Los Alamos
NATIONAL LABORATORY
EST.1943

memorandum

Environmental Protection Division Office

Date: August 8, 2006
Refer to: ENV-DO:06-009

Mr. Edward Horst
Environmental Compliance Specialist, Enforcement
New Mexico Environment Department
Air Quality Bureau
2048 Galisteo St.
Santa Fe, New Mexico 87505

SEMI-ANNUAL MONITORING REPORT FOR JANUARY – JUNE, 2006
AIR QUALITY TITLE V OPERATING PERMIT P100-M1
IDEA ID NO. 856 – LOS ALAMOS NATIONAL LABORATORY (LANL)

Dear Mr. Horst:

Attached is a copy of Los Alamos National Laboratory's Title V Operating Permit semi-annual monitoring report for the period **January 1 – June 30, 2006**. This submission is required by permit condition 4.2 of NMED Operating Permit P100-M1 dated June 15, 2006, and is transmitted within the allowed 45 days after the end of the reporting period as specified in permit condition 4.3.

If you have any questions or comments regarding this submittal or would like to discuss the submittal in greater detail, please contact Steve Story at 665-2169.

Sincerely,

Victoria A. George
Division Leader
Environmental Protection Division

SLS:dj

Enc: a/s

Cy: w/o opacity reports

J. Prooyen, ADPADOPS, A102
R.Watkins, ADESH&Q, K491
S. Fong, DOE-LA-AO, A316
P. Wardwell, LC-ESH, A187
D. Wilburn, ENV-EAQ, J978
S. Story, ENV-EAQ, J978

D. Paulson, ENV-EAQ, J978
S. Cossey, ENV-EAQ, J978
M. Stockton, ENV-EAQ, J978
J. Stanton, SSS-AE-V02, A199
R. Costa, SSS-AE-V02, A199
IRM-RMSSO, A150
ESH&Q File, K491
ENV-MAQ Title V Monitoring Report File, with opacity reports
ENV-MAQ Reading File

LA-UR-06-5553

Approved for public release; distribution is unlimited.

Title: Semi-Annual Monitoring Report
January 1 - June 30, 2006
Air Quality Title V Operating Permit P100M1
Los Alamos National Laboratory

Author(s): Steven Story, ENV-EAQ

Submitted to: Mr. Edward Horst
Environmental Compliance Specialist, Enforcement
New Mexico Environment Department
Air Quality Bureau
2048 Galisteo St.
Santa Fe, New Mexico 87505

Los Alamos National Laboratory
Operating Permit P100M1
Semi-Annual Monitoring Report
January 1 – June 30, 2006

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 _____ Date: 8/8/06

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. An Excess Emission Report was submitted to NMED on August 2, 2006, for an opacity reading greater than 20%.
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 installed 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 in the morning and once in the afternoon, as required by 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.	A log is maintained indicating the number of Be samples processed. The log 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 on February 10, 2006 [ENV-MAQ:06-042] and May 8, 2006 [ENV-MAQ:06-132].
	Cartridge and HEPA filters will be equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while	Cartridge and HEPA filters are equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans

	the exhaust fans are in operation.	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. No opacity readings were performed during this period.

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. 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 will be 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 and used to calculate emissions on a semi-annual basis. LANL's "Historical Solvent Usage Data" report for January 1 – June 30, 2006 is provided in Attachment E.
2.6.4.2	Complete checklist for work practice standards.	LANL completes a work practice checklist each time the degreaser is used. This checklist is posted on the degreaser glove box.

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 every six months. Stationary generator hours of operation for 2006 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 when the cloth tube filters are shaken. 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. 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.	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.	A certificate or analysis report indicating the total sulfur content is available for fuel oil shipments. No fuel oil was purchased 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 conducted using Department approved methods and standards for determining	A contract is in place with the fuel oil supplier, which requires a certificate of analysis that includes sulfur content. If the fuel oil is received without the certificate, the shipment will be refused until the certificate is

Permit Section	Monitoring Required	Monitoring Performed
	total sulfur content of No. 2 fuel oil.	available for sulfur content verification or sample results have been received and verified.
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.	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).	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).	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.	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 gas is specified in the contract with the supplier. Opacity measurements performed at the TA-03 Power Plant are provided in Attachment 1.
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.	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-	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. Asphalt Plant, Permit Condition 2.1.2.1, Fugitive Emission Opacity recorded at 24% on May 1, 2006. Excess Emission Report Submitted to NMED

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

Attachment A
Asphalt Plant Opacity Reports

Summary Table, Reports Attached

	Source	Date	Time	Opacity*
Jan	Top of Shaker	01/05/06	9:35 am	0
	Conveyor Belt	01/05/06	9:45 am	0
	Top of Baghouse Stack	01/05/06	9:25 am	0
Feb	Top of Shaker	02/03/06	1:02 pm	0
	Conveyor Belt	02/15/06	1:12 pm	(1.5%) 3%
	Top of Baghouse Stack	02/03/06	1:15 pm	0
Mar	Top of Shaker	03/20/06	1:16 pm	0
	Conveyor Belt	03/23/06	12:46 pm	0
	Top of Baghouse Stack	03/20/06	1:09 pm	0
Apr	Top of Shaker	04/06/06	11:17 am	0
	Conveyor Belt	04/07/06	8:54 am	0
	Top of Baghouse Stack	04/06/06	11:23 am	0
May	Top of Shaker	05/01/06	10:00 am	< 1%
	Conveyor Belt	05/01/06	11:12 am	(4 %) 24%
	Top of Baghouse Stack	05/01/06	10:11 am	< 1%
June	Top of Shaker	06/02/06	9:30 am	0
	Conveyor Belt	06/02/06	9:43 am	1%
	Top of Baghouse Stack	06/02/06	9:37 am	0

*** Opacity in ( ) is reported opacity from Observer**

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

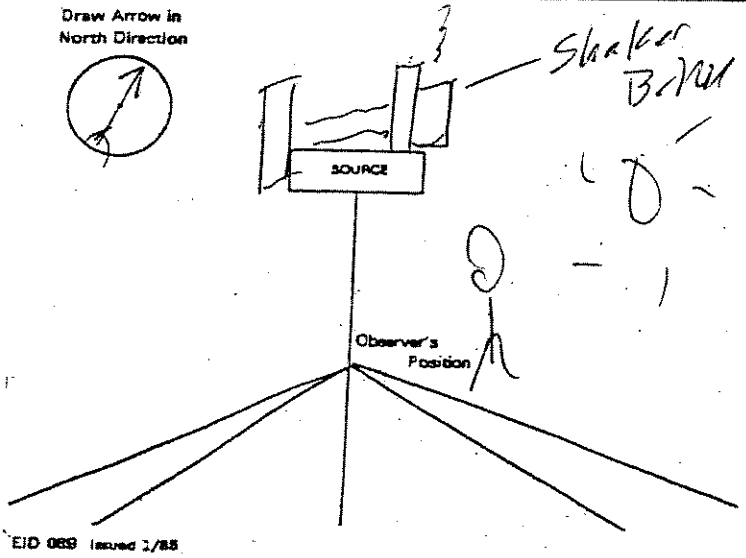
SOURCE: BDM Asphalt Plant
OBSERVATION DATE: 1/5/06
START TIME: 9:33
STOP TIME: 9:45
LOCATION: Sigma Mesa Los Alamos NM
Type of Source: Asphalt Plant
Type of Control Equipment: Baghouse
Describe Emission Point (top of stack, etc.): Clear
Height Above Ground Level: 30 Feet
Height Relative to Observer: 33 Feet
Distance from Observer: 70 Yards
Direction from Observer: 10 N West
Description of Plume (steam exit only): N/A ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color: Clear
Plume Type: N/A ☐ Continuous ☐ Fugitive ☐ Intermittent
Water Droplets Present? N/A ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached
At what point in the plume was opacity determined? 1' Above Top of Shaker Box
Describe Background (i.e. blue sky, trees, etc.): Blue Sky
Background Color: Blue
Sky Conditions: Clear
Wind Speed: 0 mph
Wind Direction (i.e. from North to South): N/A
Ambient Temperature: 17 °F
Wet Temperature: -11.7 °F
Relative Humidity: 36 %

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	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11					23				
12					24				

COMMENTS:

Average Opacity: N.A. 0 0 0
Range of Opacity Readings: Min.: 0 Max.: 0
OBSERVER (please print) Name: David Plank Title: Env. Sci
Signature: David Plank Date: 1/5/06
Organization: BSC-AZNV Certification Date: 9/11/05

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 069 Issued 1/88

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

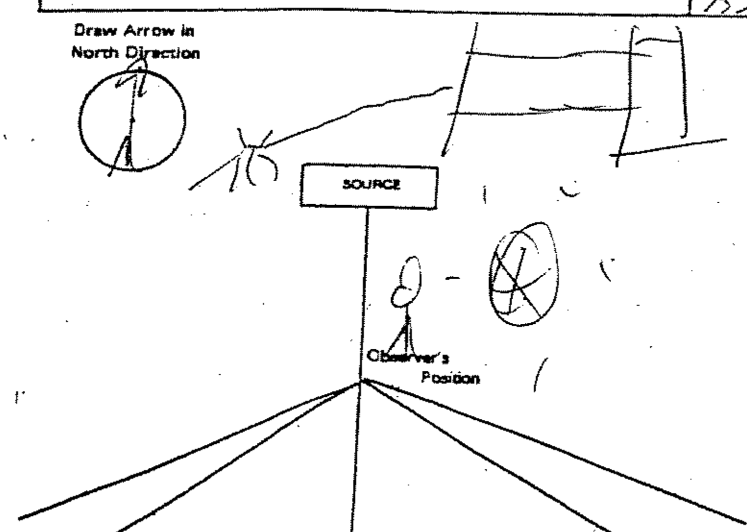
SOURCE	BDM Asphalt Plant
LOCATION	Sigma Mesa, Los Alamos NM
OBSERVATION DATE	1/5/06
START TIME	945
STOP TIME	9:55
Type of Source?	Asphalt Plant
Type of Control Equipment	Baghouse
Describe Emission Point (top of stack, etc.)	Above Conveyor Belt
Height Above Ground Level	2-10 Feet
Height Relative to Observer	2-10 Feet
Distance from Observer	30 Yards
Direction from Observer	To North
Description of Plume (stack exit only)	N/A ☐ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation
Emission Color	Clear
Plume Type	N/A ☐ Continuous ☐ Fugitive ☐ Intermittent
Water Droplets Present?	No ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached
At what point in the plume was opacity determined?	Above Conveyor Belt
Describe Background (i.e. blue sky, trees, etc.)	Blue Sky / Trees
Background Color	Blue
Sky Conditions	Clear
Wind Speed	0 mph
Wind Direction (i.e. from North to South)	N/A
Ambient Temperature	1.3 °C
Wet Temperature	−11.4 °C
Relative Humidity	38 %

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	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11					23				
12					24				

COMMENTS:

Average Opacity	Min. 1-6 0%
Range of Opacity Readings	Min.: 0 Max.: 0
OBSERVER (please print) Name:	David Plante
Title:	Env. Sci.
Signature	[signature]
Date	1/5/06
Organization	KSL-AENV
Certification Date	9/1/05

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

Plume Direction
Sun
North

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

Signature: ____________________

Title: ____________________

Date: ____________________

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: DOT-Asphalt Plant	OBSERVATION DATE: 1/5/06
LOCATION: Sigma Mesa, Los Alamos, NM	START TIME: 9:25
Type of Source: Asphalt Plant	STOP TIME: 9:35
Type of Control Equipment: Baghouse	
Describe Emission Point (top of stack, etc.): Top of Stack	
Height Above Ground Level: 20 Feet	Height Relative to Observer: 25 Feet
Distance from Observer: 50 Yards	Direction from Observer: 10 N. West
Description of Plume (stack exit only): N/A ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation	
Emission Color: Clear	Plume Type: N/A ☐ Continuous ☐ Fugitive ☐ Intermittent
Water Droplets Present? ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached: None	
At what point in the plume was opacity determined? N/A	
Describe Background (i.e. blue sky, trees, etc.): Clear Blue Sky	
Background Color: Blue	Sky Conditions: Clear
Wind Speed: 0 mph	Wind Direction (i.e. from North to South): N/A
Ambient Temperature: 13 °C	Wet Temperature: -11.4 °C	Relative Humidity: 38 %

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	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11					23				
12					24				

COMMENTS:

Average Opacity: Min 0%

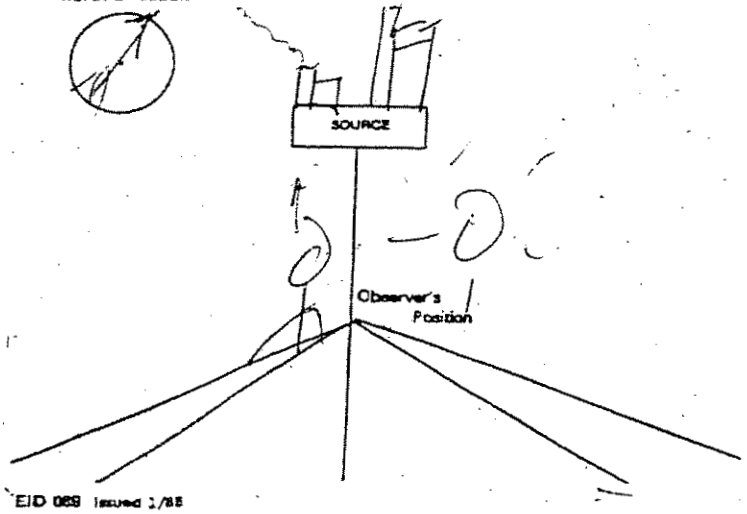
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print) Name: David Plate Title: Env. Sci.

Signature: David Plate Date: 1/5/06

Organization: ESC-ENV Certification Date: 9/1/05

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 069 Issued 1/88

VISIBLE EMISSION OBSERVATION FORM

ORIG FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT	OBSERVATION DATE: FEB 3 2006
LOCATION: ~~TA-3-73~~ TA-60-RC	START TIME: 1:02PM
Type of Source: ASPHALT PLANT	STOP TIME: 1:42PM
Type of Control Equipment: BAGHOUSE	
Describe Emission Point (top of stack, etc.): TOP OF SHAKER	
Height Above Ground Level: 40 Feet	
Height Relative to Observer: 40 Feet	
Distance from Observer: 30 Yards	
Direction from Observer: NORTH	
Description of Plume (stack exit only): N/A ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Lofting ☐ Trapping	
Emission Color: NO EMISSIONS	
Plume Type: N.A. – NONE ☐ 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.): BLUE SKY	
Background Color: CLEAR	
Sky Conditions: CLEAR	
Wind Speed: 5 TO 9 mph	
Wind Direction (i.e. from North to South): EAST TO WEST	
Ambient Temperature: APPROX 52 °F	
Wet Temperature: UNKNOWN °F	
Relative Humidity: 5 TO 15 %	

Min.	Sec. 0	15	30	45	Min.	Sec. 0	15	30	45
START → 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				
END → 6	0	0	0	0	18				
7	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11					23				
12					24				

COMMENTS: NO VISIBLE EMISSIONS. FACILITY WAS OPERATING NORMAL

Average Opacity: 0

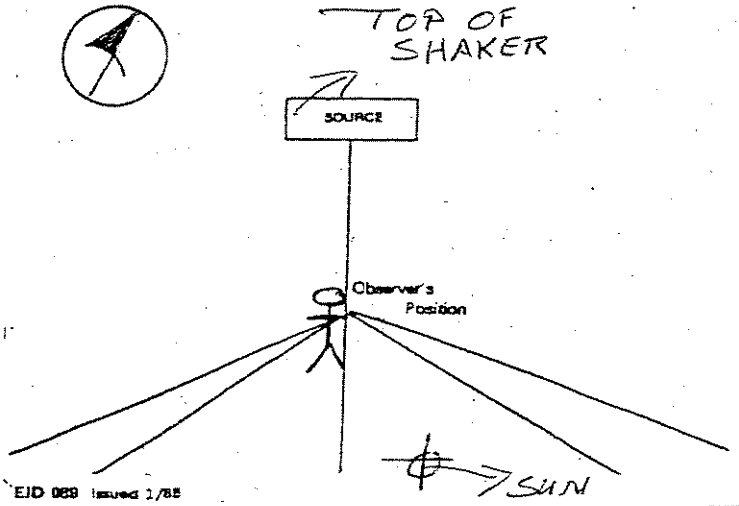
Range of Opacity Readings: Min.: 0 Max.: 0

