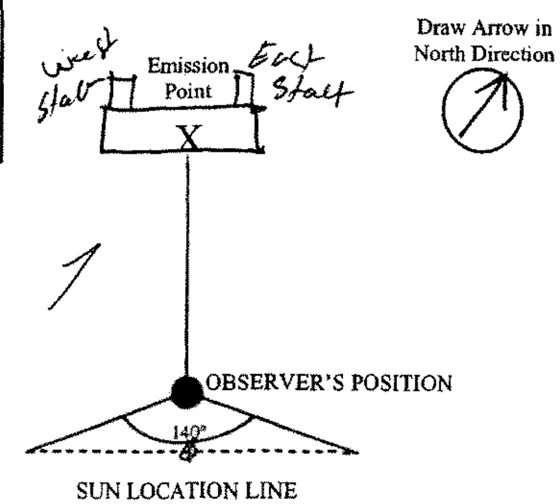
Signature: [signature] Date: 5-11-07

Observer Organization: KSL

Certified by: EtA Certification Date: 2-28-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos NATIONAL LABORATORY

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

ce Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler #3	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Boiler #3 Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	200 Feet

Distance From Observer	Direction of Source From Observer
75 ~~Feet~~ yards	North west

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

Emission Color	Plume Type ☒No Plume Present
Clear	☐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 Stack

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

Background Color	Sky Conditions
Blue	Clear

Wind Speed mph	Wind Direction (provide from/to, i.e. from North to South)
6.9	west Sout west

Ambient Temperature	Relative Humidity
47.3 °F	62 %

Additional Comments/Information: Fuel oil Burning on #3 Boiler

Observation Date	Start Time	End Time
5-11-07	9:25 Am	9:35 Am

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

OBSERVER (please print)
Name: Lucas M. Hoar Title: Analyst

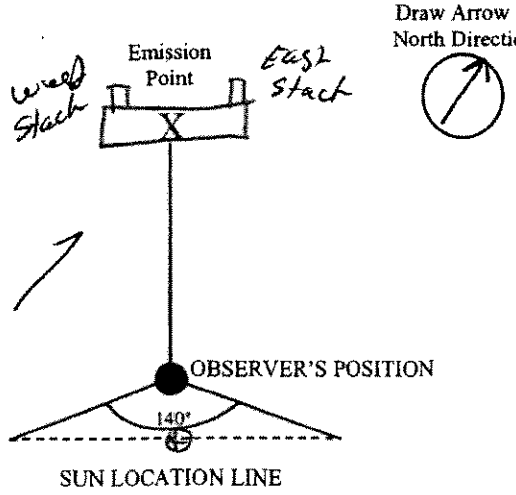
Signature	Date
	5-11-07

Observer Organization: KSL

Certified by	Certification Date
EHA	2-28-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler #3	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Boiler #3 stack

Height Above Ground Level	Height Relative to Observer
150 Feet	200 Feet

Distance From Observer	Direction of Source From Observer
~~75~~ yards ~~Feet~~	North west

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

Emission Color	Plume Type
Clear	☒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 Stack

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

Background Color	Sky Conditions
Blue	Clear

Speed	Wind Direction (provide from/to, i.e. from North to South)
6.9 mph	West Sout west

Ambient Temperature	Relative Humidity
47.3 °F	62 %

Additional Comments/Information:
fuel oil Burning on #3 Boiler

Observation Date	Start Time	End Time
5-11-07	9:35 Am	9:45 Am

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

OBSERVER (please print)
Name: Lucas M. Hill Title: Operator

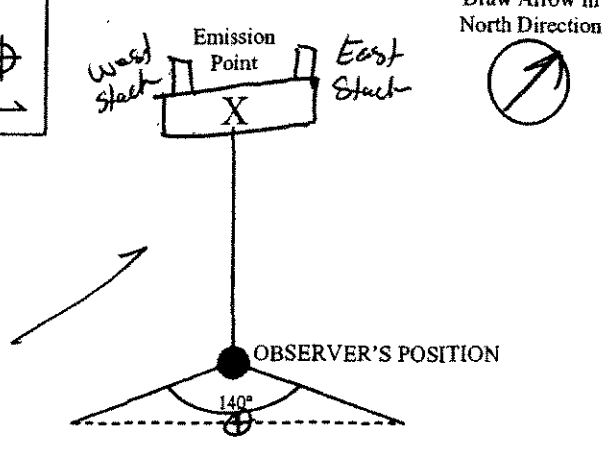
Signature	Date
	5-11-07

Observer Organization: KSL

Certified by	Certification Date
EHA	2-28-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Los Alamos NATIONAL LABORATORY Est. 1943 — The World's Greatest Science Protecting America

