National Security Technologies LLC
Vision • Service • Partnership

P270-PR-09-0034

January 28, 2009

Greg A. Remer, Chief
Bureau of Air Pollution Control
Department of Conservation and Natural Resources
Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701-5249

Subject: **NEVADA TEST SITE (NTS) CLASS II AIR QUALITY OPERATING PERMIT (AQOP) AP9711-0549.01, FOURTH QUARTER REPORTS, CALENDAR YEAR 2008 (CY08)**

On behalf of the National Nuclear Security Administration Nevada Site Office, National Security Technologies, LLC is providing the enclosed three reports for the period October 1, 2008 through December 31, 2008. These reports include:

1) A 12-month *Operations Plan* update and a *Summary Report* of Big Explosives Experimental Facility (BEEF) activities, in accordance with section V.AG.3 of the NTS AQOP.

2) Quarterly chemical release data from the Nonproliferation Test and Evaluation Complex (NPTEC) in accordance with Section V.AH.3.d of the NTS AQOP.

3) The NTS site-wide hazardous air pollutant (HAP) report that lists quantities of HAP emissions, hours of operation and fuel usage for the fourth quarter of CY08 as well as the preceding 9 months for the NTS equipment that is regulated under permit emission caps. HAP emissions from the BEEF and NPTEC activities are also included.

If there are any questions regarding the enclosed reports, please contact Elizabeth Calman at (702) 295-5453.

P. M. Radack

P. M. Radack, Manager
Environmental Services Department

ECC:db
Subject Code: ENV 8

Enclosures: as stated

cc: See page 2

National Security Technologies, LLC
Vision • Service • Partnership

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cc w/encs.
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SUMMARY EMISSIONS REPORT

CLASS II AIR QUALITY OPERATING PERMIT
AP9711-0549.01

BIG EXPLOSIVES EXPERIMENTAL FACILITY (BEEF)

4TH QUARTER, CALENDAR YEAR 2008

Submitted by
National Security Technologies, LLC
On behalf of
The National Nuclear Security Administration
Nevada Site Office

January 28, 2009

Los Alamos NATIONAL LABORATORY EST. 1943

Joint Nevada Program Office

Lawrence Livermore National Laboratory

January 22, 2009
JNPO-SO-09-012

Lori Plummer, Program Manager
Environmental Protection Team/Office of AMEM
National Nuclear Security Administration
Nevada Site Office
P.O. Box 98518, M/S 505
Las Vegas, NV 89193-8518

SUBJECT: REVISION OF SUMMARY REPORT FOR FOURTH QUARTER 2008 AND OPERATIONS PLAN UPDATE; TO CORRECT TITLES

Reference: Nevada Test Site Air Quality Operations Permit (AQOP)

In accordance with the requirements of the Nevada Test Site AQOP dated April 12, 2005, Lawrence Livermore National Laboratory submits the attached BEEF Quarterly Report: *Summary Report* for the forth calendar quarter of 2008 and update to the *Operations Plan* (12-month look ahead). The Bureau of Air Pollution Control (BAPC) requires this information within 30 days of the end of each calendar quarter.

The *Summary Report* typically identifies the actual net explosive weight detonated (max 24-hour; max per detonation; sum for the quarter) and associated emissions (max 24-hour, max per detonation; sum for the quarter) for the subject calendar quarter.

Data from the Continuous Ambient Particulate Monitor (PM_{10} data) and associated meteorological data provided by NOAA/SORD are shown in Attachment III of the report. Specific operations information is recorded and maintained in a log as required by the permit. The Management and Operating (M&O) supports the installation, calibration, and operation of the particulate monitor in accordance with the *BEEF Sampling and Meteorological Monitoring Systems* Plan reviewed and approved by both NNSA/NSO and the BAPC.

Should you have any questions or require additional information, please contact Michael Lipstate directly at 702-295-6328.