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

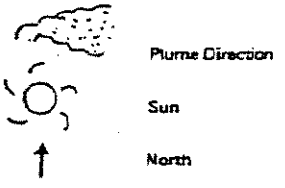
Signature: R Costa Date: 2-3-06

Organization: KSL Certification Date: 2-1-06

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: 2-17-06

EID 069 Issued 1/88

VISIBLE EMISSION OBSERVATION FORM

OP16 FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
OBSERVATION DATE: FEB 3 2006
START TIME: 1:15 PM
STOP TIME: 1:25 PM
LOCATION: ~~TA-33~~ TA-60 RC
Type of Source: ASPHALT
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): TOP OF BAGHOUSE EXHAUST
Height Above Ground Level: 25 Feet
Height Relative to Observer: 20 Feet
Distance from Observer: 30 Yards
Direction from Observer: NORTH
Description of Plume (stack exit only): N/A ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Lofting ☐ Trapping
Emission Color: NO EMISSION
Plume Type: NONE ☐ 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 STACK OUTLET
Describe Background (i.e. blue sky, trees, etc.): BLUE SKY
Background Color: CLEAR
Sky Conditions: CLEAR
Wind Speed: 5 TO 9 mph
Wind Direction (i.e. from North to South): EAST TO WEST
Ambient Temperature: APPROX 52 °F
Wet Temperature: UNKNOWN °F
Relative Humidity: 5 TO 15 %

Min. \ Sec.	0	15	30	45	Min. \ Sec.	0	15	30	45
START → 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				
END → 6	0	0	0	0	18				
7	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11					23				
12					24				

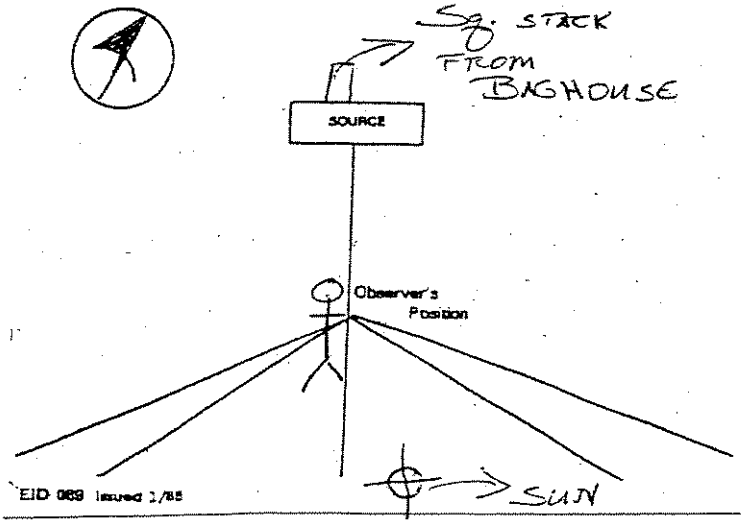
COMMENTS: NO VISIBLE EMISSIONS
FACILITY WAS OPERATING NORMAL

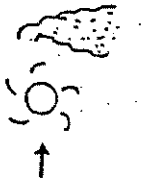
Average Opacity: - 0 -
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print) Name: RICHARD COSTA Title: ENGINEER
Signature: [signature] Date: 2-3-06
Organization: KSL Certification Date: 2-1-06

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: 2-17-06

EID 069 Issued 1/85

VISIBLE EMISSION OBSERVATION FORM

OPIG FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
LOCATION: TA-3-33=TA-60-RC
OBSERVATION DATE: 2-15-06
START TIME: 1:12 PM
STOP TIME: 1:22 PM

Type of Source: ASPHALT
Type of Control Equipment: BAG HOUSE
Describe Emission Point (top of stack, etc.): CONVEYER BELT
Height Above Ground Level: 5 Feet
Height Relative to Observer: 5 Feet
Distance from Observer: 25 Yards
Direction from Observer: SOUTH
Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Lofting ☐ Trapping
Emission Color: LT. BROWN
Plume Type: ☐ Continuous ☐ Fugitive ☒ Intermittent
Water Droplets Present? ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached
At what point in the plume was opacity determined? 18 to 20" ABOVE SOURCE
Describe Background (i.e. blue sky, trees, etc.): BLUE SKY
Background Color: CLEAR
Sky Conditions: CLEAR
Wind Speed: 18 TO 30 mph
Wind Direction (i.e. from North to South): WEST
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

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

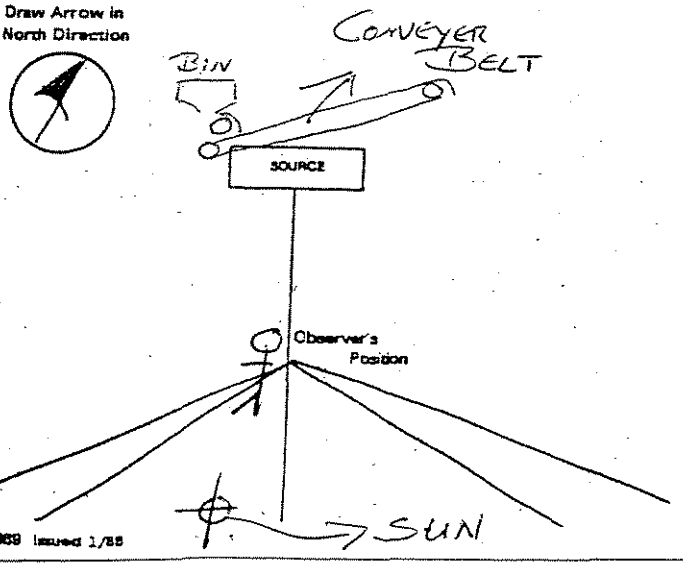
COMMENTS: LT. BROWN DUST EMISSIONS FROM MODERATE WIND COND.

N.W.S HIGHEST GUST 44 MPH

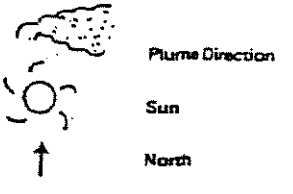
Average Opacity: 1.5
Range of Opacity Readings: Min.: 0 Max.: 10

OBSERVER (please print) Name: RICHARD COSTA Title: ENGINEER
Signature: R COSTA
Date: 2-15-06
Organization: KSL
Certification Date: 2-1-06

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: 2-17-06

EID 069 Issued 1/88

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
LOCATION: ~~TA-3-33~~ TA-60 - RC
Type of Source: ASPHALT PLANT
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): TOP OF SHAKER
Height Above Ground Level: 40 Feet
Height Relative to Observer: 35 Feet
Distance from Observer: 30 Yards
Direction from Observer: NORTH
Description of Plume (stack exit only): N/A. ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color: NO EMISSIONS
Plume Type: NONE ☐ 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 EMISSION POINT
Describe Background (i.e. blue sky, trees, etc.): PARTLY CLOUDY (P.C.)
Background Color: PC - BLUE SKY
Sky Conditions: PC
Wind Speed: mph
Wind Direction (i.e. from North to South):
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

OBSERVATION DATE: MARCH 20 2006
START TIME: 1:16
STOP TIME: 1:22

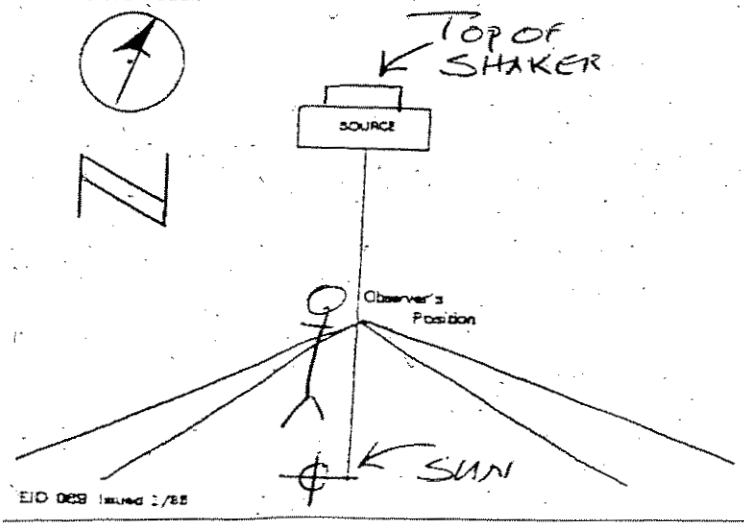
Sec. / Min.	0	15	30	45	Sec. / Min.	0	15	30	45
1	0	0	0	0	13				
2	0	0	0	0	14				
3	0	0	0	0	15				
4	0	0	0	0	16				
5	0	0	0	0	17				
6	0	0	0	0	18				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

COMMENTS: NO VISIBLE EMISSION. FACILITY WAS OPERATING NORMAL.

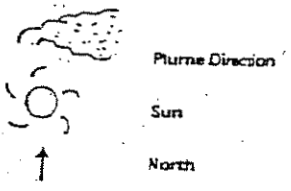
Average Opacity: 0
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print): Name: RICHARD COSTA Title: ENGINEER
Signature: R Costa
Date: 3-20-06
Organization: KSL
Certification Date: 2-1-06

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: 3-24-06

EID 0659 Issued 2/88

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT

LOCATION: ~~TA-3-33~~ TA-60-RC

Type of Source: ASPHALT

Type of Control Equipment: BAGHOUSE

Describe Emission Point (top of stack, etc.): TOP OF BAGHOUSE EXHAUST (STACK)

Height Above Ground Level: 25 Feet

Height Relative to Observer: 20 Feet

Distance from Observer: 30 Yards

Direction from Observer: NORTH

Description of Plume (stack exit only): N.A. ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation

Emission Color: NO EMISSION

Plume Type: NONE ☐ 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 STACK OUTLET

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

Background Color: PC - BLUE SKY

Sky Conditions: P.C.

Wind Speed: mph

Wind Direction (i.e. from North to South):

Ambient Temperature: °F

Wet Temperature: °F

Relative Humidity: %

OBSERVATION DATE: MARCH 20 2006

START TIME: 1:09 PM

STOP TIME: 1:45 PM

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 VISIBLE EMISSIONS. FACILITY WAS OPERATING NORMAL.

Average Opacity: -0-

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

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

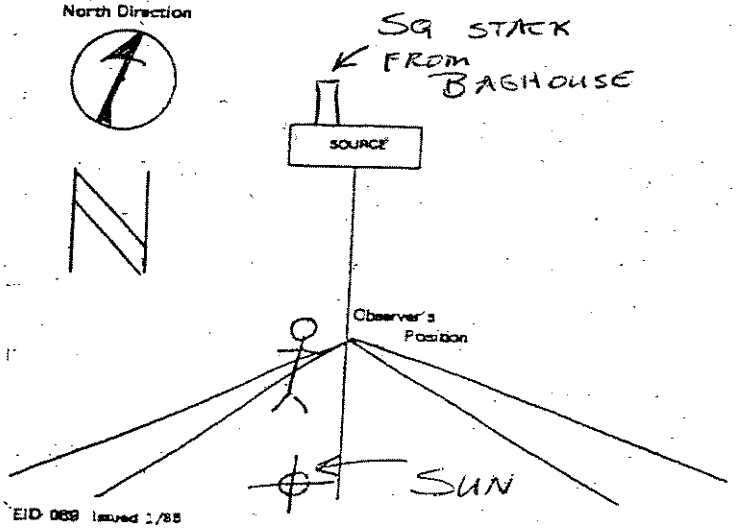
Signature: R. Costa

Date: 3-20-06

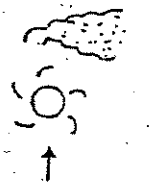
Organization: KSL

Certification Date: 2-1-06

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: 3-24-06

EID 069 Issued 1/88

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
LOCATION: ~~TA-3-39~~ TA-60
OBSERVATION DATE: MARCH 23 2006
START TIME: 12:46
STOP TIME: 12:52

Type of Source: ASHALT
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): CONVEYER BELT
Height Above Ground Level: 5 Feet
Height Relative to Observer: 5 Feet
Distance from Observer: 30 Yards
Direction from Observer: ~~SOUTH~~ NORTH
Description of Plume (stack exit only): NONE ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color: NONE
Plume Type: NONE ☐ Continuous ☐ Fugitive ☐ Intermittent
Water Droplets Present? ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached
At what point in the plume was opacity determined? 18" TO 20" ABOVE SOURCE
Describe Background (i.e. blue sky, trees, etc.): CLEAR BLUE SKY
Background Color: CLEAR
Sky Conditions: CLEAR
Wind Speed: mph
Wind Direction (i.e. from North to South):
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

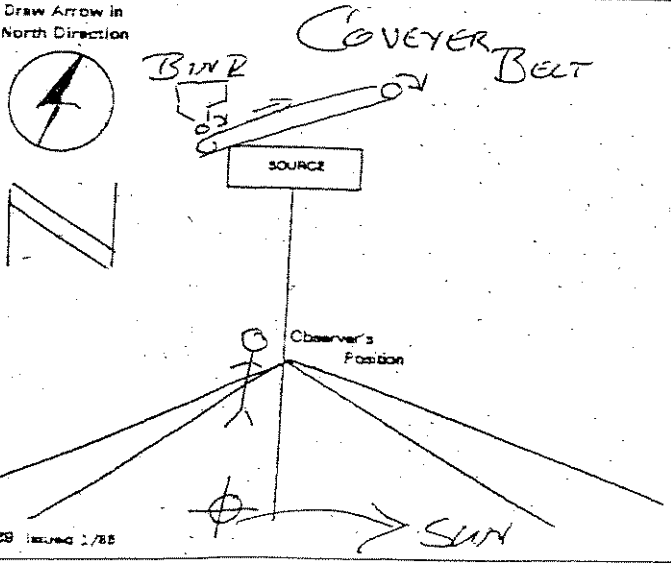
Min.	Sec. 0	15	30	45	Min.	Sec. 0	15	30	45
1	0	0	0	0	13				
2	0	0	0	0	14				
3	0	0	0	0	15				
4	0	0	0	0	16				
5	0	0	0	0	17				
6	0	0	0	0	18				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

COMMENTS: NO VISIBLE EMISSIONS
SOIL WAS MOIST W/ FROM SNOW COVER.

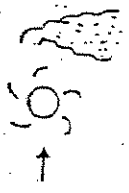
Average Opacity: -0-
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print) Name: RICHARD COSTA Title: ENGINEER
Signature: R. Costa Date:
Organization: Certification Date:

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: 3-24-06

EID 069 Revised 1/88

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
LOCATION: ~~TA-3-33~~ TA-60-RC
OBSERVATION DATE: APRIL 6-2006
START TIME: 11:17 AM
STOP TIME: 11:23 AM

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 RC				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

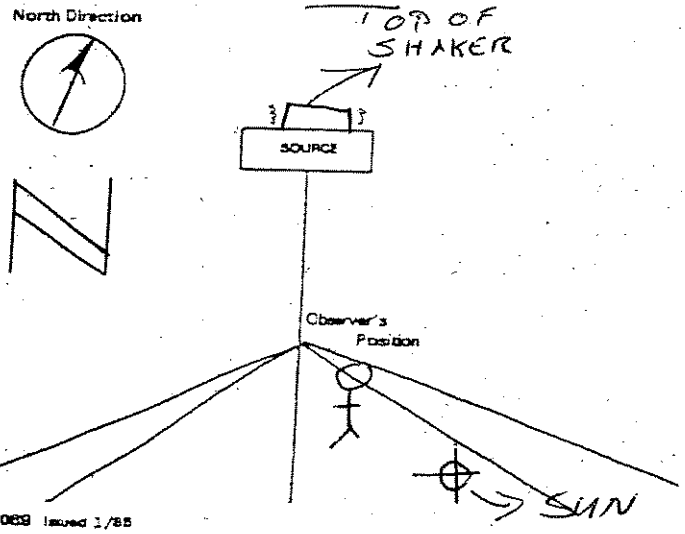
Type of Source: ASPHALT PLANT
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): TOP OF SHAKER
Height Above Ground Level: 40 Feet
Height Relative to Observer: 40 Feet
Distance from Observer: 30 Yards
Direction from Observer: NORTH
Description of Plume (stack exit only): ☒ None ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Fumigation ☐ Trapping
Emission Color: NO EMISSIONS
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" ABOVE EMISSION POINT
Describe Background (i.e. blue sky, trees, etc.): CLEAR SKY
Background Color: BLUE
Sky Conditions:
Wind Speed: mph
Wind Direction (i.e. from North to South): SEE ATTACHED WEATHER
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: STATS, %

COMMENTS: NORMAL OPERATIONS. NO EMISSIONS NOTED. ROADS WET FROM SNOW.