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler #3	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Boiler #3 stack

Height Above Ground Level	Height Relative to Observer
150 Feet	200 Feet

Distance From Observer	Direction of Source From Observer
75 yards ~~Feet~~	North west

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

Emission Color	Plume Type
Clear	☒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 stack

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

Background Color	Sky Conditions
Blue skys	Clear

d Speed	Wind Direction (provide from/to, i.e. from North to South)
6.9 mph	west South west

Ambient Temperature	Relative Humidity
47.3 °F	62 %

Additional Comments/Information: We Stablized At 9:55 Am on fuel oil

Observation Date	Start Time	End Time
5-11-07	9:45 Am	9:55 Am

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

OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

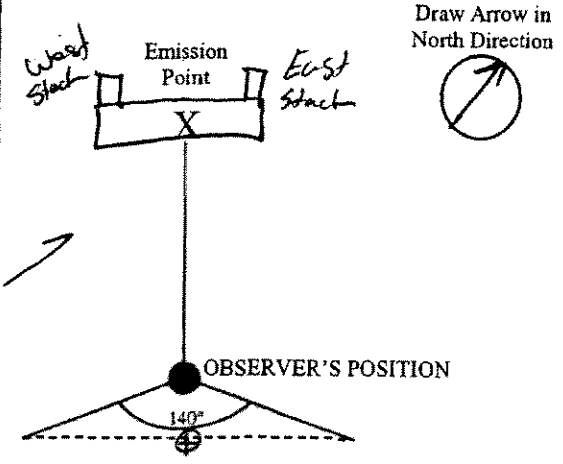
Signature	Date
	5-11-07

Observer Organization: RSL

Certified by	Certification Date
E+A	2-28-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler #3	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Boiler #3 Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	200 Feet

Distance From Observer	Direction of Source From Observer
75 yards ~~Feet~~	North West

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

Emission Color	Plume Type ☑No Plume Present
Clear	☐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 of Stack

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

Background Color	Sky Conditions
Blue Skys	Clear

Speed	Wind Direction (provide from/to, i.e. from North to South)
6 9 mph	West South West

Ambient Temperature	Relative Humidity
73 °F	62 %

Additional Comments/Information:
Put A New Burner in Boiler #3
Per Rusty & James Williams PALBO

Observation Date	Start Time	End Time
5-11-07	10:12 AM	10:22 AM

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

OBSERVER (please print)
Name: Lucas Miller Title: Operator

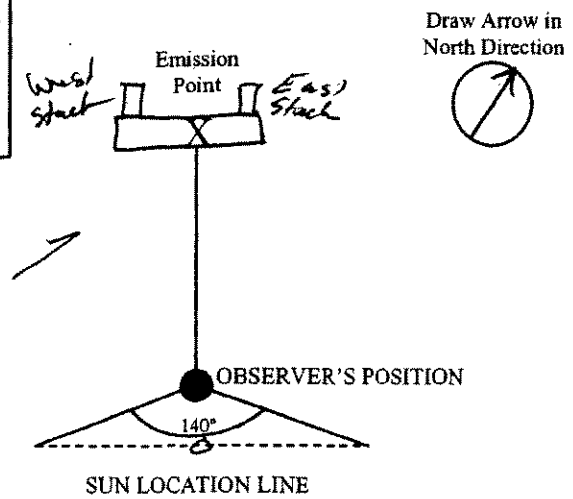
Signature	Date
	5-11-07

Observer Organization: KSL

Certified by	Certification Date
EJA	2-28-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler #3	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Boiler #3 stack

Height Above Ground Level	Height Relative to Observer
150 Feet	200 Feet

Distance From Observer	Direction of Source From Observer
75 ~~Feet~~ yards	North west

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

Emission Color	Plume Type
Black to clear	☐ 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 stack