M. T. Lipstate for D.B

Donald M. Bourcier
Associate Program Leader
Joint Nevada Program Office

DB:lm

Attachments:
Attachment I, *4th Quarter 2008 Emissions from BEEF, Summary Report*
Attachment II, *BEEF Operations Plan, Rolling 12 Month*
Attachment III, *Ambient Meteorological Conditions and PM10 Monitoring Data*

cc: w/attachment:
T. Belka, LLNL, L-777
E. Calman, NSTec, NTS 327
L. Cohn, NNSA, NSF/WB208
M. Lipstate, LLNL, L-777
JNPO Site Operations Files, M/S J900

cc: w/o attachment:
L. Berzins, LLNL, L-099
T. Denny, NNSA, M/S 505
R. Higgs, LLNL, M/S 505

ATTACHMENT I

SUMMARY REPORT
4TH QUARTER 2008 EMISSIONS FROM BEEF

Net Explosive Weight

Status	(All)

Sum of Explosive Weight (lbs)	Calendar Qtr			
Family	2008 1st Qtr	2008 2nd Qtr	2008 3rd Qtr	2008 4th Qtr
A0		149.17		0.00
A1	1.20	646.07	2230.50	587.00
B1	877.00	33.56	128.50	
B3		0.01		
D1	0.05	0.10	0.27	0.00

A0 - Pure Compound
A1 - TNT Based
A2 - TNT/Aluminum
B1 - Nitramine/binder
B2 - Nitramine/binder/aluminum
B3 - Nitramine/binder/ w/ fluorine or chlorine
B4 - Nitramine/binder w/ toxics
C1 - Dynamites w/absorbants
C2 - Dynamites w/ oxidizers
C3 - Dynamites w/ nitrocellulose
D1 - Detonator materials

Estimated Emissions

Status	(All)

Sum of Emissions (lbs)		Calendar Qtr				
Category	Pollutant	2008 1st Qtr	2008 2nd Qtr	2008 3rd Qtr	2008 4th Qtr	Grand Total
Criteria	CO	0.00	233.52	71.38	32.82	337.72
	NOX	0.00				0.00
	Pb	0.00				0.00
	PM	111.70	54.29	937.75	52.80	1156.54
	PM10	1.86	0.90	15.65	0.88	19.29
	Solids (C,P,...)	0.00				0.00
	SOX	0.00				0.00
	VOC	0.00	0.19			0.19
	Solids(C,P, ...)		42.45			42.45
	Solids(Al2O3, AlN, . .)			407.28		407.28
	Solids(SiO2)			27.60		27.60
Criteria Total		113.56	331.35	1459.66	86.50	1991.07
HAPS	Ammonia	0.00				0.00
	Chlorine Cpmd	0.00				0.00
	HCN		12.81			12.81
	CN		0.01			0.01
	HF		1.04			1.04
	HAPS				197.35	197.35
HAPS Total		0.00	13.86		197.35	211.21
Grand Total		113.56	345.21	1459.66	283.85	2202.28

Max Emissions/Shot (lbs/24 Hr)

Status	(All)

Max of SumOfEmissions(lbs)	Calendar Qtr			
Category	2008 1st Qtr	2008 2nd Qtr	2008 3rd Qtr	2008 4th Qtr
Criteria	113.5600	276.1600	776.6400	86.5000
HAPS	0.0000	12.8200		197.3500

Max Net Explosive Weight/Shot(lbs/24Hr)

Status	(All)

Max of SumOfExplosive Weight (lbs)	Calendar Qtr			
	2008 1st Qtr	2008 2nd Qtr	2008 3rd Qtr	2008 4th Qtr
Total	877.00	646.07	2230.50	587.00

ATTACHMENT II

BEEF OPERATIONS PLAN

ROLLING 12 MONTH PLAN FOR EXPERIMENTAL ACTIVITIES AT BEEF

1ST QUARTER 2009 THROUGH 4TH QUARTER 2009

Net Explosive Weight

Status	Planned

Sum of Explosive Weight (lbs)	Calendar Qtr			
Family	2009 1st Qtr	2009 2nd Qtr	2009 3rd Qtr	2009 4th Qtr
A1	1.20	1.20	2.00	304.00
B1	1769.00	884.50	904.50	904.50
B3			350.00	
D1	0.10	0.05	1.05	2.05

A0 - Pure Compound
A1 - TNT Based
A2 - TNT/Aluminum
B1 - Nitramine/binder
B2 - Nitramine/binder/aluminum
B3 - Nitramine/binder/ w/ fluorine or chlorine
B4 - Nitramine/binder w/ toxics
C1 - Dynamites w/absorbants
C2 - Dynamites w/ oxidizers
C3 - Dynamites w/ nitrocellulose
D1 - Detonator materials