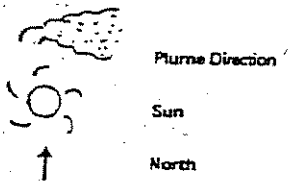
Average Opacity: - 0 -
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print) Name: RICHARD COSTA Title: ENGINEER
Signature: R Costa Date: APRIL 10 2006
Organization: KSL Certification Date: 2-1-06

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: 4-17-06

EID 0659 Issued 1/85

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
LOCATION: ~~TA-33~~ TA-60-RC
OBSERVATION DATE: APRIL-6-2006
START TIME: 11:23 AM
STOP TIME: 11:29 AM

Type of Source: ASPHALT
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): TOP OF BAGHOUSE EXHAUST (STACK)
Height Above Ground Level: 25 Feet
Height Relative to Observer: 20 Feet
Distance from Observer: 30 Yards
Direction from Observer: NORTH
Description of Plume (stack exit only): NONE ☐ Looping ☐ Fanning ☒ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color: NO EMISSIONS
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" ABOVE STACK
Describe Background (i.e. blue sky, trees, etc.): CLEAR
Background Color: BLUE SKY
Sky Conditions: SOME CLOUDS
Wind Speed: mph
Wind Direction (i.e. from North to South)
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

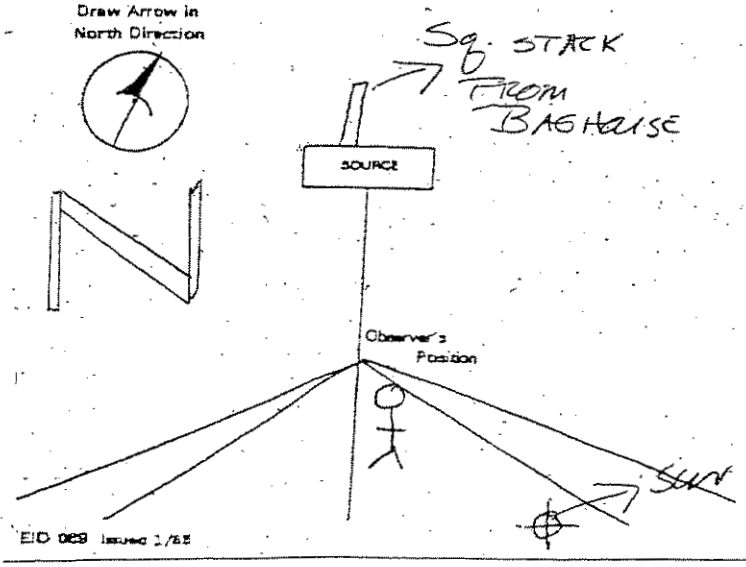
Min. \ Sec.	0	15	30	45	Min. \ Sec.	0	15	30	45
1	0	0	0	0	13				
2	0	0	0	0	14				
3	0	0	0	0	15				
4	0	0	0	0	16				
5	0	0	0	0	17				
6	0	0	0	0	18				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

COMMENTS: NO EMISSIONS NOTED

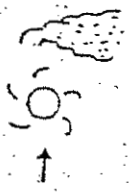
Average Opacity: -0-
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print) Name: RICHARD COSTA Title: ENGINEER
Signature: R. Costa Date: APRIL-10-2006
Organization: KSL Certification Date: 2-1-06

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: 4-17-06

EID 069 Issued 1/85

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
LOCATION: TA-60 TA-60 RC
Type of Source: ASPHALT
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): CONVEYER BELT
Height Above Ground Level: 5 Feet
Height Relative to Observer: 5 Feet
Distance from Observer: 30 Yards
Direction from Observer: SOUTH NORTH
Description of Plume (stack exit only): NONE ☐ Looping ☐ Fanning ☑ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color: NO EMISSIONS
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" ABOVE SOURCE
Describe Background (i.e. blue sky, trees, etc.): CLEAR
Background Color: BLUE
Sky Conditions: LIGHT CLOUDS
Wind Speed: mph
Wind Direction (i.e. from North to South): SEE ATTACHED MET
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: DATA %

OBSERVATION DATE: APRIL-7-2006
START TIME: 854AM
STOP TIME: 900AM

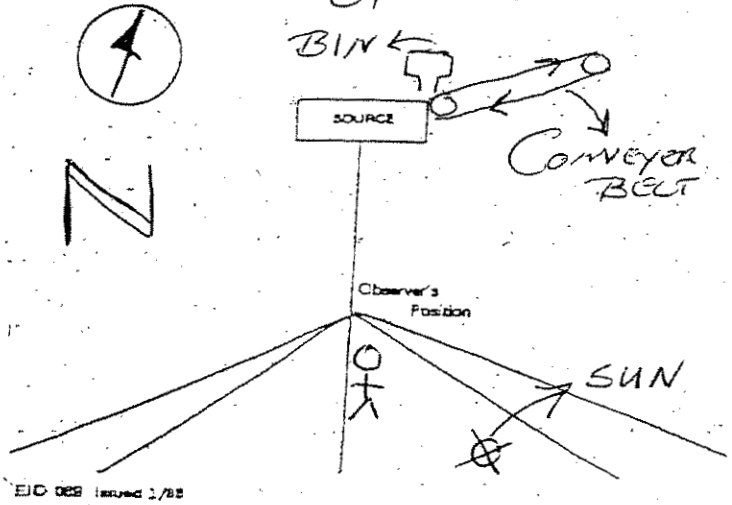
Min.	Sec. 0	15	30	45	Min.	Sec. 0	15	30	45
1	0	0	0	0	13				
2	0	0	0	0	14				
3	0	0	0	0	15				
4	0	0	0	0	16				
5	0	0	0	0	17				
6	0	0	0	0	18				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

COMMENTS: CONVEYER MATERIAL WAS MOIST FROM RECENT LIGHT SNOW. OBSERVER

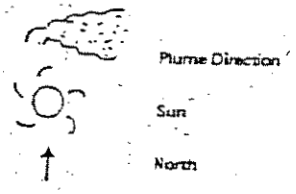
Average Opacity: -0-
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER
Signature: R Costa Date: APRIL-10-2006
Organization: KSL Certification Date: 2-1-06

Draw Arrow in North Direction: WATER TRUCK IN OPERATION.



IMPORTANT: Please indicate the following by sketch:



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

Signature: Charles McKee
Title:
Date: 4-17-06

EID 068 Issued 1/88

ORIG FORM

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
LOCATION: ~~TA-3-33~~ TA-60-RC
Type of Source: ASPHALT PLANT
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): TOP OF SHAKER
Height Above Ground Level: 40 Feet
Height Relative to Observer: 40 Feet
Distance from Observer: 35 Yards
Direction from Observer: NORTH
Description of Plume (stack exit only): ☐ Looping ☒ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color: NONE
Plume Type: NONE ☐ 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 SOURCE
Describe Background (i.e. blue sky, trees, etc.): BLUE SKY - SOME CLOUDS
Background Color:
Sky Conditions: CLEAR
Wind Speed: mph
Wind Direction (i.e. from North to South):
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

OBSERVATION DATE: MAY 01 2006
START TIME: 10AM
STOP TIME: 10:10AM

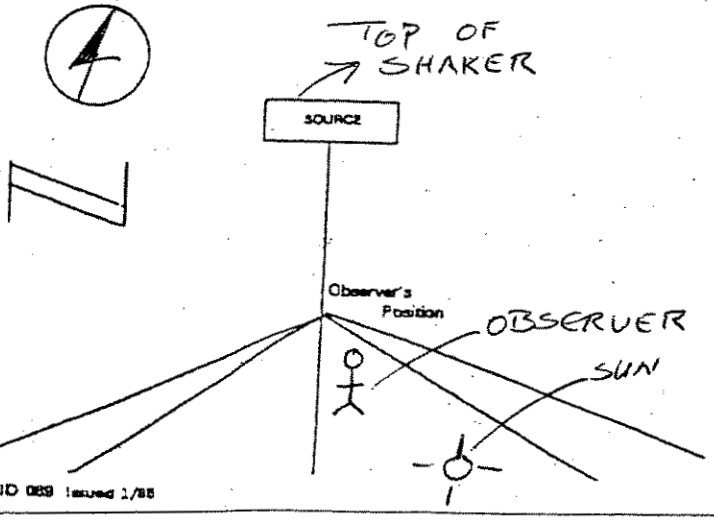
Min. \ Sec.	0	15	30	45	Min. \ Sec.	0	15	30	45
1	0	0	0	0	13				
2	0	0	0	0	14				
3	0	0	0	0	15				
4	0	0	0	0	16				
5	0	0	0	0	17				
6	0	0	0	0	18				
7	0	0	0	0	19				
8	0	0	0	0	20				
9	0	5	0	0	21				
10	0	0	0	0	22				
11					23				
12					24				

COMMENTS: NO VISIBLE EMISSIONS - VERY WINDY - FACILITY OPERATING NORMAL.

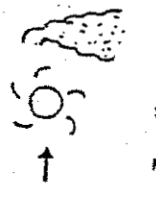
Average Opacity: 0
Range of Opacity Readings: Min.: 0 Max.: 5

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER
Signature: R. Costa Date: MAY 3 06
Organization: KSL Certification Date: 2-1-06

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: 5-20-06

EID 089 Issued 1/88

VISIBLE EMISSION OBSERVATION FORM

OPIG FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

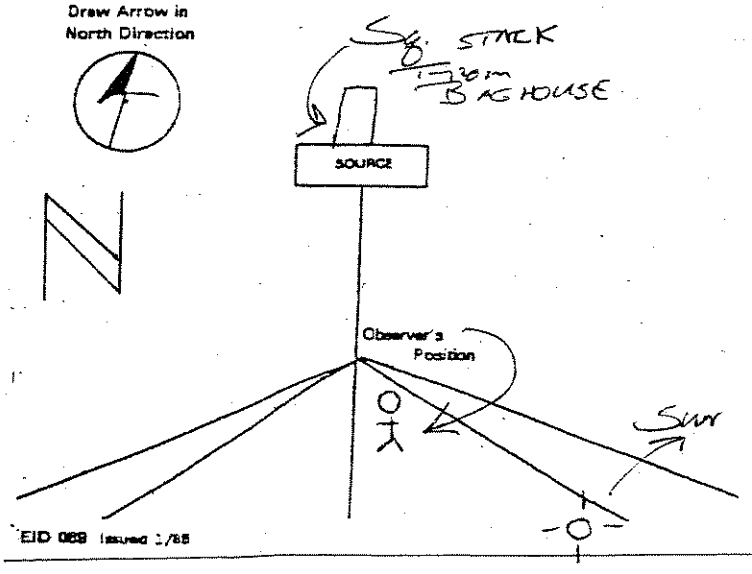
SOURCE: ASPHALT PLANT
OBSERVATION DATE: MAY 01 2006
START TIME: 10:11AM
STOP TIME: 10:21AM
LOCATION: TA-3-33 TA-60-RC
Type of Source: ASPHALT
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): TOP OF BAGHOUSE
Height Above Ground Level: 25 Feet
Height Relative to Observer: 20 Feet
Distance from Observer: 30 Yards
Direction from Observer: NORTH
Description of Plume (stack exit only): ☐ Looping ☒ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color: NO EMISSION
Plume Type: NONE ☐ 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 STACK EXIT
Describe Background (i.e. blue sky, trees, etc.): BLUE - SOME CLOUDS
Background Color:
Sky Conditions:
Wind Speed: mph
Wind Direction (i.e. from North to South):
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

Min.	Sec. 0	15	30	45	Min.	Sec. 0	15	30	45
START 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	5	17				
END 6	0	0	0	0	18				
7	0	0	0	0	19				
8	0	0	0	0	20				
9	0	5	0	0	21				
10	0	0	0	0	22				
11					23				
12					24				

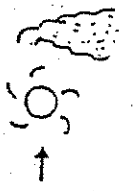
COMMENTS: VERY WINDY - NO EMISSIONS FACILITY WAS OPERATING NORMAL.

Average Opacity: LESS THAN 1
Range of Opacity Readings: Min.: 0 Max.: 5
OBSERVER (please print): Name: RICHARD COSTA Title: ENGINEER
Signature: R Costa
Date:
Organization: KSL
Certification Date: 5-1-06

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: 5-20-06

EID 069 Issued 1/85

VISIBLE EMISSION OBSERVATION FORM

ORIG FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

Field	Entry
Source	ASPHALT PLANT
Location	TA-3-33 TA-60 · RC
Observation Date	MAY 01 2006
Start Time	11:12AM
Stop Time	11:22AM
Type of Source	ASPHALT
Type of Control Equipment	BAGHOUSE
Describe Emission Point (top of stack, etc.)	CONVEYER BELT
Height Above Ground Level	5 Feet
Height Relative to Observer	5 Feet
Distance from Observer	30 Yards
Direction from Observer	SOUTH
Description of Plume (stack exit only)	☐ Lofting ☐ Trapping ☐ Looping ☒ Fanning ☐ Coning ☐ Fumigation
Emission Color	GRAY
Plume Type	☐ Continuous ☐ Fugitive ☒ Intermittent
Water Droplets Present?	☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached
At what point in the plume was opacity determined?	18" TO 20" PAST SOURCE
Describe Background (i.e. blue sky, trees, etc.)	CLEAR BLUE - SOME CLOUDS
Background Color	BLUE
Sky Conditions	PART CLOUDY
Wind Speed	mph
Wind Direction (i.e. from North to South)	
Ambient Temperature	°F
Wet Temperature	°F
Relative Humidity	%

Min. \ Sec.	0	15	30	45	Min. \ Sec.	0	15	30	45
1	5	15	20	10	13				
2	20	20	30	40	14				
3	25	30	40	40	15				
4	40	50	40	40	16				
5	20	20	20	20	17				
6	5	5	10	5	18				
START 7	5	10	5	5	19				
8	5	0	5	5	20				
9	5	0	5	5	21				
10	5	5	5	5	22				
11	0	5	5	0	23				
END 12	0	5	5	0	24				

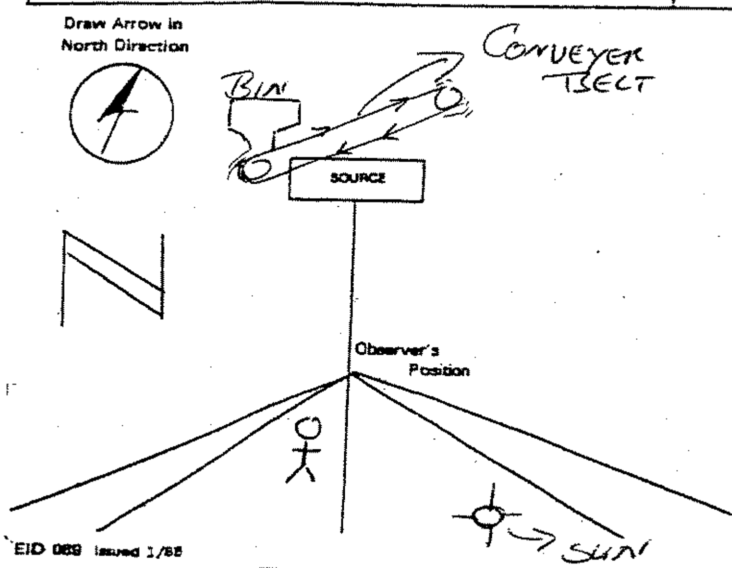
COMMENTS: VERY WINDY - DRY CONDITIONS

Average Opacity: 4.0

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

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER
Signature: R. Costa Date: MAY 3 06
Organization: KSL Certification Date: 2-1-06

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: 5-20-06

VISIBLE EMISSION OBSERVATION FORM

OR16

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
OBSERVATION DATE: JUNE 2. 06
START TIME: 9:30AM
STOP TIME: 9:36AM
LOCATION: TA-33 TA-60 RC

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

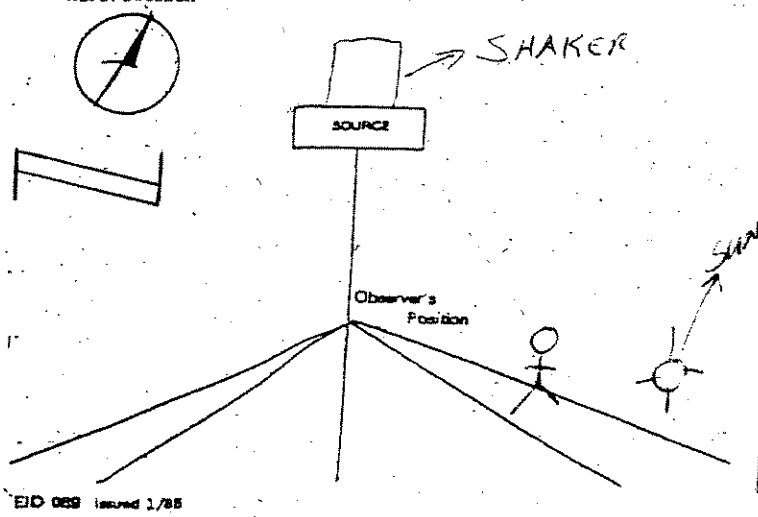
Type of Source: ASPHALT PRODUCTION
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): TOP OF SHAKER
Height Above Ground Level: 40 Feet
Height Relative to Observer: 35 Feet
Distance from Observer: 30 Yards
Direction from Observer: NNE
Description of Plume (stack exit only): NA ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color: NO EMISSION
Plume Type: NONE ☐ Continuous ☐ Fugitive ☐ Intermittent
Water Droplets Present? NA. ☐ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached
At what point in the plume was opacity determined? 12 TO 14" ABOVE EMISSION POINT
Describe Background (i.e. blue sky, trees, etc.): CLEAR BLUE SKY
Background Color: CLEAR
Sky Conditions: CLEAR
Wind Speed: 3 TO 7 mph
Wind Direction (i.e. from North to South): S.E.
Ambient Temperature: 65 °F
Wet Temperature: N.A °F
Relative Humidity: 8 TO 15 %

COMMENTS: NO VISIBLE EMISSIONS. TOTAL OBSERVATION TIME, 13 MIN. OPACITY READING 9:30 TO 9:36 AM. #7 TO 13 NO EMISSIONS SEEN.