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

Background Color	Sky Conditions
Blue Skys	Clear

Speed	Wind Direction (provide from to, i.e. from North to South)
6.9 mph	West South West

Ambient Temperature	Relative Humidity
47.3 °F	62 %

Additional Comments/Information:
Stop taking readings at this time stabilize with New Burner Per James.w 10:32Am

Observation Date	Start Time	End Time
5-11-07	10:22Am	10:32Am

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	
2	0	0	0	0	
3	0	5	5	5	
4	5	0	0	5	
5	5	5	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	Range of Opacity Readings
0.87%	Min. 0% Max. 5%

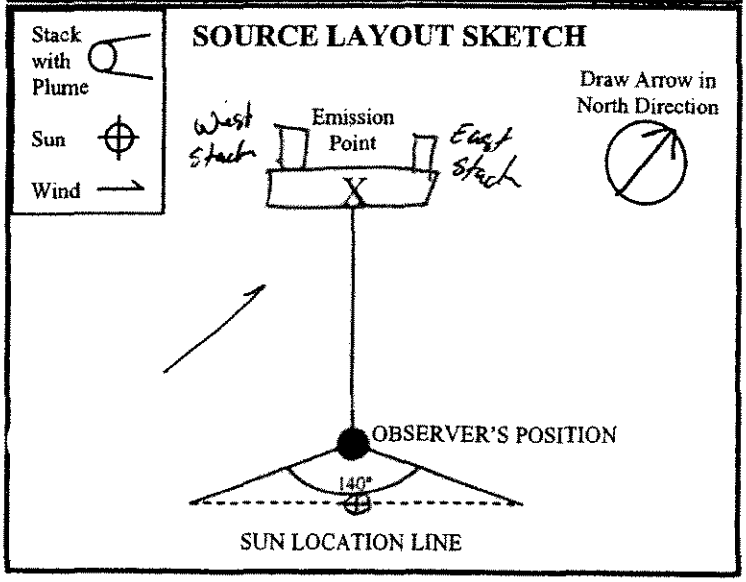
OBSERVER (please print)
Name: Lucas M. Miller Title: Operator

Signature	Date
	5-11-07

Observer Organization: KSL

Certified by	Certification Date
E+A	2-28-07

SOURCE LAYOUT SKETCH



Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

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 Most West Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 150 Feet

Distance From Observer: 200 Yards

Direction of Source From Observer: NE

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

Emission Color: Black

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? One Foot Above Stack

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

Background Color: Blue/Grey

Sky Conditions: Mostly Cloudy

Wind Speed: 12 mph

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

Ambient Temperature: 62.5 °F

Relative Humidity: 45 %

Additional Comments/Information:
Boiler to be Put On Line To Run Turbine

Observation Date: 5/15/07

Start Time: 1324

End Time: 1334

Min \ Sec	0	15	30	45	Comments
1	0	0	0	0	Lit #4 Burner
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	75	100	100	
9	100	25	10	5	
10	0	0	0	0	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity: 10.375 %

Range of Opacity Readings: Min. 0.0% Max. 100%

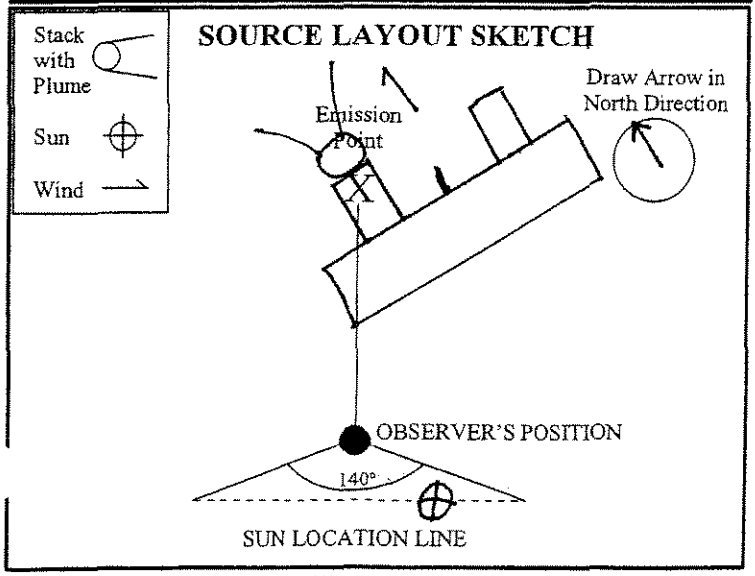
OBSERVER (please print)
Name: Brian Ortiz
Title: Maint. Lead Man