Estimated Emissions

Status	Planned

Sum of Emissions (lbs)		Calendar Qtr				
Category	Pollutant	2009 1st Qtr	2009 2nd Qtr	2009 3rd Qtr	2009 4th Qtr	Grand Total
Criteria	CO	0.00		0.00	0.01	0.01
	NOX	0.00		0.00	0.01	0.01
	PM	223.40	111.70	147.30	138.50	620.90
	PM10	3.72	1.86	2.01	1.98	9.57
	Solids (C,P,...)			0.00	1.50	1.50
	VOC			0.00	0.00	0.00
Criteria Total		227.12	113.56	149.31	142.00	631.99
HAPS	Ammonia			0.01	0.01	0.02
	Chlorine Cpmd			5.00		5.00
	HCN			0.02	0.00	0.02
	Hydrazine			0.02	0.00	0.02
HAPS Total				5.05	0.01	5.06
Grand Total		227.12	113.56	154.36	142.01	637.05

Max Emissions/Shot (lbs/24Hr)

Status	Planned

Max of SumOfEmissions(lbs)	Calendar Qtr			
Category	2009 1st Qtr	2009 2nd Qtr	2009 3rd Qtr	2009 4th Qtr
Criteria	113.5600	113.5600	113.9000	113.9000
HAPS			5.0500	0.0100

Max Net Explosive Weight/Shot(lbs/24Hr)

Status	Planned

Max of SumOfExplosive Weight (lbs)	Calendar Qtr			
	2009 1st Qtr	2009 2nd Qtr	2009 3rd Qtr	2009 4th Qtr
Total	1769.00	884.50	904.50	904.50