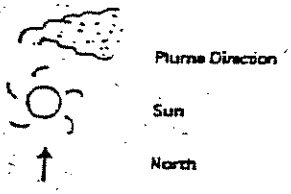
Average Opacity: -0-
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER
Signature: R. Costa Date: JUNE 5 06
Organization: KSL Certification Date: 2-1-06

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: 6-6-06

EID 069 Issued 1/85

VISIBLE EMISSION OBSERVATION FORM

0916

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT

OBSERVATION DATE: JUNE 2 06

START TIME: 937AM

STOP TIME: 942AM

LOCATION: TA-3-39 TA-60-RC

Type of Source: ASPHALT

Type of Control Equipment: BAGHOUSE

Describe Emission Point (top of stack, etc.): TOP OF BAGHOUSE EXHAUST

Height Above Ground Level: 25 Feet

Height Relative to Observer: 20 Feet

Distance from Observer: 30 Yards

Direction from Observer: NNE

Description of Plume (stack exit only): NONE ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Trapping

Emission Color: NO EMISSIONS

Plume Type: N.A. ☐ Continuous ☐ Fugitive ☐ Intermittent

Water Droplets Present? N.A. ☐ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached

At what point in the plume was opacity determined? 12' TO 14' ABOVE STACK

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

Background Color: CLEAR

Sky Conditions: CLEAR

Wind Speed: 3 TO 7 mph

Wind Direction (i.e. from North to South): S.E.

Ambient Temperature: 65 °F

Wet Temperature: N.A. °F

Relative Humidity: 8-015* %

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

COMMENTS: NO EMISSION DURING THE 13 MIN. OBSERVED. ACTUAL OPACITY TEST FROM 7 TO 12 LOG.

Average Opacity: 0

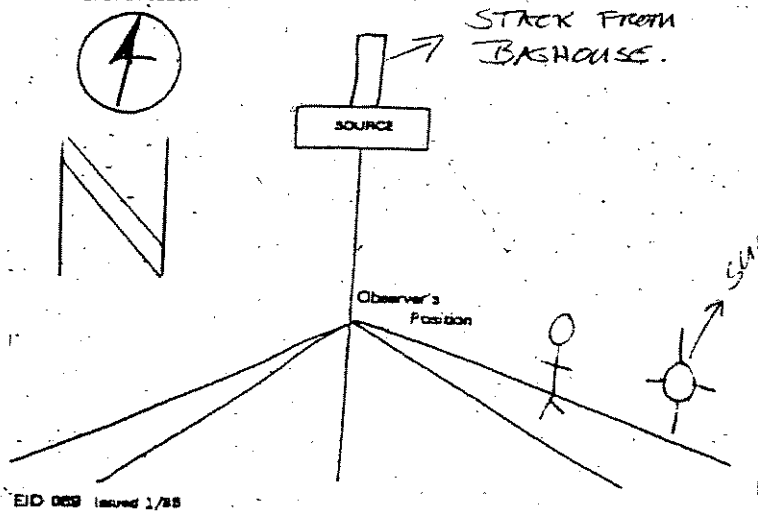
Range of Opacity Readings: Min.: 0 Max.: 0

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

Signature: R. COSTA Date: JUNE 5 06

Organization: KSL Certification Date: 2-1-06

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: 6-6-06

EID 069 Issued 1/88

OPG

VISIBLE EMISSION OBSERVATION FORM

Environmental Improvement Division
RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: ASPHALT PLANT
LOCATION: ~~TA-33~~ TA-60-RC
OBSERVATION DATE: June 2 2006
START TIME: 943AM
STOP TIME: 9:53AM

Type of Source: ASPHALT PROD.
Type of Control Equipment: BAGHOUSE
Describe Emission Point (top of stack, etc.): CONVEYOR BELT
Height Above Ground Level: 5 Feet
Height Relative to Observer: 5 Feet
Distance from Observer: 35 Yards
Direction from Observer: NORTH
Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☐ Coning ☒ Fumigation ☐ Lofting ☐ Trapping
Emission Color: LT. GRAY
Plume Type: ☐ Continuous ☐ Fugitive ☒ Intermittent
Water Droplets Present? ☒ NO ☐ YES If YES, droplet plume is ☐ Attached ☐ Detached
At what point in the plume was opacity determined? 14" ABOVE THE SOURCE
Describe Background (i.e. blue sky, trees, etc.): CLEAR BLUE SKY
Background Color: CLEAR
Sky Conditions: CLEAR
Wind Speed: 3-7 mph
Wind Direction (i.e. from North to South): SE
Ambient Temperature: 65 °F
Wet Temperature: NA °F
Relative Humidity: 8-15 %

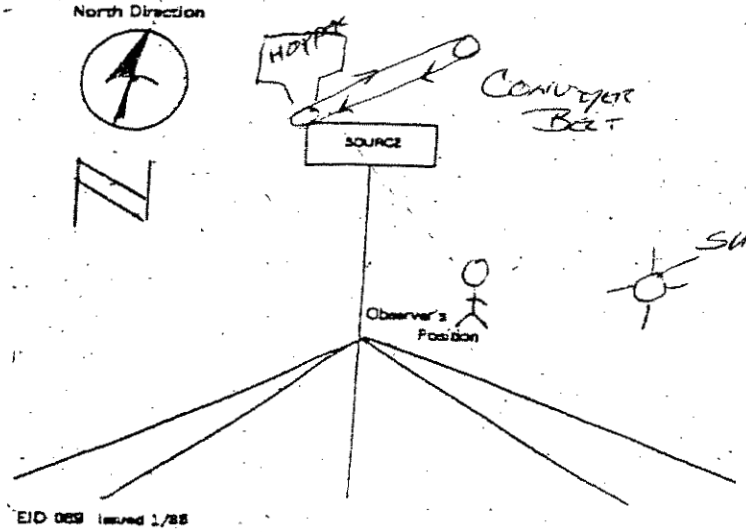
Sec. / Min.	0	15	30	45	Sec. / Min.	0	15	30	45
START	0	0	0	0	13				
2	0	0	0	0	14				
3	0	5	0	0	15				
4	0	0	0	5	16				
5	0	5	0	0	17				
6	0	5	5	0	18				
7	—	0	—		19				
8	—	0	—		20				
9	—	0	—		21				
10	—	0	—		22				
11					23				
12					24				

COMMENTS: NO EMISSION EXCEEDING 20% PERMIT ALLOWABLE. FACILITY IS COMPLIANT AT THIS TIME.

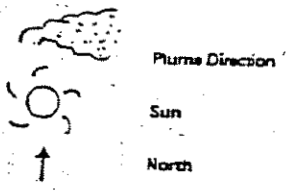
Average Opacity: 1.0% RC
Range of Opacity Readings: Min.: 0 Max.: 5

OBSERVER (please print)
Name: RICHARD COSTA Title: ENGINEER
Signature: R. Costa Date: JUNE 5 06
Organization: KSL Certification Date: 2-1-06

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: 6-6-06

EID 0659 Issued 1/88

Attachment B
Beryllium HEPA Filter Tests Results

Summary Table, Reports Attached

Unit	Date	Pass/Fail
TA-55 (H5-1430) (FF-852)	5/10/2006	Pass
TA-55 (H5-1440) (FF-853)	4/28/2006	Pass

100 AREA GLOVEBOX EXHAUST IN-PLACE HEPA FILTER TESTING

ATTACHMENT A
100 Area Glovebox Exhaust FF-852 Data Sheet

Date: 5-10-06 (8.4.1) LAS Calibration Expiration Date: 01-25-07 (8.4.3) Diluter Calibration Expiration Date: 08-06-06 (8.4.4) Dilution Ratio: 2100 (8.4.2)

Step Number	Item	FF-852 H-5-1430
9.1.12.2	Background concentration (part./cc)	3.178×10^{-2} part. concentration
9.1.12.3	Upstream concentration (part./cc)	2.521×10^{6} part. concentration
9.1.12.4	Challenge aerosol concentration between 2.00×10^{6} and 2.71×10^{6} part./cc	MMV Initials
9.1.12.5	1st stage downstream concentration (part./cc)	5.246×10^{1} part. concentration
9.1.12.6	2nd/3rd stage downstream concentration (part./cc)	3.884×10^{-2} part. concentration
9.1.12.7	1st stage Penetration $\leq 5.0 \times 10^{-4}$ (efficiency $\geq$ 99.95%)	2.079×10^{-5}
9.1.12.8	2nd/3rd stage Penetration $\leq 2.5 \times 10^{-7}$ (efficiency $\geq$ 99.999975%)	2.801×10^{-9}
9.1.13.3 9.1.13.4	Ensure all test port ball valves are closed	MMV Initials / RO Independent Verification

Valve	Required Position	Initials	Independent Verification
HV-852-H	Closed and Locked	MMV	RO
HV-852-G	Closed	MMV	RO
HV-852-F	Closed	MMV	RO
HV-852-D	Closed	MMV	RO
HV-852-C	Closed	MMV	MB
HV-852-B	Closed	MMV	RO
HV-852-A	Closed	MMV	RO
HV-852-AA	Closed	MMV	MB

Comments:

Surveillance Personnel: Signature 05/10/06 Date

OC On-duty Supervisor: Signature 5-10-06 Date

100 AREA GLOVEBOX EXHAUST IN-PLACE HEPA FILTER TESTING

ATTACHMENT B
100 Area Glovebox Exhaust FF-853 Data Sheet

Date: 4/28/06 (8.4.1) LAS Calibration Expiration Date: 6/25/06 (8.4.3) Diluter Calibration Expiration Date: 06/06/06 (8.4.4) Dilution Ratio: 2100/1 (8.4.2)

Step Number	Item	FF-853 H-5-1440
9.2.12.2	Background concentration (part./cc)	0.0 part. concentration
9.2.12.3	Upstream concentration (part./cc)	2.57×10^6 part. concentration
9.2.12.4	Challenge aerosol concentration between 2.00×10^6 and 2.71×10^6 part./cc)	PT Initials
9.2.12.5	1st stage downstream concentration (part./cc)	2.226×10^2 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%)	8.661×10^{-5}
9.2.12.8	2nd/3rd stage Penetration ≤ 2.5×10^{-7} (efficiency ≥ 99.999975%)	4.132×10^{-9}
9.2.13.3 9.2.13.4	Ensure all test port ball valves are closed	PT Initials / mm Independent Verification

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

Comments:

Surveillance Personnel Paul Trujillo 43806 Signature Date

OC On-duty Supervisor Signature 4/28/06 Date

Attachment C
Boilers and Heaters Natural Gas Usage

2006 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	4001	0	4.001	January	31.75	242
February	3476	0	3.476	February	31.62	232
March	3557	0	3.557	March	31.45	232
April	2517	0	2.517	April	31.34	136
May	2002	0	2.002	May	31.21	48
June	1720 ✓	0 ✓	1.720	June	31.38	8
July				July		
August				August		
September				September		
October				October		
November				November		
December				December		
Annual Totals:	17273	0	17.273			
Jan. - June	17273	0	17.273			
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)

Reviewed by/Date: Walt Whetten 7/05/06

2006 Small Boilers Data Entry / Gas Use

	Month	Metered Boilers: TA-55 Boiler Gas Use (MSCF)[c] BHW-1B (B-602)	BHW-2B (B-603)	TA-50-2[d] (MSCF) BS-1	Total Gas Use[a] (MSCF)	(MMSCF)	Non-Metered Gas Use (MMSCF)	12-Month Rolling Total for all Small Boilers (MMSCF)[e]
Data Entry	January	2751	135		69,973	69.97	66.84	513.43
	February	591	0		59,582	59.58	58.74	504.46
	March	1630	0		58,189	58.19	56.31	496.97
	April	1301	57		35,789	35.79	34.18	484.29
	May	578	1010		21,932	21.93	20.10	475.96
	June	242	910	1492	16,395	16.40	14.99	476.66
	July							
	August							
	September							
	October							
	November							
	December							
	TOTAL	7093	2112	1492	261,860	261.86	251.16	Permit Limit: 670

2006 Non Metered Boiler Pool Capacity:	**306.1**	MMBTU/hr[f]
Estimated Gas-Use per MMBtu rating Jan-June:	0.82	MMscf/MMBtu/hr
Estimated Gas-Use per MMBtu rating July-Dec:	0.00	MMscf/MMBtu/hr
Estimated Gas-Use per MMBtu - Annual	0.82	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[g] (MMSCF)								
AIRS Stack #	015	016	017	018	019	020	021	024	Insignificant Units[h]
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[f] (MMBTU/hr)	**5.336**	**5.335**	**7.140**	**7.115**	**7.115**	**5.335**	**5.335**	**12.700**	**251**
Calculated Gas Use-Jan-June	4.379	4.378	5.859	5.838	5.838	4.378	4.378	10.421	205.696
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	4.379	4.378	5.859	5.838	5.838	4.378	4.378	10.421	205.696

Reviewed By/Date: Walt Whitman 8-8-06

Attachment D
Carpenter Shop Hours of Operation

2006 TA-3 & TA-15 Carpenter Shops

TA-3	Data Entry
	Hours of Operation[1]
Month	TA-3
January	15.5
February	19
March	22.5
April	26.5
May	14.25
June	11 ✓
6 mo. Total	108.75

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	10.2
February	19.8
March	29.2
April	13.3
May	13.3
June	16.0 ✓
6 mo. Total	101.8

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.

Reviewed By/Date: Walt Wattman 7/25/06

Attachment E
Degreaser Solvent Usage

RRES-MAQ Labview
RISK REDUCTION & ENVIRONMENTAL STEWARDSHIP DIVISION
phone: 665-8855
fax: 665-8858
who we are
METEOROLOGY & AIR QUALITY

Degreaser Compliance Site

Historical Solvent Usage Data

The usage information for UT Bath degreaser from Jan-01-2006 through Jun-30-2006 is displayed below.