Signature: Brian Ortiz
Date: 5/15/07

Observer Organization: KSL

Certified by: ETA
Certification Date: 3-15-07

SOURCE LAYOUT SKETCH



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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler # 1	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most West Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	150 Feet

Distance From Observer	Direction of Source From Observer
200 Yards	NE

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

Emission Color	Plume Type
Black	☐ 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? One Foot Above Stack

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

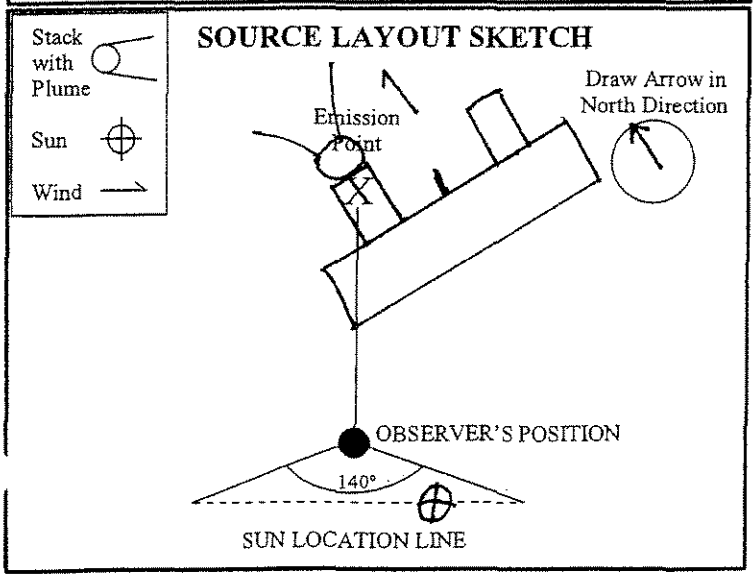
Background Color	Sky Conditions
Blue/Grey	Mostly Cloudy

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
12 mph	From South to North

Ambient Temperature	Relative Humidity
62.5 °F	45 %

Additional Comments/Information:

SOURCE LAYOUT SKETCH



Observation Date	Start Time	End Time
5/15/07	1334	1344

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	Lit #2 Burner
6	0	0	0	0	
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	75	75	100	
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity	Range of Opacity Readings
6.25 %	Min. 0.0% Max. 100%

OBSERVER (please print)
Name: BRIAN ORTIZ Title: Maint. Lead MAN

Signature: Brian Ortiz Date: 5/15/07

Observer Organization: KSL

Certified by	Certification Date
ETA	3-15-07

Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

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 Most West Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 150 Feet

Distance From Observer: 200 Yards

Direction of Source From Observer: NE

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

Emission Color: Black

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? One Foot Above Stack

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

Background Color: Blue/Grey

Sky Conditions: Mostly Cloudy

Wind Speed: 12 mph

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

Ambient Temperature: 62.5 °F

Relative Humidity: 45 %

Additional Comments/Information:

Observation Date: 5/15/07

Start Time: 1344

End Time: 1354

Min \ Sec	0	15	30	45	Comments
1	5	5	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: .25%

Range of Opacity Readings: Min. 0.0% Max. 5%

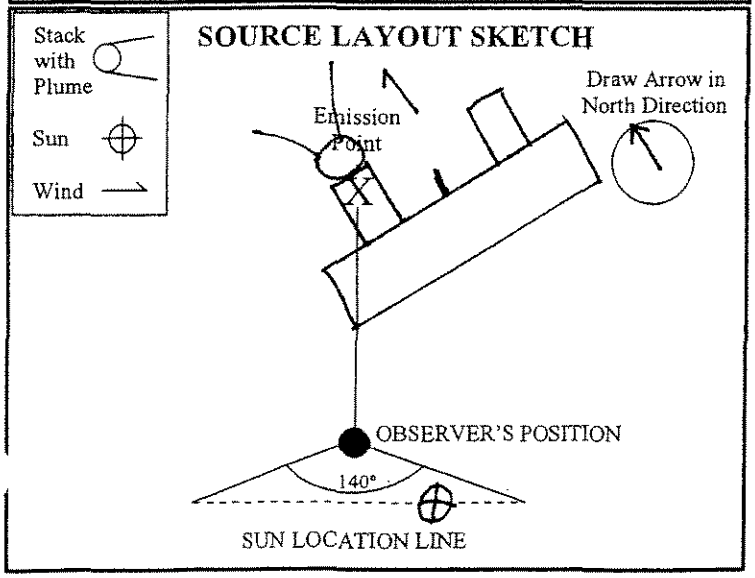
OBSERVER (please print) Name: BRIAN ORTIZ Title: Maint. Lead MAN