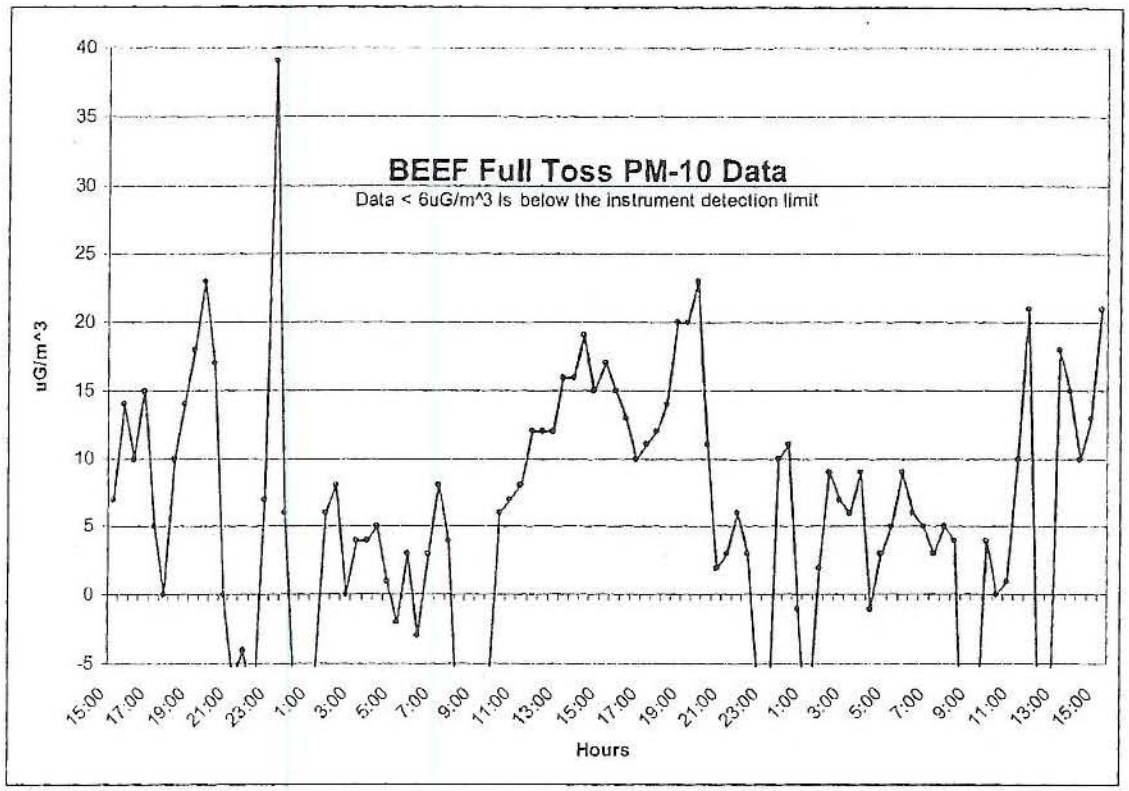
ATTACHMENT III

AMBIENT METEOROLOGICAL CONDITIONS AND PM10 MONITORING DATA FOR 4TH QUARTER 2008

BEEF Ambient Meteorological Conditions
At Shot Time
4th Quarter 2008

Conditions:

Wind Speed: . . . . . 4 mph
Wind Direction: 234
Dry Bulb Temperature: . . . . . .29.7 °C
% Cloud Cover: . . . . . 0%. Clear
Visibility: . . . . . CAVU (Clear Air Visibility Unlimited)
Current Weather Report: . . . . . N/A (Not Available)


BEEF Full Toss PM-10 Data
Data < 6uG/m^3 is below the instrument detection limit
uG/m^3
40
35
30
25
20
15
10
5
0
-5
15:00
17:00
19:00
21:00
23:00
1:00
3:00
5:00
7:00
9:00
11:00
13:00
15:00
17:00
19:00
21:00
23:00
1:00
3:00
5:00
7:00
9:00
11:00
13:00
15:00
Hours

FH64 C14 (PM10) Data Collection Report
10/28/08

```
Setup Parameters:

D8
P
ESM Andersen          Dust Measuring FH62C14   No.:      1      08-10-20
-------------------------------------------------------------------------
----

FH 62 C14  V1.06    Thermo ESM Andersen
CALCULATION MODE:        0
OBSERVATION TIME:       60 min
STANDARD DEVIATION:     10 %
RC-FILTER FOR MASS      33 s
HIGH VOLTAGE :        1290
COMP.FACTOR F(R1/R2)   316 %
 EFFICIENCY  Ea2:       13 %
                mV     435

PRINTFORMAT:             8
PRINTFORMAT:             0
PRINTCYCLE :           300

   FILTERCHANGE
MASS  >          ug    1500
AIRFLOW  <       1/h    950
CYCLE            min   1440
HOUR   :                 24

NOMINAL VAL. HEATER AND AIR FLOW
HEATER TEMPERATURE:      0
AIR FLOW     :        1000
IMISSIONLIMIT 1:      9999
IMISSIONLIMIT 2:      9999

    CALIBRATION
AMPLIFICATION:        6939
TEMP.COMP.FACTOR:    18.70
P2-COMP.FACTOR:       1.06
Pabs-COMP.FACTOR:     4.00
 dP2/dT   [hPa/K]:    0.00
 dPabs/dT [hPa/K]:    0.00

CALIBRATION OF SENS.
AIR FLOW     :        8.66

VOLUME-REFERENCE                    :          0
 P1,SP  P1,Z P2,SP  P2,Z  P3,Z  T1,Z  T2,Z  T3,Z  T4,Z
    21   129   130   124   140    79   152    62     4

ANALOG OUTPUTS
OUTPUT ZERO     :        1
CONCENTRATION:           0
CONCENTRATION:        1000
AIR FLOW     :           0
AIR FLOW     :        1000
TEMP. PM 10 HEAD       -20
```

FH64 C14 (PM10) Data Collection Report
10/28/08

TEMP. PM 10 HEAD	40
DUST MASS :	0
DUST MASS :	1000
ANALOG OUT 6:	0
ANALOG OUT 6:	1000

END

Respectfully Submitted,

/s/ Michael T. (Mike) Bridenburg
NSTec Sr. Engineer
PM10 Team Lead

SUMMARY EMISSIONS REPORT

CLASS II AIR QUALITY OPERATING PERMIT
AP9711-0549.01

NEVADA TEST SITE (NTS)
HAZARDOUS AIR POLLUTANTS

4TH QUARTER, CALENDAR YEAR 2008

Submitted by
National Security Technologies, LLC
On behalf of
The National Nuclear Security Administration
Nevada Site Office