General Degreaser Information

Degreaser Type	TA	Building	Solvent
Cold Batch	55		Trichloroethylene

Date Measured	Initial Solvent Level (inches)	Volume Added (liters)	Level Added (inches)	Volume Removed (liters)	Level Removed (inches)
Jan-03-2006	6.5	0.00	0.00	0.0	0.0
Feb-01-2006	6.3	0.00	0.00	0.0	0.0
Mar-01-2006	5.9	0.00	0.00	0.0	0.0
Apr-03-2006	5.5	0.00	0.00	0.0	0.0
Apr-10-2006	5.5	3.34	1.70	0.0	0.0
Apr-27-2006	7.2	0.00	0.00	14.15	7.2
May-01-2006	0.0	0.00	0.00	0.0	0.0

Change Selection | View Emissions | Main Menu
Problem Report | Exit Application

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

Degreaser Compliance User's Guide

Page Last Modified: 29-Jul-2004 10:18

Attachment F
Internal Combustion Generator Hours of Operation

2006 GENERATOR HOURS

								First 6 Month Readings 2006			Second 6 Month Readings 2006		
TA	Bldg	Manufacturer	MODEL	KW	Fuel Type	Reading Date 2nd half 05'	Reading 2nd half 05'	6 Month Reading Date	Reading	Hours Run	12 Month Reading Date	Reading	Hours Run
3	40	Onan Sons	1500DVE15R31374B	150	Diesel	Nov-05	246.0	Apr-06	246.0	0.0			
3	223	Onan Sons		45	Nat. Gas	Nov-05	469.1	Apr-06	473.2	4.1			
3	440	Cummins	500FDR5051	150	Diesel	Dec-05	98.0	Apr-06	114.5	16.5			
3	440	Cummins	DFGA-5005210	500	Diesel	Dec-05	42.9	Apr-06	60.7	17.8			
3	1076	Cummins	DGBB-5601289	35	Diesel	Dec-05	44.5	May-06	80.6	36.1			
3	1404	Cummins	DFLC-5554001	1250	Diesel	Dec-05	79.0	May-06	112.9	33.9			
3	1498	Caterpillar		600	Diesel	Nov-05	281.0	Apr-06	286.0	5.0			
3	2322	Onan Sons		80	Diesel	Nov-05	202.8	Apr-06	284.4	81.6			
16	980	Cummins	KTA50-G2	1100	Diesel	Dec-05	10.4	May-06	63.6	53.2			
16	1374	Onan Sons	60ENA	60	Nat. Gas	Nov-05	978.0	Apr-06	1018.6	40.6			
18	31	Onan Sons	275DFML29807N	275	Diesel	Dec-05	160.0	May-06	172.2	12.2			
21	155	Onan Sons	750.ODFV-4XR	750	Diesel	Nov-05	837.8	Apr-06	849.1	11.3			
21	357	Caterpillar		125	Diesel	Nov-05	456.5	Apr-06	467.9	11.4			
21	1002	Onan Sons	H1750DSG15	175	Diesel	Nov-05	2934.0	Apr-06	2962.7	28.7			
21	1002	Onan Sons		350	Diesel	Nov-05	1878.1	Apr-06	2506.4	628.3			
21	1002	Cummins	150DGFA	150	Diesel	Nov-05	1083.5	Apr-06	1145.0	61.5			
33	20	Kohler	30ROZ	30	Diesel	Nov-05	915.2	May-06	916.7	1.5			
33	151	Caterpillar	XQ225	225	Diesel	Nov-05	2944.0	May-06	2944.0	0.0			
33	208	Kohler	1600ROZD	1600	Diesel	Nov-05	4.9	May-06	4.9	0.0			
33	Point	Onan Sons	80DG10A	80	Diesel	Nov-05	7643.1	May-06	7643.1	0.0			
35	2	Onan Sons	100DGDB	100	Diesel	Dec-05	115.3	May-06	115.3	0.0			
43	1	Cummins	4BT3.9-GC	50	Diesel	Nov-05	356.7	Apr-06	362.1	5.4			
43	1	Onan Sons		150	Diesel	Nov-05	506.6	Apr-06	530.2	23.6			
46	335	Onan Sons	300DEFCB	300	Diesel	Nov-05	784.6	May-06	824.6	40.0			
48	45	Onan Sons	DFCB-5740130	300	Diesel	Nov-05	343.7	May-06	2.9	2.9			
50	37	Cummins	680FDR5059FF	500	Diesel	Nov-05	475.4	Apr-06	480.4	5.0			
50	184	Onan Sons	75ENAD	60	Nat. Gas	Nov-05	92.1	Apr-06	112.1	20.0			
50	188	Onan Sons	L940563879	1250	Diesel	Nov-05	142.7	Apr-06	148.1	5.4			
53	1	Onan Sons		60	Nat. Gas	Nov-05	1067.1	Apr-06	1110.9	43.8			
53	2	Kato Eng.	Kaman	50	Diesel	Nov-05	194.3	May-06	194.3	0.0			
53	M	Cummins		60	Diesel	Nov-05	4440.0	May-06	4440.1	0.1			
53	M	Onan Sons		12.5	Nat. Gas	Nov-05	581.5	May-06	581.6	0.1			
54	412	Olympian	95M-07874-F	500	Diesel	Nov-05	269.2	Apr-06	282.5	13.3			
55	5			100	Nat. Gas	Dec-05	62.4	Apr-06	65.7	3.3			
55	8	Detroit		600	Diesel	Dec-05	782.9	May-06	792.2	9.3			
55	364	Onan Sons	1250DFLC-4987	1250	Diesel	Dec-05	11.9	May-06	23.2	11.3			
55	28	Onan Sons		40	Diesel	Dec-05	45.1	Apr-06	47.2	2.1			
55	47	Onan Sons	1465	200	Diesel	Nov-05	492.3	Apr-06	500.1	7.8			
55	142	Cummins	DFEB-4963414	400	Diesel	Dec-05	75.0	Apr-06	79.4	4.4			
59	1	Allis Chalmers	2884-0703	90	Diesel	Nov-05	736.8	Apr-06	742.0	5.2			
63	Yard	Murphy		20	Diesel	Nov-05	569.9	May-06	715.9	146.0			
64	1	Onan Sons		250	Diesel	Nov-05	134.5	May-06	140.4	5.9			
64	39	Onan Sons		20	Diesel	Dec-05	189.9	May-06	189.9	0.0			
69	33	Cummins	DFLC-5568730	1250	Diesel	Nov-05	35.0	Apr-06	40.6	5.6			
	44 Generators in use								**TOTAL**	1404.2		**TOTAL**	0.0

N/R = Not Read

First half average hours per unit	31.9	Second half average hours per unit

Annual Average of hours per unit	31.9

Reviewed By / Date:

Attachment G
Data Disintegrator Box Throughput

2006 TA-52 Data Disintegrator

Reviewed By / Date: Walt Whittum

Month	Data Entry Boxes[(c)] Shredded	12-Month Rolling Total	Month	Data Entry Boxes[(c)] Shredded	12-Month Rolling Total
January	1436	7897	July		
February	1040	8169	August		
March	766	7870	September		
April	705	7731	October		
May	1023	7986	November		
June	1379 ✓	9228	December		
6 mo. Total	6,349		6 mo. Total:	0	

Annual Boxes (2006):	6,349

Attachment H
Power Plant Natural Gas and Fuel Oil Usage

TA-3 Power Plant Fuel Use Totals 2006 (Data Entry)

	DATA ENTRY							
	TA-3-22 Steam Plant[b] Boiler # 1 (Edgemoor Iron Works, 210 MMBTU/hr)		TA-3-22 Steam Plant[b] Boiler # 2 (Edgemoor Iron Works, 210 MMBTU/hr)		TA-3-22 Steam Plant[b] Boiler # 3 (Union Iron Works, 210 MMBTU/hr)		Monthly Totals	
Month	Natural Gas (MCF)[a]	Fuel Oil (gallons)[a]	Natural Gas (MCF)[a]	Fuel Oil (gallons)[a]	Natural Gas (MCF)[a]	Fuel Oil (gallons)[a]	Natural Gas (MMCF)[a]	Fuel Oil (gallons)[a]
January	5,171	0	7,866	0	55,572	0	68.609	0
February	4,840	713	5,675	0	47,920	0	58.435	713
March	1,934	603	10,104	319	45,818	0	57.856	922
April	0	0	8,249	378	41,663	0	49.912	378
May	0	0	24,512	651	9,412	0	33.924	651
June	0 ✓	0 ✓	28,120 ✓	658 ✓	1,346 ✓	0 ✓	29.466	658
July								
August								
September								
October								
November								
December								
Annual Totals:	11,945	1,316	84,526	2,006	201,731	0	298.202	3322
Jan. - June	11,945	1,316	84,526	2,006	201,731	0	298.202	3322
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	561.9	4403
February	563.4	4994
March	561.7	5881
April	563.9	5215
May	556.1	4970
June	554.9	4972
July		
August		
September		
October		
November		
December		

	Totals by Fuel Type	
	Natural Gas (MMscf)	Fuel Oil (Gallons)
Annual Totals:	298.20	3322.00
Jan. - June	298.20	3322.00
July - Dec.	0.00	0.00

For References, See "Emission Summary Sheet"

Data Reviewed By: WM NMN 7/25/06

Permit Limits:	2000 MMscf	500,000 gallons

The limit for Natural Gas is from NSR Permit # 2195BM2. **The limit for Fuel Oil is from the Title-V Operating Permit.**

Attachment I
Power Plant Opacity Reports

Summary Table, Reports Attached

Source	Date	Time	Opacity
TA-3-22 Power Plant	02-21-06	9:44 am	9.625%
TA-3-22 Power Plant	03-28-06	8:10 am	0%
TA-3-22 Power Plant	04-04-06	10:15 am	5.5%
TA-3-22 Power Plant	05-31-06	10:47 am	10.75%
TA-3-22 Power Plant	06-06-06	9:15am	0%
TA-3-22 Power Plant	06-20-06	7:50 am	6.5%

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: Fuel oil #1 Boiler

LOCATION: TA 3 SMZZ 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 ~~Ft~~

Direction from Observer: NW

Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☑ Setting ☐ Trapping

Emission Color: Black

Plume Type: ☐ 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: 3-5 mph

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

Ambient Temperature: °F

Wet Temperature: °F

Relative Humidity: %

COMMENTS:

OBSERVATION DATE: 2/21/06

START TIME: 9:44

STOP TIME: 10:44

Min. \ Sec.	0	15	30	45
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	25	25
7	25	0	0	50
8	25	5	0	0
9	0	0	100	75
10	50	5	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0

Average Opacity: 9.625%

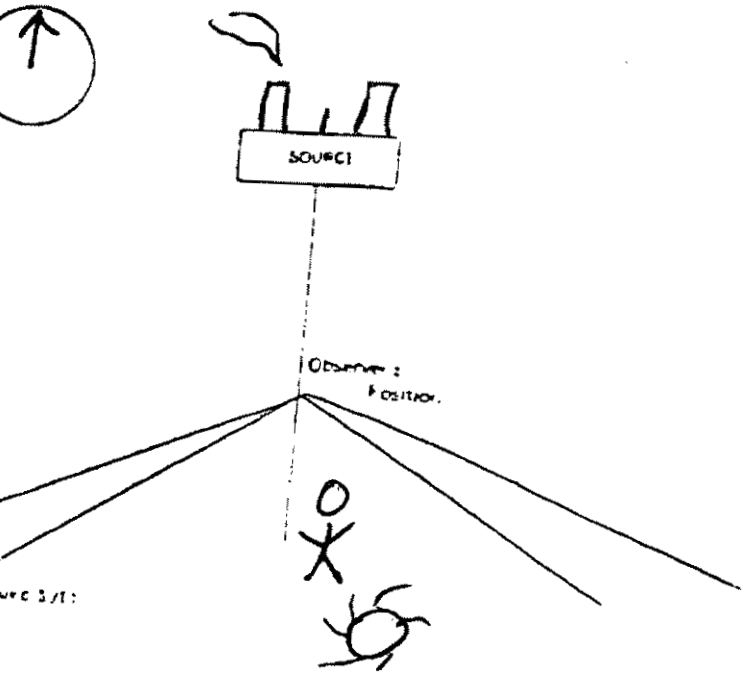
Range of Opacity Reading: Min.: 0 Max.: 100

OBSERVER (Please print) Name: BRIAN ORTE Title: Operator

Signature: Brian Orte Date: 2-21-06

Organization: Utilities Certification Date: 8/31/05

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

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

Signature: Armand Stanley

Title: Maintenance Engineer

Date: 2-21-06

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: Fuel Oil #1 Boiler	OBSERVATION DATE: 2/21/06	START TIME: 9:41	STOP TIME:
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 ~~Ft~~	Direction from Observer: NE
Description of Plume (stack exit only): ☑ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation	
Emission Color: Black	Plume Type: ☐ 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 Foot Above Stack	
Describe Background (i.e. blue sky, trees, etc.): Blue Sky	
Background Color: Blue	Sky Conditions: Clear
Wind Speed: 3-5 mph	Wind Direction (i.e. from North to South): SE TO NW
Ambient Temperature: °F	Wet Temperature: °F / Relative Humidity: %

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

COMMENTS:

Average Opacity: 9.625 %

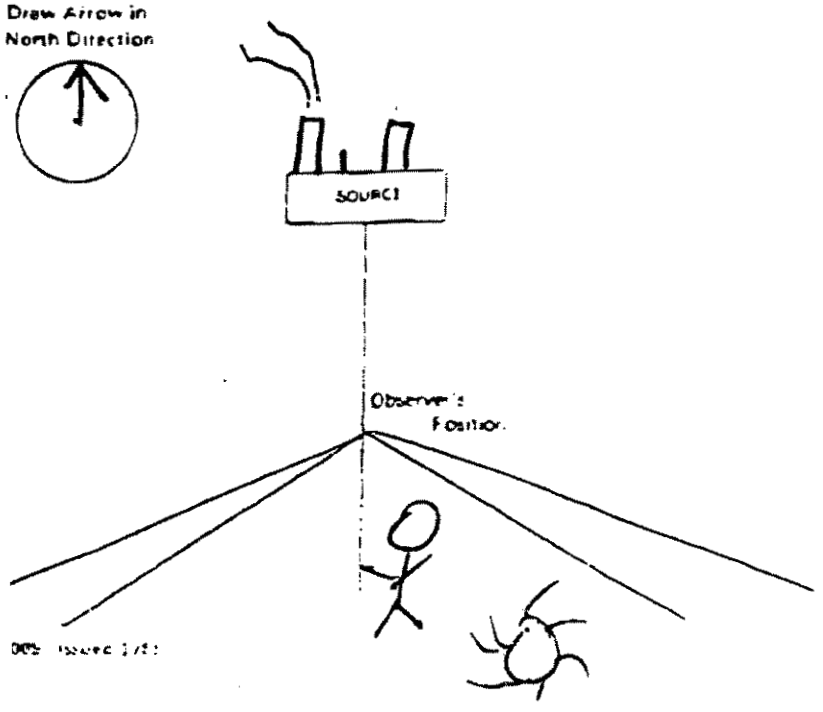
Range of Opacity Reading: Min.: 0 Max.: 100

OBSERVER (please print) Name: BRIAN ORTIZ Title: OPERATOR

Signature: Brian Ortiz Date: 2/21/06

Organization: Utilities Certification Date: 8/31/05

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

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

Signature: Armand Stanley

Title: Maintenance Engineer

Date: 2-21-06

DEP Issued 1/95

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE	Fuel oil #1 Boiler
LOCATION	TAS SMZZ 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 Feet
Direction from Observer	NW
Description of Plume (stack exit only)	☑ Looping ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation
Emission Color	Black
Plume Type	☐ 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	3-5 mph
Wind Direction (i.e. from North to South)	SE to NW
Ambient Temperature	°F
Wet Temperature	°F
Relative Humidity	%

OBSERVATION DATE: 2-21-06 | START TIME: 9:44 | STOP TIME: 10:44

Sec / Min.	0	15	30	45	Sec / Min.	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	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11	0	0	0	0	23				
12	0	0	0	0	24				

Average Opacity: 9.625 %

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

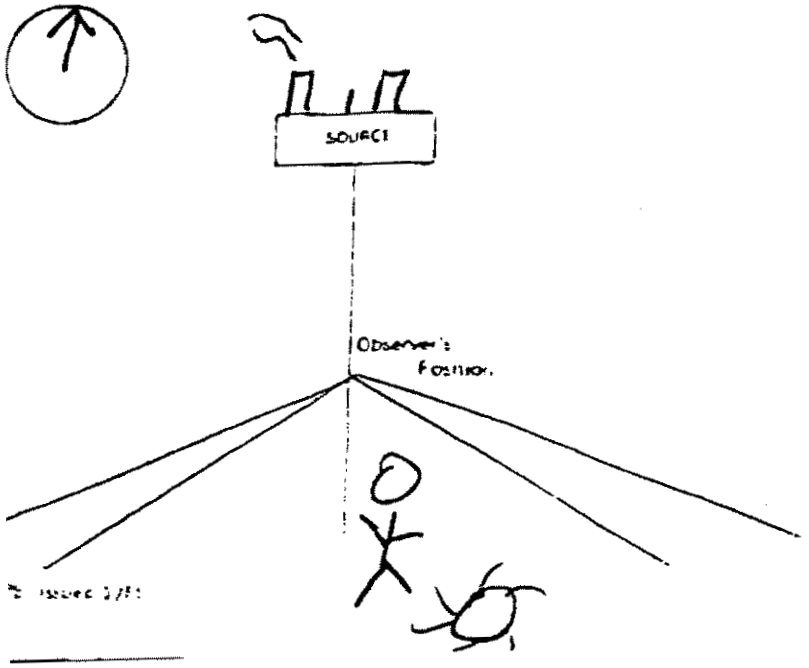
COMMENTS: stopped reading at 10:44 now just observing.