Signature: Brian Ortiz Date: 5/15/07

Observer Organization: KSL

Certified by: ETA Certification Date: 3-15-07

SOURCE LAYOUT SKETCH



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

Source Name: Power Plant at TA-3

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 Most West Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 150 Feet

Distance From Observer: 200 Yards

Direction of Source From Observer: NE

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

Emission Color: None

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? One Foot Above Stack

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

Background Color: Blue/Grey

Sky Conditions: Mostly Cloudy

Wind Speed: 12 mph

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

Ambient Temperature: 62.5 °F

Relative Humidity: 45 %

Additional Comments/Information:

Observation Date: 5/15/07 Start Time: 1354 End Time: 1404

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: 0.0%

Range of Opacity Readings: Min. 0.0% Max. 0.0%

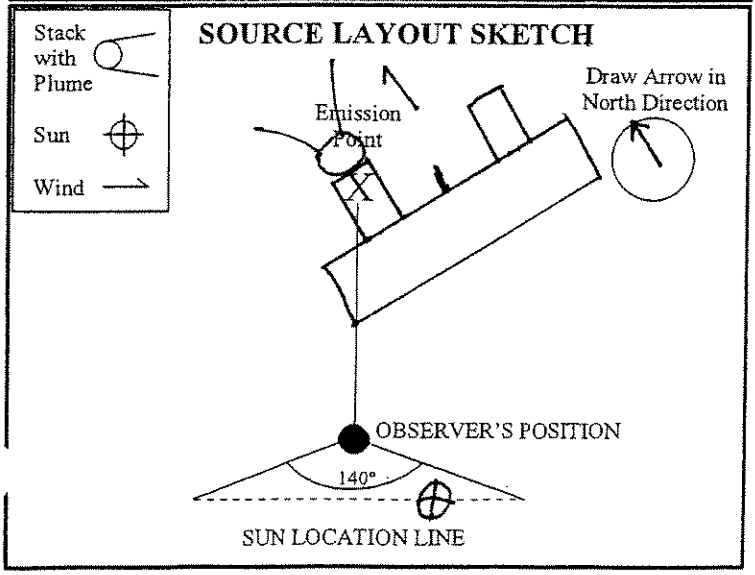
OBSERVER (please print) Name: Brian Ortiz Title: Maint. Head Man

Signature: Brian Ortiz Date: 5/15/07

Observer Organization: KSL

Certified by: ETA Certification Date: 3-15-07

SOURCE LAYOUT SKETCH



Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler # 1	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most West Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	150 Feet

Distance From Observer	Direction of Source From Observer
200 Yards	NE

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

Emission Color	Plume Type
None	☒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? One foot Above Stack

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

Background Color	Sky Conditions
Blue/Grey	Mostly Cloudy

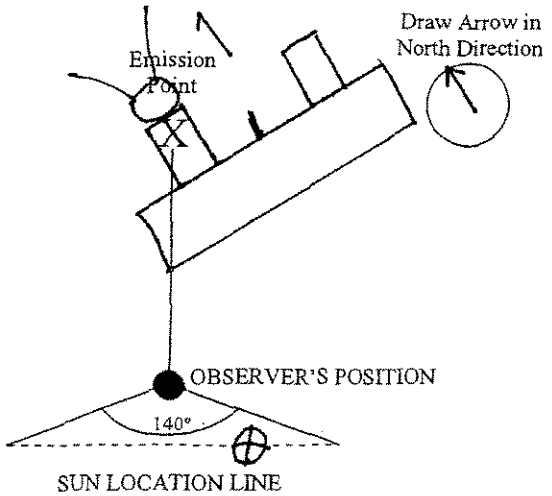
Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
12 mph	From South to North