January 28, 2009

Hazardous Air Pollutant Emissions Summary - Tons/Yr

Summary of Emissions for: 1st Qtr 2008 - 4th Qtr 2008

This report includes the Permitted and Insignificant Emissions Sources that are regulated under a site-wide emissions cap for hazardous air pollutants (HAPS)

Equipment/Activity Description	1st Quarter 2008 (Ton/Yr)	2nd Quarter 2008 (Ton/Yr)	3rd Quarter 2008 (Ton/Yr)	4th Quarter 2008 (Ton/Yr)	Total HAPs Emissions (Ton/Yr)
Aggregate Processing Equipment	2.12E-04	1.22E-06	8.90E-07	7.79E-07	2.15E-04
Combustion Equipment	3.53E-03	1.07E-02	7.73E-04	6.71E-04	1.56E-02
Boilers	6.18E-03	2.01E-03	1.49E-03	1.45E-03	1.11E-02
Chemical Releases	1.84E-02	2.85E-03	6.47E-02	1.16E-01	2.02E-01
		TOTAL			**2.29E-01**

Hazardous Air Pollutant Emissions - Tons/Yr

1st Qtr 2008 / 2nd Qtr 2008					Totals	Totals	Totals	Totals	Totals	Totals	Totals	TOTAL HAPS
3rd Qtr 2008 / 4th Qtr 2008					2.67E-08	1.81E-08	2.27E-07	2.57E-07	7.18E-07	1.97E-04	1.71E-05	2.15E-04
Emission Source Number	Equipment Description		Operating Hours (hr/qtr)	Control (%)	As (ton/yr)	Be (ton/yr)	Cd (ton/yr)	Cr (ton/yr)	Pb (ton/yr)	Mn (ton/yr)	Ni (ton/yr)	
AGGREGATE PROCESSING EQUIPMENT - 1ST QUARTER, 2008												
Area 1 Concrete Batch Plant					5.04E-09	1.7184E-08	2.2464E-07	2.4192E-07	7.0656E-07	1.94E-04	1.69E-05	2.12E-04
1.46	Baghouse 04				5.04E-09	1.7184E-08	2.2464E-07	2.4192E-07	7.0656E-07	1.94E-04	1.69E-05	
46A	loading overhead bin		6	99	2.52E-09	8.592E-09	1.1232E-07	1.2096E-07	3.5328E-07	9.70E-05	8.45E-06	
46B	loading weigh hopper		6	99	2.52E-09	8.592E-09	1.1232E-07	1.2096E-07	3.5328E-07	9.70E-05	8.45E-06	
Area 6 Cementing Equipment					1.23E-09	9.15E-11	1.73E-11	4.81E-09	1.50E-09	4.59E-08	5.69E-09	5.92E-08
6.004	Baghouse 10				1.227E-09	9.15E-11	1.725E-11	4.8075E-09	1.50075E-09	4.59E-08	5.6925E-09	
4A	Load blending tank		1.5	99	8.7E-11	0	4.425E-12	5.325E-10	1.4325E-10	2.295E-08	1.23E-09	
4B	Blending tank discharge		1.5	99	1.14E-09	9.15E-11	1.2825E-11	4.275E-09	1.3575E-09	2.295E-08	4.4625E-09	
										1st Quarter Total		***2.12E-04***
AGGREGATE PROCESSING EQUIPMENT - 2ND QUARTER, 2008												
Area 1 Concrete Batch Plant					6.72E-09	7.16E-11	9.36E-10	1.008E-09	2.944E-09	8.08E-07	7.04E-08	8.90E-07
1.46	Baghouse 04				6.72E-09	7.16E-11	9.36E-10	1.008E-09	2.944E-09	8.08E-07	7.04E-08	
46A	loading overhead bin		8	99	3.36E-09	3.58E-11	4.68E-10	5.04E-10	1.472E-09	4.04E-07	3.52E-08	
46B	loading weigh hopper		8	99	3.36E-09	3.58E-11	4.68E-10	5.04E-10	1.472E-09	4.04E-07	3.52E-08	
Area 6 Cementing Equipment					1.16E-09	6.10E-10	5.90E-11	7.10E-09	1.91E-09	3.06E-07	1.64E-08	3.33E-07
6.004	Baghouse 10				1.16E-09	6.1E-10	5.9E-11	7.1E-09	1.91E-09	3.06E-07	1.64E-08	
4A	Load blending tank		10	99	5.8E-10	0	2.95E-11	3.55E-09	9.55E-10	1.53E-07	8.2E-09	
4B	Blending tank discharge		10	99	5.8E-10	6.1E-10	2.95E-11	3.55E-09	9.55E-10	1.53E-07	8.2E-09	
										2nd Quarter Total		***1.22E-06***
AGGREGATE PROCESSING EQUIPMENT - 3RD QUARTER, 2008												
Area 1 Concrete Batch Plant					6.72E-09	7.16E-11	9.36E-10	1.008E-09	2.944E-09	8.08E-07	7.04E-08	8.90E-07
1.46	Baghouse 04				6.72E-09	7.16E-11	9.36E-10	1.008E-09	2.944E-09	8.08E-07	7.04E-08	
46A	loading overhead bin		8	99	3.36E-09	3.58E-11	4.68E-10	5.04E-10	1.472E-09	4.04E-07	3.52E-08	
46B	loading weigh hopper		8	99	3.36E-09	3.58E-11	4.68E-10	5.04E-10	1.472E-09	4.04E-07	3.52E-08	
										3rd Quarter Total		***8.90E-07***
AGGREGATE PROCESSING EQUIPMENT - 4TH QUARTER, 2008												
Area 1 Concrete Batch Plant					5.88E-09	6.27E-11	8.19E-10	8.82E-10	2.58E-09	7.07E-07	6.16E-08	7.79E-07
1.46	Baghouse 04				5.88E-09	6.27E-11	8.19E-10	8.82E-10	2.58E-09	7.07E-07	6.16E-08	
46A	loading overhead bin		7	99	2.94E-09	3.13E-11	4.10E-10	4.41E-10	1.29E-09	3.54E-07	3.08E-08	
46B	loading weigh hopper		7	99	2.94E-09	3.13E-11	4.10E-10	4.41E-10	1.29E-09	3.54E-07	3.08E-08	
										4th Quarter Total		***7.79E-07***