OBSERVER (please print) Name: Brian Ortiz Title: Operator

Signature: Brian Ortiz Date: 2-21-06

Organization: Utilities Certification Date: 8-31-05

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

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

Signature: Samuel Standley

Title: Maintenance Foreman

Date: 2-21-06

* Issued 2/95

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: Fuel Oil #2 Boiler
LOCATION: TA 3 SM 22 Power Plant
Type of Source: Fuel Oil
Type of Control Equipment: NA
Describe Emission Point (top of stack, etc.): West Stack - Top of Stack
Height Above Ground Level: 175 Feet
Height Relative to Observer: 190 Feet
Distance from Observer: 250 Feet
Direction from Observer: N W
Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Lofting ☐ Trapping
Emission Color: Black
Plume Type: ☐ 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.): Gray + Blue Skies
Background Color: Gray-Blue
Sky Condition: Partly Cloudy
Wind Speed: 0-3 mph
Wind Direction (i.e. from North to South): S-N
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

OBSERVATION DATE: 3-28-06
START TIME: 0810
STOP TIME: 1015

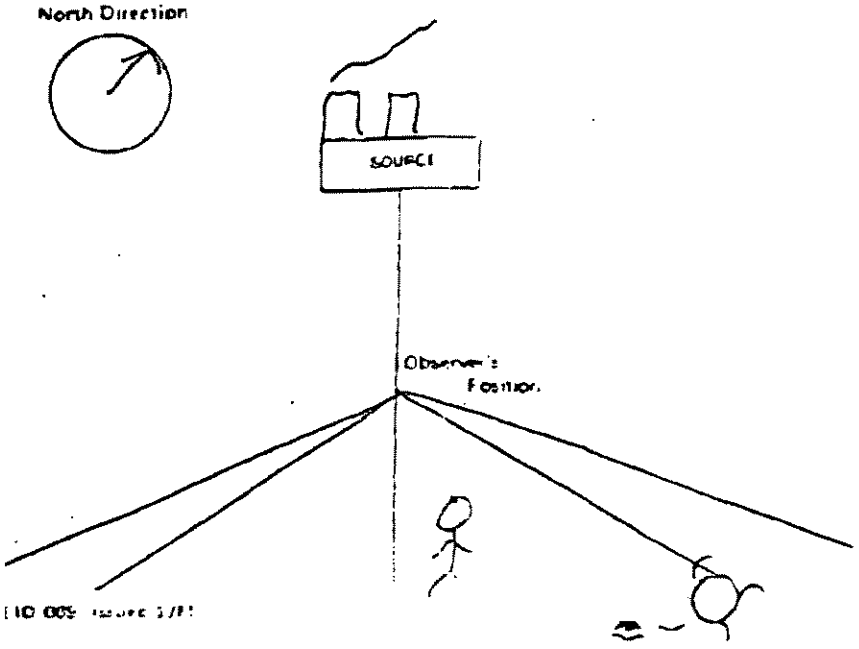
Min. \ Sec	0	15	30	45	Min. \ Sec	0	15	30	45
1	0	0	0	0	13	0	0	0	0
2	0	0	0	0	14	0	0	0	0
3	0	0	0	0	15	0	0	0	0
4	0	0	0	0	16	0	0	0	0
5	0	0	0	0	17	0	0	0	0
6	0	0	0	0	18	0	0	0	0
7	0	0	0	0	19	0	0	0	0
8	0	0	0	0	20	0	0	0	0
9	0	0	0	0	21	0	0	0	0
10	0	0	0	0	22	0	0	0	0
11	0	0	0	0	23	0	0	0	0
12	0	0	0	0	24	0	0	0	0

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

COMMENTS:
1 Fuel Oil Burner Put in Service at 08:10 and Removed From Service at 1015. Operators unable to put another burner in service.

OBSERVER (please print) Name: Leonard Pacheco Title: Operator
Signature:
Date: 3-28-06
Organization: KSL
Certification Date: 3-1-06

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

I acknowledge receipt of a copy of these visible emissions observations.
Signature: Bonney R. Maguf
Title: UPPS Ops Superintendent
Date: 3/28/06

EID 005 (Revised 3/97)

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: FUEL OIL #2 BOILER

LOCATION: TA 3 SM 22 POWER PLANT

Type of Source: FUEL OIL | **Type of Control Equipment:** NA

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

Height Above Ground Level: 175 Feet | **Height Relative to Observer:** 190 Feet

Distance from Observer: 250' ~~Yards~~ | **Direction from Observer:** N.W

Description of Plume (stack exit only): ☐ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation

Emission Color: BLACK | **Plume Type:** ☐ 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.): GRAY + BLUE SKY

Background Color: GRAY + BLUE | **Sky Conditions:** PARTLY CLOUDY

Wind Speed: 0-3 mph | **Wind Direction (i.e. from North to South):** S - N

Ambient Temperature: °F | **Wet Temperature:** °F | **Relative Humidity:** %

COMMENTS:

OBSERVATION DATE: 3-28-06 | **START TIME:** 0810 | **STOP TIME:** 1015

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

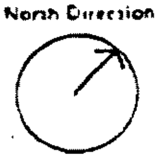
Average Opacity: 0 | **Range of Opacity Readings** Min.: 0 Max.: 0

OBSERVER (please print) Name: LEONARD PACHECO Title: OPERATER

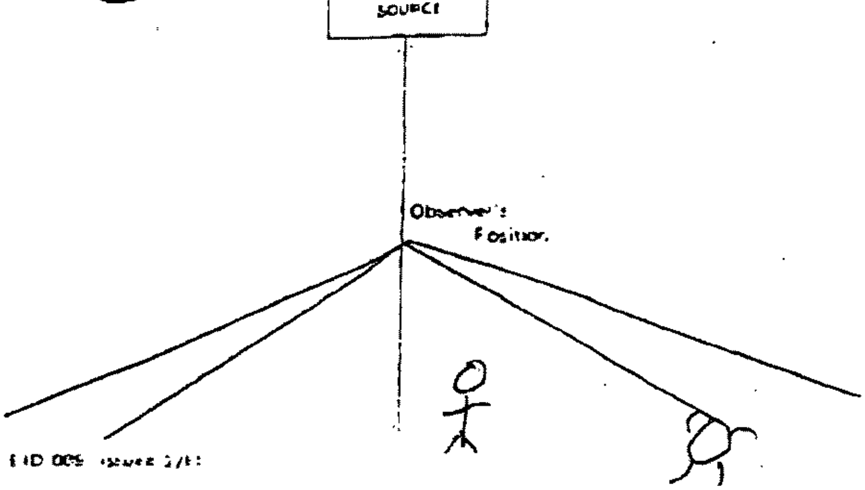
Signature: [signature] | **Date:** 3-28-06

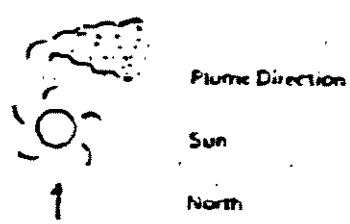
Organization: KSL | **Certification Date:** 3-1-06

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:





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

Signature: Benny R. Marquez

Title: UPPS Ops Superintendent

Date: 3/28/06

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE	FUEL OIL #2 BOILER
LOCATION	TA 3 SM 22 POWER PLANT
Type of Source	FUEL
Type of Control Equipment	NA
Describe Emission Point (top of stack, etc.)	WEST STACK — TOP OF STACK
Height Above Ground Level	175 Feet
Height Relative to Observer	190 Feet
Distance from Observer	250 Feet
Direction from Observer	N W
Description of Plume (stack exit only)	☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Lofting ☐ Trapping
Emission Color	BLACK
Plume Type	☐ 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.)	GRAY & BLUE SKY
Background Color	GRAY & BLUE
Sky Conditions	PARTLY CLOUDY
Wind Speed	0-3 mph
Wind Direction (fr. from North to South)	S-N
Ambient Temperature	°F
Wet Temperature	°F
Relative Humidity	%

OBSERVATION DATE	START TIME	STOP TIME
3-28-06	0810	1015

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

COMMENTS:

Average Opacity: 0

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

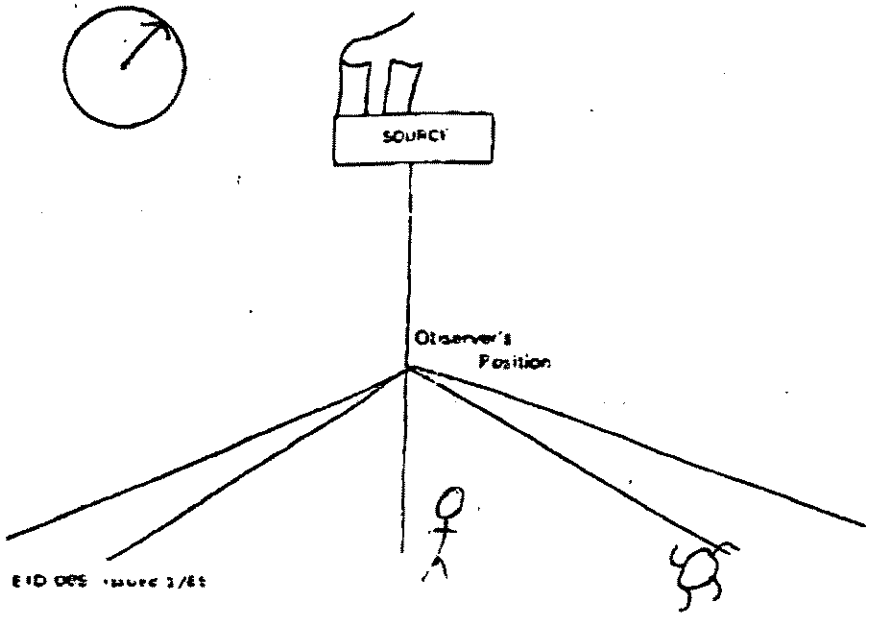
OBSERVER (please print)

Name: LEONARD PACHECO Title: OPERATER

Signature: [signature] Date: 3-28-06

Organization: KSL Certification Date: 3-1-06

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

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

Signature: Benny R. Maez

Title: UPPS Ops Superintendent

Date: 3/28/06

RECORD OF VISUAL DETERMINATION OF OPACITY

4

SOURCE: FUEL OIL # 2 BOILER	OBSERVATION DATE: 3-28-06
LOCATION: TA 3 SM 22 POWER PLANT	START TIME: 0810
Type of Source: FUEL OIL	STOP TIME: 1015
Type of Control Equipment: NA	
Describe Emission Point (top of stack, etc.): WEST STACK - TOP OF STACK	
Height Above Ground Level: 175 Feet	Height Relative to Observer: 190 Feet
Distance from Observer: 250'	Direction from Observer: N W
Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation	
Emission Color: BLACK	Plume Type: ☐ 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.): GRAY + BLUE SKY	
Background Color: GRAY + BLUE	Sky Conditions: PARTLY CLOUDY
Wind Speed: 0-3 mph	Wind Direction (i.e. from North to South): S-N
Ambient Temperature: °F	Wet Temperature: °F
	Relative Humidity: %

Sec. Min.	0	15	30	45
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	0	0	0	0
12	0	0	0	0

Sec. Min.	0	15	30	45
13	0	0	0	0
14	0	0	0	0
15	0	0	0	0
16	0	0	0	0
17	0	0	0	0
18	0	0	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0
24	0	0	0	0

Average Opacity: 0

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

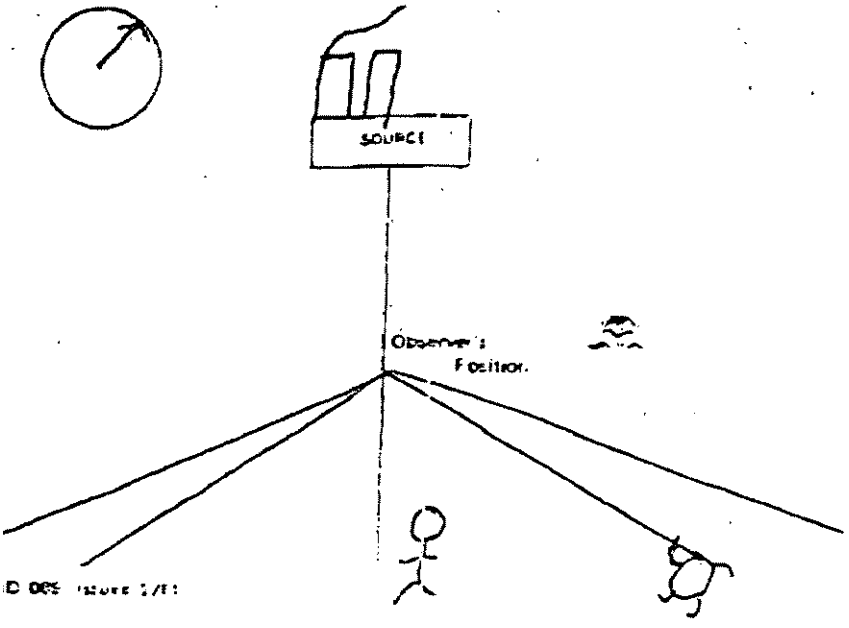
COMMENTS:

OBSERVER (please print)
Name: LEONARD PALMERO Title: OPERATER

Signature: [signature] Date: 3-28-06

Organization: KSL Certification Date: 3-1-06

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: UPPS ops Superintendent

Date: 3/28/06

D OPS Issue 2/1:

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: FUEL OIL #2 BOILER

OBSERVATION DATE: 3-28-06 | START TIME: 0810 | STOP TIME: 1015

LOCATION: TA 3 SM 22 POWER PLANT

Type of Source: FUEL OIL

Type of Control Equipment: NA

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

Height Above Ground Level: 175 Feet

Height Relative to Observer: 190 Feet

Distance from Observer: 250 ~~Meters~~

Direction from Observer: NW

Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Lofting ☐ Trapping

Emission Color: BLACK

Plume Type: ☐ 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.): GRAY + BLUE SKY

Background Color: GRAY + BLUE

Sky Conditions: PARTLY CLOUDY

Wind Speed: 0-3 mph

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

Ambient Temperature: °F

Wet Temperature: °F

Relative Humidity: %

COMMENTS:

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

Average Opacity: 0

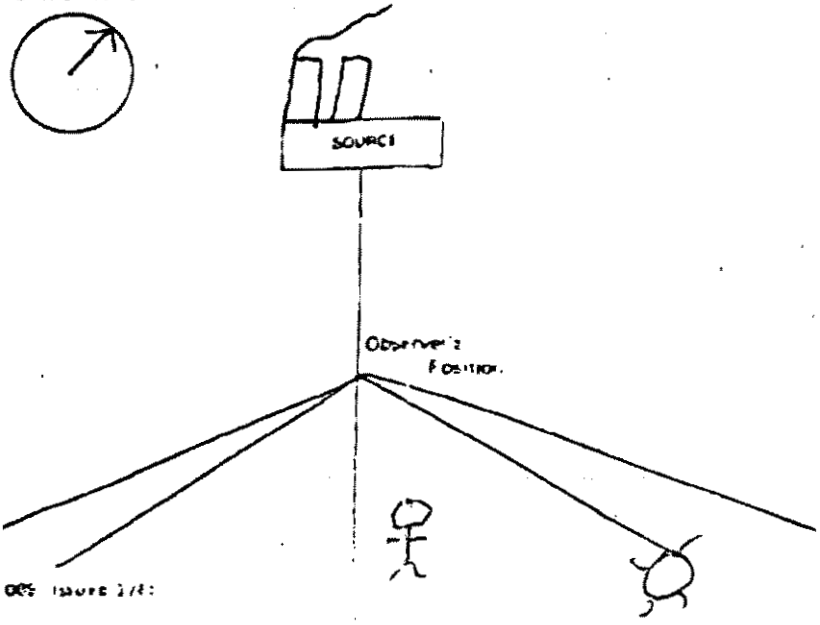
Range of Opacity Readings: Min.: 0 Max.: 0

OBSERVER (please print): Name: LEONARD PACHECO Title: OPERATER

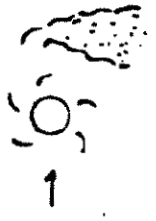
Signature: [signature] Date: 3-28-06

Certification: KSL Certification Date: 3-1-06

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: USPS Ops Supervisor

Date: 3/28/06

OES Issue 2/8:

RECORD OF VISUAL DETERMINATION OF OPACITY 6

SOURCE	FUEL OIL #2 BOILER
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.)	WEST TANK TOP OF STACK
Height Above Ground Level	175 Feet
Height Relative to Observer	190 Feet
Distance from Observer	250' ~~Yards~~
Direction from Observer	N.W
Description of Plume (stack exit only)	☐ Looping ☐ Fanning ☐ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color	BLACK
Plume Type	☐ 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.)	Gray + BLUE
Background Color	GRAY + BLUE
Sky Conditions	PARTLY CLOUDY
Wind Speed	0-3 mph
Wind Direction (i.e. from North to South)	S-N
Ambient Temperature	°F
Wet Temperature	°F
Relative Humidity	%