Ambient Temperature	Relative Humidity
62.5 °F	45 %

Additional Comments/Information:

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Observation Date	Start Time	End Time
5/15/07	1404	1414

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	Range of Opacity Readings Min.	Max.
0.0%	0.0%	0.0%

OBSERVER (please print)
Name: Brian Ortiz Title: Maint. Lead Man

Signature: Brian Ortiz Date: 5/15/07

Observer Organization: KSL

Certified by	Certification Date
ETA	3-15-07

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

Source Name: Power Plant at TA-3

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 Most West Stack

Height Above Ground Level: 150 Feet

Height Relative to Observer: 150 Feet

Distance From Observer: 200 Yards

Direction of Source From Observer: NE

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

Emission Color: None

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? One Foot Above Stack

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

Background Color: Blue/Grey

Sky Conditions: Mostly Cloudy

Wind Speed: 12 mph

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

Ambient Temperature: 62.5 °F

Relative Humidity: 45 %

Additional Comments/Information:

Observation Date: 5/15/07

Start Time: 1414

End Time: 1424

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					
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15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity: 0.0%

Range of Opacity Readings: Min. 0.0% Max. 0.0%

OBSERVER (please print)
Name: Brian Ortiz
Title: Maint. Lead Man

Signature: Brian Ortiz

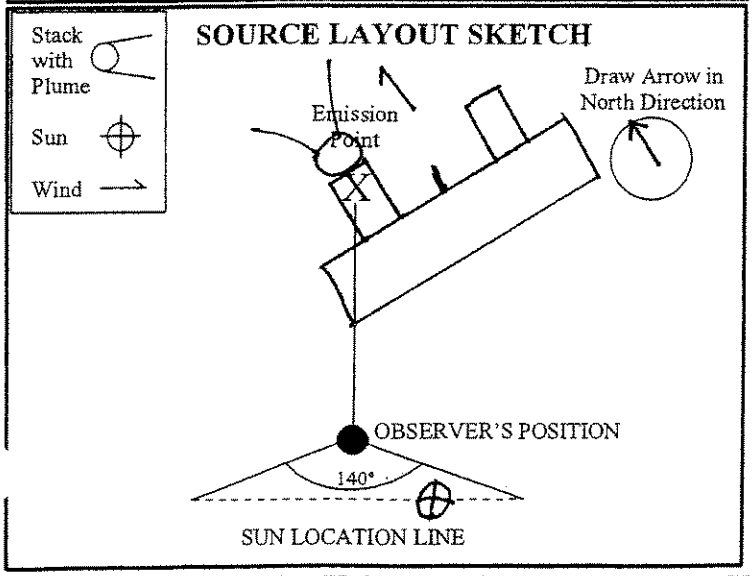
Date: 5/15/07

Observer Organization: KSL

Certified by: ETA

Certification Date: 3-15-07

SOURCE LAYOUT SKETCH



Los Alamos NATIONAL LABORATORY Est. 1943

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler # 1	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most West Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	150 Feet

Distance From Observer	Direction of Source From Observer
200 Yards	NE

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

Emission Color	Plume Type
None	☒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? One foot Above Stack

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

Background Color	Sky Conditions
Blue/Grey	Mostly Cloudy

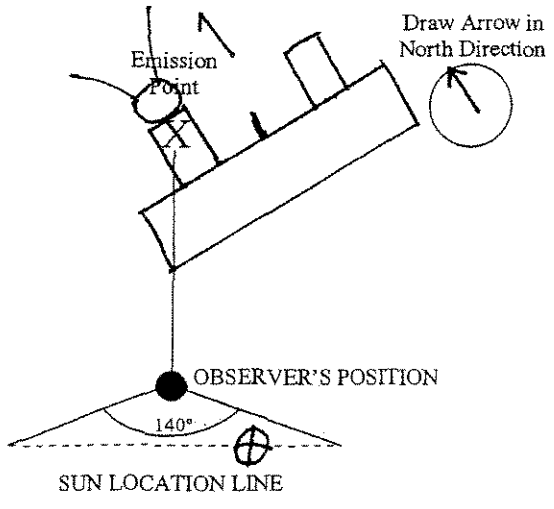
Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
12 mph	From South to North