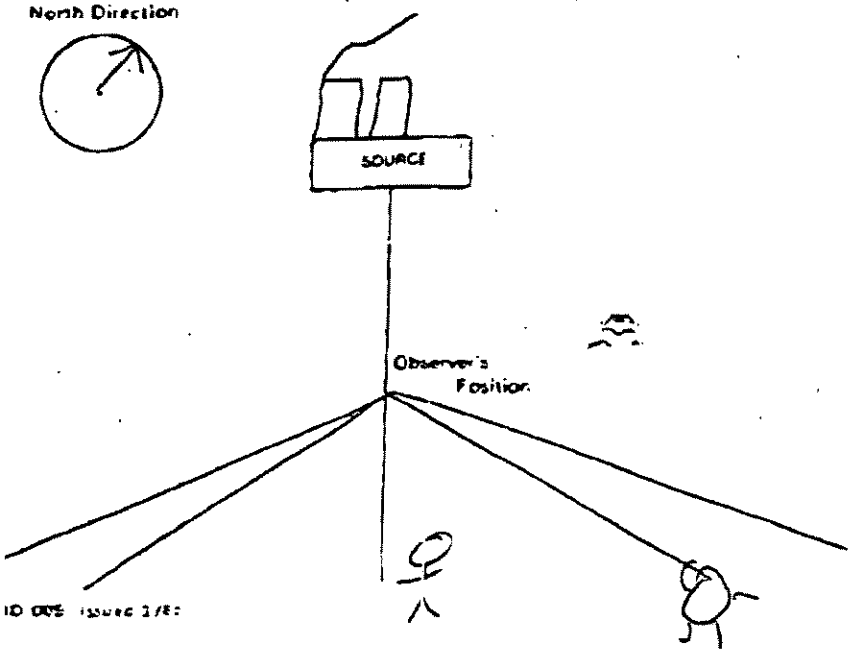
OBSERVATION DATE	START TIME	STOP TIME
3-28-06	0810	10:15

Sec. / Min.	0	15	30	45	Sec. / Min.	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					18				
7					19				
8					20				
9					21				
10					22				
11					23				
12					24				

COMMENTS:

Average Opacity	Range of Opacity Readings: Min.: Max.:
OBSERVER (please print) Name: Leonard Pacheco	Title: OPERATOR
Signature	Date: 3-28-06
Organization: YSL	Certification Date: 3-1-06

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

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

Signature: Benny R. Mayer

Title: UPPS Ops Superintendent

Date: 3/28/06

ID 005 Issued 2/8:

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE	FUEL OIL #2 BOILER
LOCATION	TA 3 SM 22 POWER PLANT
Type of Source	FUEL OIL
Type of Control Equipment	NA
Describe Emission Point (top of stack, etc.)	WEST STACK — TOP OF STACK
Height Above Ground Level	150 Feet
Height Relative to Observer	170 Feet
Distance from Observer	250 Yards
Direction from Observer	SE
Description of Plume (stack exit only)	☐ Looping ☐ Fanning ☑ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color	BLACK
Plume Type	☐ 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.)	WHITE CLOUDS & BLUE SKY
Background Color	WHITE & BLUE
Sky Conditions	PARTLY CLOUDY / BROKEN
Wind Speed	2-5 mph
Wind Direction (i.e. from North to South)	SOUTH TO WEST
Ambient Temperature	°F
Wet Temperature	°F
Relative Humidity	%

OBSERVATION DATE	START TIME	STOP TIME
4-4-06	1015	1200

Sec. / Min.	0	15	30	45	Sec. / Min.	0	15	30	45
1	0	0	0	0	13	0	0	0	0
2	0	0	0	0	14	0	0	0	0
3	0	0	0	0	15	0	0	0	0
4	0	0	0	0	16	0	0	0	0
5	0	0	0	75	17	0	0	0	0
6	75	50	5	0	18	0	0	0	0
7	0	0	0	0	19	0	0	0	0
8	0	0	0	0	20	0	0	0	0
9	0	0	0	0	21	0	0	0	0
10	0	0	0	0	22	0	0	0	0
11	0	0	0	0	23	0	0	0	0
12	0	0	0	0	24	0	0	0	0

COMMENTS:

BURNER ON ABOUT 1022
BOILER TRIP AT 1027
BURNER BACK ON 1030

Average Opacity: 5.5

Range of Opacity Readings: Min.: 75 Max.: 2

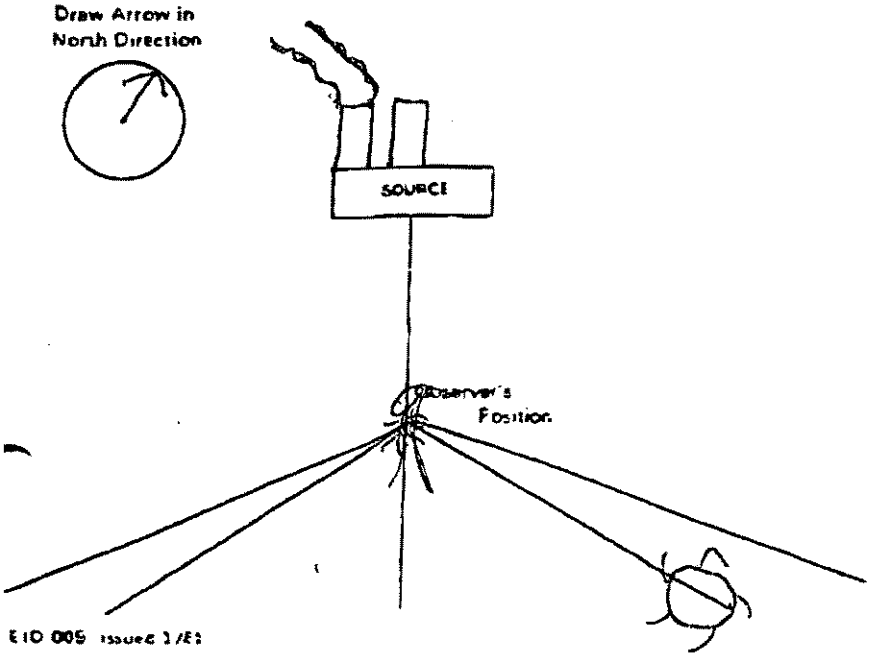
OBSERVER (please print)

Name: LEONARD PACHECO Title: OPERATOR

Signature: [signature] Date: 4-4-06

Organization: KSL Certification Date: 3-1-06

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: UPPS Superintendent

Date: 4/5/06

EID 005 Issued 1/E1

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE	FUEL OIL #2 BOILER
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.)	WEST STACK — TOP OF STACK
Height Above Ground Level	150 Feet
Height Relative to Observer	170 Feet
Distance from Observer	250' Feet
Direction from Observer	SE
Description of Plume (stack exit only)	☐ Looping ☐ Fanning ☑ Coning ☐ Lofting ☐ Trapping ☐ Fumigation
Emission Color	BLACK
Plume Type	☐ 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 + WHITE SKY
Background Color	BLUE + WHITE
Sky Conditions	SAME
Wind Speed	2-5 mph
Wind Direction (i.e. from North to South)	SAME
Ambient Temperature	°F
Wet Temperature	°F
Relative Humidity	%

COMMENTS:

1055 : BURNER ON

OBSERVATION DATE: 4-4-06 | START TIME: 1015 | STOP TIME: 1200

Min. \ Sec.	0	15	30	45	Min. \ Sec.	0	15	30	45
1	0	0	0	0	13	0	0	0	0
2	0	0	0	0	14	0	0	0	0
3	0	0	0	0	15	0	0	0	0
4	0	0	0	0	16	0	0	0	0
5	0	0	0	0	17	0	0	0	0
6	0	0	0	0	18	0	0	0	0
7	0	0	0	0	19	0	0	25	25
8	0	0	0	0	20	50	50	5	0
9	0	0	0	0	21	0	0	0	0
10	0	0	0	0	22	0	0	0	0
11	0	0	0	0	23	0	0	0	0
12	0	0	0	0	24	0	0	25	25

Average Opacity: 5-5

Range of Opacity Readings: Min.: 75 Max.: 2

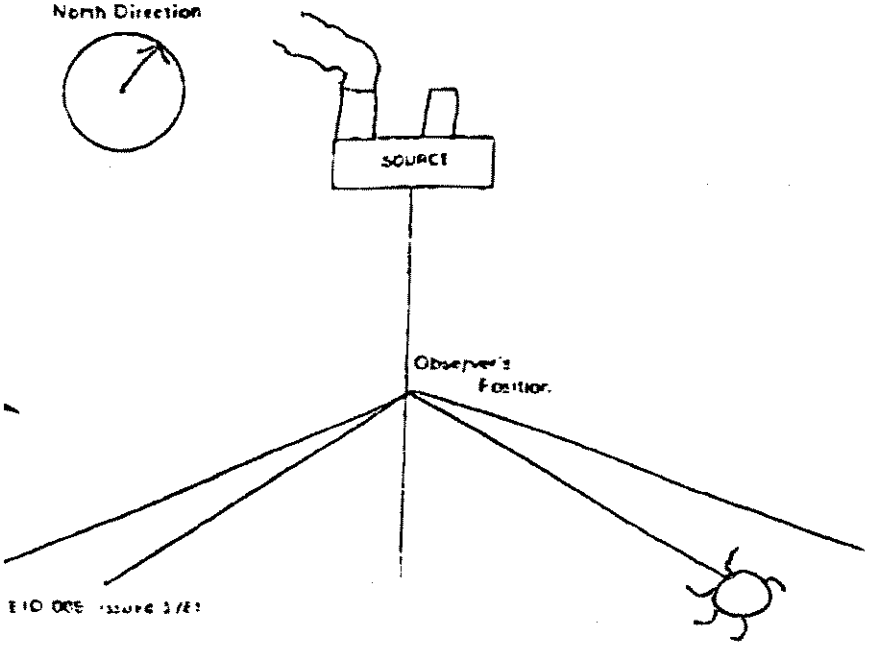
OBSERVER (please print)

Name: LEONARD PACHECO Title: OPERATER

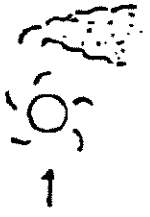
Signature: [signature] Date: 4-4-06

Organization: KSL Certification Date: 3-1-06

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:



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

Signature: Benny R. Morgan

Title: UBPS Superintendent

Date: 4/5/06

EPD 005 Issued 3/81

RECORD OF VISUAL DETERMINATION OF OPACITY

PG3

SOURCE: FUEL OIL # 2 BOILER	OBSERVATION DATE: 4-4-06
LOCATION: TA-3 SM 22 POWER PLANT	START TIME: 1015
Type of Source: FUEL OIL	STOP TIME: 1200
Type of Control Equipment: N/A	
Describe Emission Point (top of stack, etc.): WEST STACK TOP OF STACK	
Height Above Ground Level: 150 Feet	Height Relative to Observer: 170 Feet
Distance from Observer: 250' ~~Yards~~	Direction from Observer: SE
Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☑ Coning ☐ Lofting ☐ Trapping ☐ Fumigation	
Emission Color: BLACK	Plume Type: ☐ 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.): WHITE SKY	
Background Color: WHITE	Sky Conditions: BROKEN
Wind Speed: 5-10 mph	Wind Direction (i.e. from North to South): S TO E
Ambient Temperature: °F	Wet Temperature: °F
Relative Humidity: %	

Min.	Sec. 0	15	30	45	Min.	Sec. 0	15	30	45
1	5	0	0	50	13	0	0	0	0
2	5	5	2	0	14	0	0	0	0
3	0	0	0	0	15	0	0	0	0
4	0	0	0	0	16	0	0	0	0
5	0	0	0	0	17	0	0	0	0
6	0	0	0	0	18	0	0	0	0
7	0	0	0	0	19	0	0	0	0
8	0	0	0	0	20	0	0	0	0
9	0	0	0	0	21	0	0	0	0
10	0	0	0	0	22	0	0	0	0
11	0	0	0	0	23	0	0	0	0
12	0	0	0	6	24	0	0	0	0

COMMENTS:

Average Opacity: 5-5

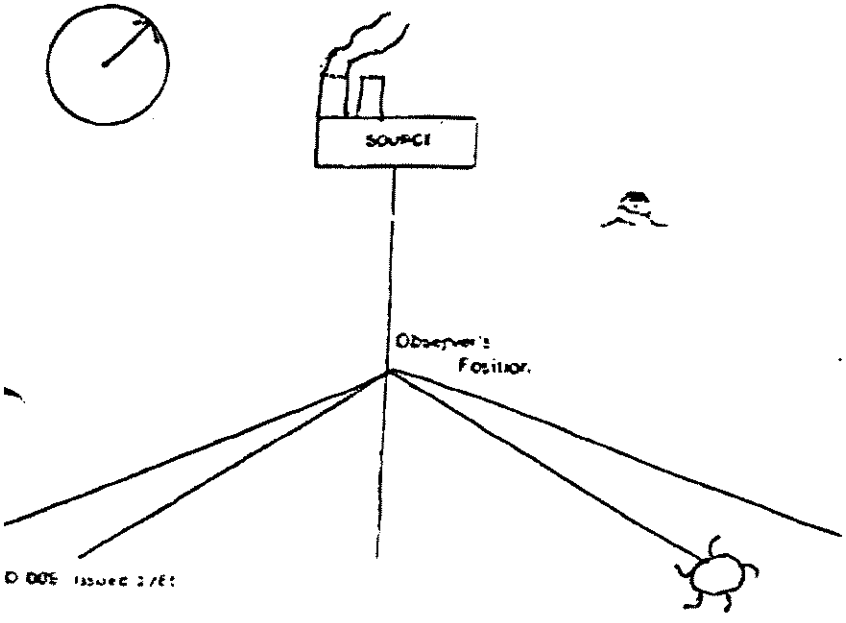
Range of Opacity Readings: Min.: 75 Max.: 2

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

Signature: [signature] Date: 4-4-06

Organization: KSL Certification Date: 3-1-06

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: WDS Superintendent

Date: 4/5/06

ID 005 Issued 2/87

RECORD OF VISUAL DETERMINATION OF OPACITY

PG 4

SOURCE: FUEL OIL #2 BOILER	OBSERVATION DATE: 4-4-06
LOCATION: TA 3 SM 22 POWER PLANT	START TIME: 1015
Type of Source: FUEL OIL	STOP TIME: 1200
Type of Control Equipment: NA	
Describe Emission Point (top of stack, etc.): WEST STACK TOP OF STACK	
Height Above Ground Level: 150 Feet	Height Relative to Observer: 170 Feet
Distance from Observer: 250 ~ Feet	Direction from Observer: SE
Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☑ Coning ☐ Lofting ☐ Trapping ☐ Fumigation	
Emission Color: BLACK	Plume Type: ☐ 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.): WHITE + BLUE SKY	
Background Color: WHITE + BLUE	Sky Condition: BROKEN
Wind Speed: 5-10 mph	Wind Direction (i.e. from North to South): S TO E
Ambient Temperature: °F	Wet Temperature: °F
Relative Humidity: %	

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

Average Opacity: 5-5

Range of Opacity Readings: Min.: 2 Max.: 75

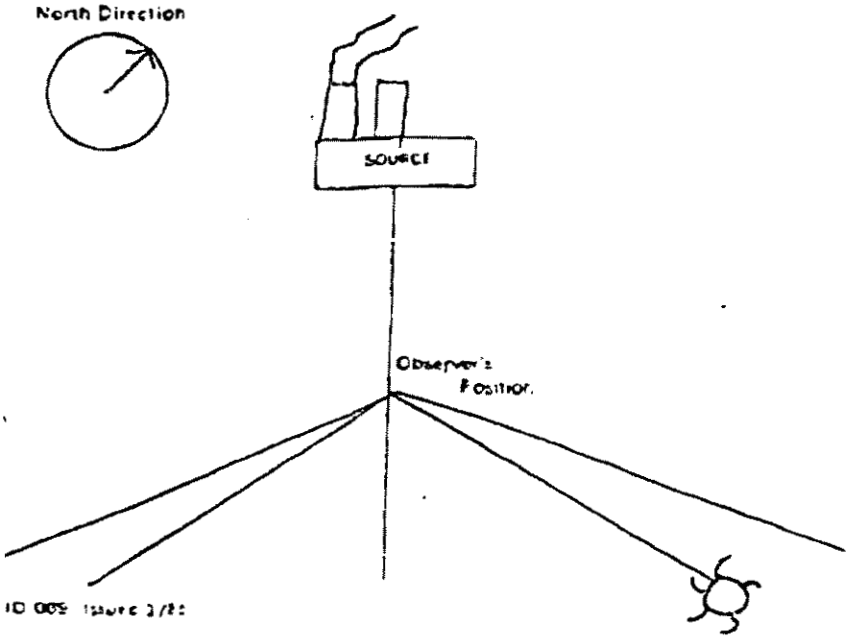
COMMENTS:

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

Signature: [signature] Date: 4-4-06

Organization: KSL Certification Date: 3-1-06

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: UAPS Supervisor

Date: 4/5/06

ID 005 Issue 3/82

RECORD OF VISUAL DETERMINATION OF OPACITY PG 5

SOURCE: FUEL OIL #2 BOILER

LOCATION: TA 3 SM 22 POWER PLANT

Type of Source: FUEL OIL — **Type of Control Equipment:** NA

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

Height Above Ground Level: 150 Feet — **Height Relative to Observer:** 170 Feet

Distance from Observer: 250 Yards — **Direction from Observer:** SE

Description of Plume (stack exit only): ☐ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☑ Coning ☐ Fumigation

Emission Color: BLACK — **Plume Type:** ☐ 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 WHITE SKY

Background Color: BLUE + WHITE — **Sky Conditions:** BROKEN

Wind Speed: 5-10 mph — **Wind Direction (i.e. from North to South):** S TO E

Ambient Temperature: °F — **Wet Temperature:** °F — **Relative Humidity:** %

COMMENTS: 1 BURNER IN SERVICE NO MORE BURNERS WILL BE PUT IN SERVICE NOT NO OTHER ADJUSTMENTS WILL BE MADE.

OBSERVATION DATE	START TIME	STOP TIME
		1200

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	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11					23				
12					24				

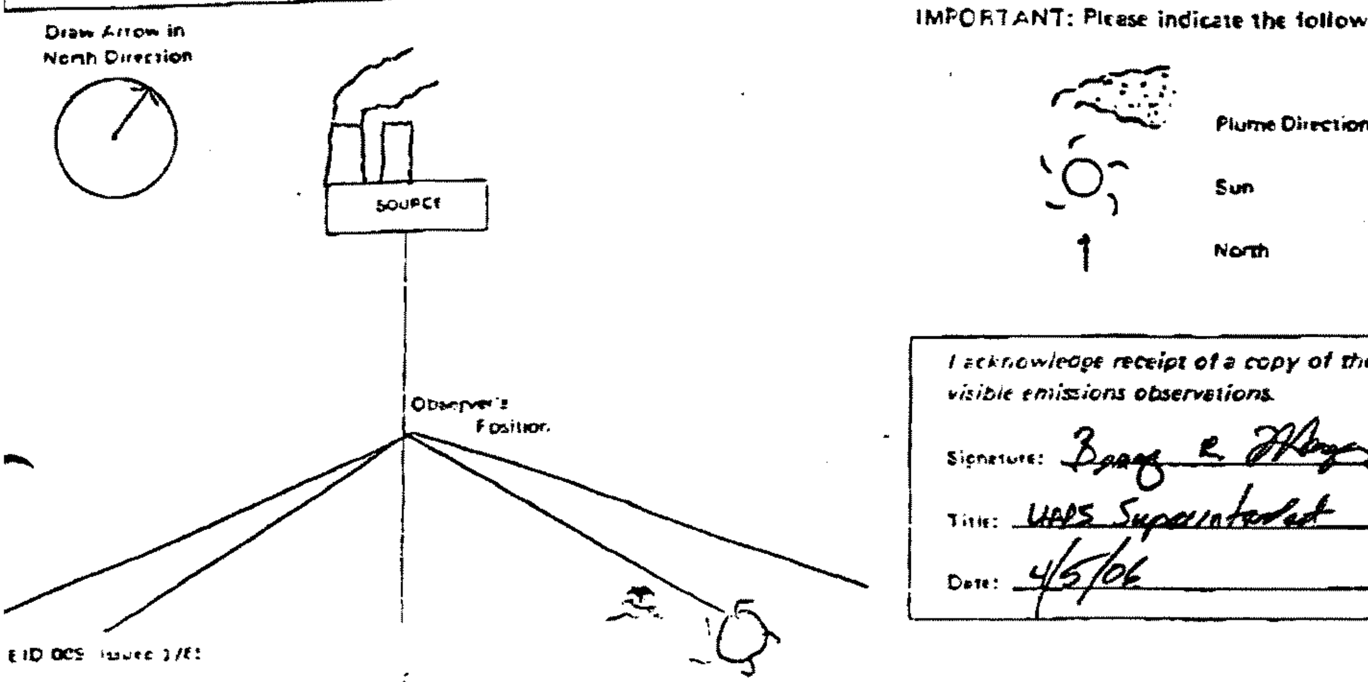
Average Opacity: 5.5 — **Range of Opacity Readings:** Min.: 2 Max.: 25

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

Signature: [signature] — **Date:** 4-4-06

Organization: KSL — **Certification Date:** 3-1-06

IMPORTANT: Please indicate the following by sketch:



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

Signature: [signature]

Title: UAPS Superintendent

Date: 4/5/06

EID OCS Issued 7/81

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: Fuel Oil #2 Boiler
LOCATION: TA 3 SM22 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: 200 Feet
Distance from Observer: 200 ~~FE~~
Direction from Observer: NW
Description of Plume (stack exit only): ☒ Plotting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation
Emission Color: Black
Plume Type: ☐ 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 / white Clouds
Background Color: Blue/white
Sky Conditions: Partly Cloudy
Wind Speed: 3-5 mph
Wind Direction (i.e. from North to South): South to North
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

COMMENTS:

OBSERVATION DATE: 5/31/06
START TIME: 10:47 AM
STOP TIME: 11:31

Min. / Sec.	0	15	30	45	Min. / Sec.	0	15	30	45
1	0	0	0	0	13	0	0	0	0
2	0	0	0	0	14	0	0	0	0
3	0	0	0	0	15	0	0	0	0
4	75	100	75	75	16	0	0	0	0
5	50	30	25	0	17	0	0	0	0
6	0	0	0	0	18	0	0	0	0
7	0	0	0	0	19	0	0	0	0
8	0	0	0	0	20	0	0	0	0
9	0	0	0	0	21	0	0	0	0
10	0	0	0	0	22	0	0	0	0
11	0	0	0	0	23	0	0	0	0
12	0	0	0	0	24	0	0	0	0

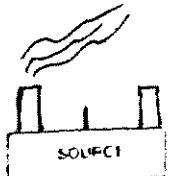
Average Opacity: 10.75 %
Range of Opacity Readings: Min.: 0.0% Max.: 100.0%

OBSERVER (please print)
Name: Brian Oster Title: Operator III
Signature: Brian Oster Date: 5/31/06
Organization: UPPS Certification Date: 3/1/06

10.75% = 430 ÷ 40 R. Cosby

IMPORTANT: Please indicate the following by sketch:

Draw Arrow in North Direction



Plume Direction
Sun
1 North

Observer's Position

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

Signature: Benny R. Marquez
Title: UPPS Sup
Date: 5/31/06

2 of 2

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: Fuel Oil #2 Boiler

LOCATION: TA3 Sm22 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: 200 Feet

Distance from Observer: 200 ~~Feet~~ Ft

Direction from Observer: NW

Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☐ Cutting ☐ Trapping

Emission Color: Black

Plume Type: ☐ 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 / White Clouds

Background Color: Blue/White

Sky Conditions: Partly Cloudy

Wind Speed: 3-5 mph

Wind Direction (i.e. from North to South): South to North

Ambient Temperature: °F

Wet Temperature: °F

Relative Humidity: %

COMMENTS: 11:31AM Stopped to observe Boiler in Automatic. Came of Fuel oil at 1:00pm

OBSERVATION DATE: 5/31/06

START TIME: 10:17

STOP TIME: 11:31

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

Average Opacity: 10.75%

Range of Opacity Reading: Min.: 0.0% Max.: 100.0%

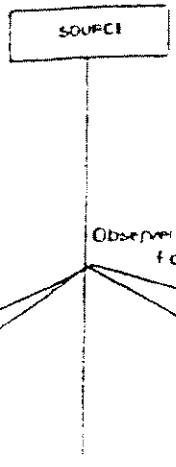
OBSERVER (please print) Name: BRIAN OTTE Title: Operator III

Signature: Brian Otte Date: 5/31/06

Organization: UPPS Certification Date: 3-1-06

IMPORTANT: Please indicate the following by sketch:

Drew Arrow in North Direction



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

Signature: Brian R. Morgan

Title: UPPS Sup

Date: 5/31/06

EID 005 (Revised 2/1)

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: Fuel oil #2 Boiler

LOCATION: TA3 SMZ Powerplant

Type of Source: Fuel oil

Type of Control Equipment:

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

Height Above Ground Level: 150 Feet

Height Relative to Observer: 175 Feet

Distance from Observer: 200 ft ~~meter~~

Direction from Observer: NE

Description of Plume (stack exit only): ☑ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation

Emission Color: Black

Plume Type: ☐ 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 (i.e. from North to South): From SW to NE

Ambient Temperature: °f

Wet Temperature: °f

Relative Humidity: %

COMMENTS: Stopped Reading At 9:32am
IJ Boiler IN Automatic
Just observing

OBSERVATION DATE: 6/6/06

START TIME: 9:15

STOP TIME: 9:32

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

Average Opacity: 0.0%

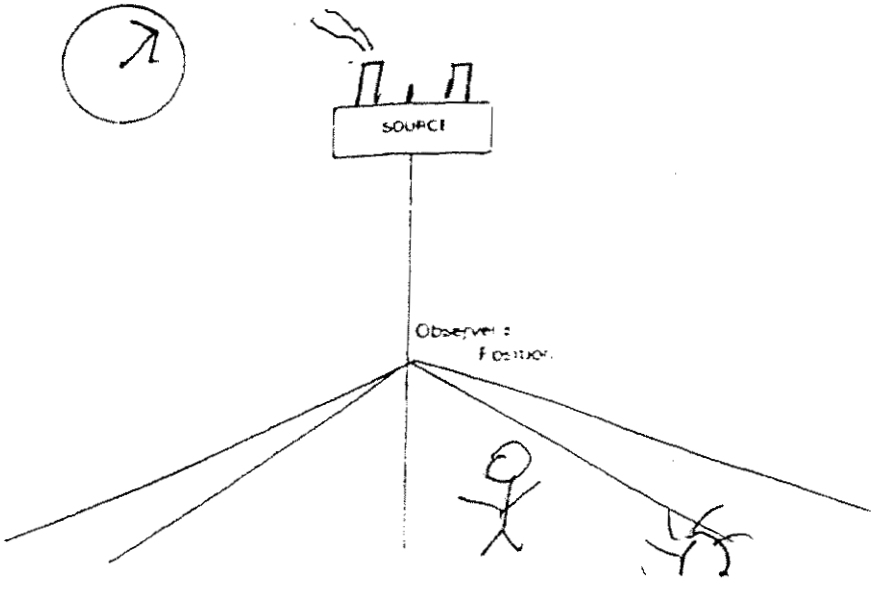
Range of Opacity Readings: Min.: 0% Max.: 0%

OBSERVER (please print) Name: BRIAN ORTIZ Title: Operator III

Signature: Brian Ortiz Date: 6/6/06

Organization: UPPS/KSL Certification Date:

Draw Arrow in North Direction



IMPORTANT: Please indicate the following by sketch:

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

Signature: Benny R Maguy

Title: UPPS Superintendent

Date: 6/6/06

RECORD OF VISUAL DETERMINATION OF OPACITY

Source: FUEL OIL #2 BOILER

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: 50 Yards

Direction from Observer: SE

Description of Plume (stack exit only): ☒ Lofting ☐ Trapping ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation

Emission Color: BLACK

Plume Type: ☐ 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

Sky Condition: CLEAR

Background Color: BLUE

Wind Speed: 05 mph

Wind Direction (i.e. from North to South): ~~N TO S~~ 6-20-06 S TO N

Ambient Temperature: °F

Wet Temperature: °F

Relative Humidity: %

COMMENTS:
0800 STOPPED READING WHILE CHANGING TO DIFFERENT BURNER

OBSERVATION DATE: 6-20-06

START TIME: 0750

STOP TIME: 0800

Min. \ Sec.	0	15	30	45	Min. \ Sec.	0	15	30	45
1	0	0	0	0	13	0			
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	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11	0	0	0	0	23				
12	0	0	0	0	24				

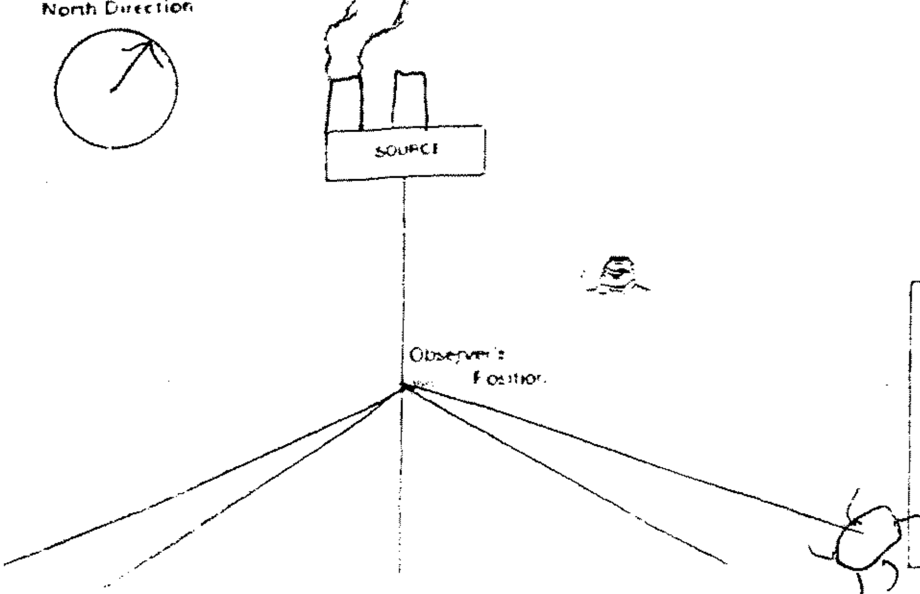
Average Opacity: 6-20-06 26.5

Range of Opacity Reading: Min.: 5 Max.: 100

OBSERVER (please print)
Name: LEONARD PACHECO
Title: OPERATER
Signature: [signature]
Date: 6-20-06
Organization: KSL UPPS
Certification Date: 3-1-05

IMPORTANT: Please indicate the following by sketch:

Draw Arrow in North Direction



Plume Direction

Sun

North

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

Signature: Benny R. Marquez
Title: UPPS Sup
Date: 6/20/06

RECORD OF VISUAL DETERMINATION OF OPACITY

SOURCE: FUEL OIL #2 BOILER
LOCATION: FA3 SILK 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: 120 Feet
Distance from Observer: 50 Yards
Direction from Observer: SE
Description of Plume (stack exit only): ☐ Looping ☐ Fanning ☐ Coning ☐ Fumigation ☑ Lofting ☐ Trapping
Emission Color: BLACK
Plume Type: ☐ 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
Background Color: BLUE
Sky Conditions: CLEAR
Wind Speed: 0.5 mph
Wind Direction (i.e. from North to South): S - N
Ambient Temperature: °F
Wet Temperature: °F
Relative Humidity: %

OBSERVATION DATE: 6-20-06
START TIME: 0810
STOP TIME: 0825

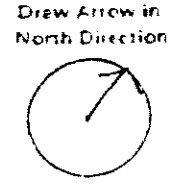
Min. \ Sec	0	15	30	45	Min. \ Sec	0	15	30	45
1	0	0	0	0	13	0	0	0	0
2	0	0	0	0	14	0	0	0	0
3	0	0	0	0	15	0	0	0	0
4	100	75	50	25	16				
5	5	5	0	0	17				
6	0	0	0	0	18				
7	0	0	0	0	19				
8	0	0	0	0	20				
9	0	0	0	0	21				
10	0	0	0	0	22				
11	0	0	0	0	23				
12	0	0	0	0	24				

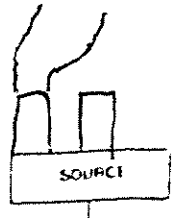
Average Opacity: JP 6-20-06 26.5
Range of Opacity Readings: Min.: 5 Max.: 100

COMMENTS:
BEGAN READING SMOKE AGAIN AFTER CHANGING TO DIFFERENT BURNER. 0810
BURNER LIT OFF & STABLE 0823
OFF FUEL AT 1035

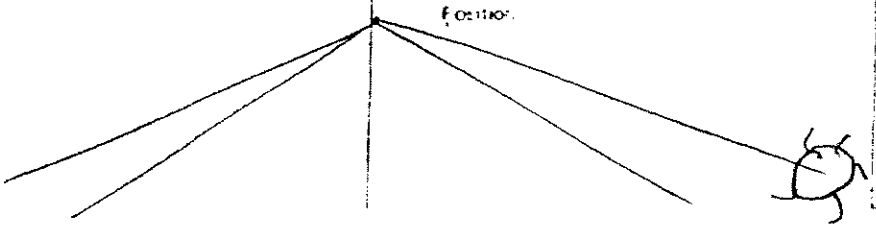
OBSERVER (please print)
Name: LEONARD PACHECO Title: OPERATOR
Signature: [signature] Date: 6-20-06
Organization: KSL UPPS Certification Date: 3-1-05

Draw Arrow in North Direction





IMPORTANT: Please indicate the following by sketch:



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

Signature: Benny R. Magyar
Title: UPPS Sup
Date: 6/20/06

OPS Issued 3/01