Ambient Temperature	Relative Humidity
62.5 °F	45 %

Additional Comments/Information:

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind



Observation Date	Start Time	End Time
5/15/07	1424	1434

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					
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16					
17					
18					
19					
20					

Average 10-Minute Opacity	Range of Opacity Readings
0.0%	Min. 0.0% Max. 0.0%

OBSERVER (please print)
Name: BRIAN ORTIZ Title: Maint. Lead MAN

Signature	Date
Brian Ortiz	5/15/07

Observer Organization: KSL

Certified by	Certification Date
ETA	3-15-07

Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler # 1	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most West Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	150 Feet

Distance From Observer	Direction of Source From Observer
200 Yards	NE

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

Emission Color	Plume Type
None	☒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? One foot Above Stack

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

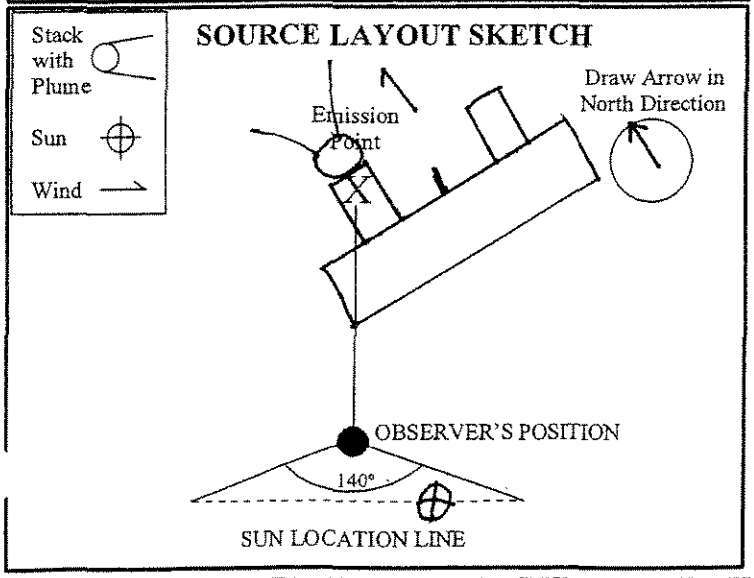
Background Color	Sky Conditions
Blue/Grey	Mostly Cloudy

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
12 mph	From South to North

Ambient Temperature	Relative Humidity
62.5 °F	45 %

Additional Comments/Information:

SOURCE LAYOUT SKETCH



Observation Date	Start Time	End Time
5/15/07	1434	1444

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					
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17					
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20					

Average 10-Minute Opacity	Range of Opacity Readings
0.0 %	Min. 0.0% Max. 0.0%

OBSERVER (please print)
Name: BRIAN ORTIZ Title: Maint. Lead MAN

Signature: Brian Ortiz Date: 5/15/07

Observer Organization: KSL

Certified by	Certification Date
ETA	3-15-07

Los Alamos NATIONAL LABORATORY

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

Source Name: Power Plant at TA-3

Source Location: TA-3-22

Type of Source	Type of Control Equipment
Boiler # 1	No Particulate Control

Describe Emission Point (Top of stack, etc.): Top of Most West Stack

Height Above Ground Level	Height Relative to Observer
150 Feet	150 Feet

Distance From Observer	Direction of Source From Observer
200 Yards	NE

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

Emission Color	Plume Type
None	☒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? One foot Above Stack

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

Background Color	Sky Conditions
Blue/Grey	Mostly Cloudy

Wind Speed	Wind Direction (provide from/to, i.e. from North to South)
12 mph	From South to North

Ambient Temperature	Relative Humidity
62.5 °F	45 %

Additional Comments/Information:

Observation Date	Start Time	End Time
5/15/07	1444	1454

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					
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14					
15					
16					
17					
18					
19					
20					

Average 10-Minute Opacity	Range of Opacity Readings
0.0 %	Min. 0.0% Max. 0.0%

OBSERVER (please print)
Name: Brian Ortiz Title: Maint. Lead Man

Signature: Brian Ortiz Date: 5/15/07

Observer Organization: KSL

Certified by	Certification Date
ETA	3-15-07

SOURCE LAYOUT SKETCH

Stack with Plume
Sun
Wind