Hazardous Air Pollutant Emissions - Tons/Yr

1st Qtr 2008 / 2nd Qtr 2008						Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	TOTAL HAPS
3rd Qtr 2008 / 4th Qtr 2008						2.25E-03	1.06E-03	7.28E-04	9.43E-03	2.76E-05	1.05E-03	6.09E-04	8.67E-05	4.15E-04	1.56E-02
Emission Source Number	NTS Number	Equipment	Operating Hours (hr/qtr)	Fuel Used (Gallons)	Current Status	Benzene (ton/yr)	Toluene (ton/yr)	Xylenes (ton/yr)	Propylene (ton/yr)	1,3-Butadiene (ton/yr)*	Formaldahyde (ton/yr)	Acetaldehyde (ton/yr)	Acrolein (ton/yr)	Napthalene (ton/yr)	
Note: the Current Status column indicates whether equipment is insignificant "IN" or permitted "PER."															
DIESEL GENERATORS/COMPRESSORS - 1ST QTR 2008															
Area 1 - U1a						1.44E-05	6.30E-06	4.39E-06	3.97E-05	6.02E-07	1.82E-05	1.18E-05	1.42E-06	1.31E-06	9.80E-05
76784	76784	generator	20	100	IN	6.53E-06	2.86E-06	2.00E-06	1.81E-05	2.74E-07	8.26E-06	5.37E-06	6.48E-07	5.94E-07	
1.76	76786	generator	23	115	IN	7.51E-06	3.29E-06	2.29E-06	2.08E-05	3.15E-07	9.50E-06	6.17E-06	7.45E-07	6.83E-07	
79016	79016	hoist, mine rescue	2	10	IN	3.18E-07	1.40E-07	9.73E-08	8.81E-07	1.33E-08	4.03E-07	2.62E-07	3.16E-08	2.89E-08	
Area 5 Checkpoint Pass						4.78E-07	2.03E-04	1.41E-04	1.28E-03	1.94E-05	5.85E-04	3.81E-04	4.59E-05	4.21E-05	2.70E-03
5.001	76506	generator/Checkpoint Pass	5	25	IN	4.78E-07	2.09E-07	1.46E-07	1.32E-06	2.00E-08	6.04E-07	3.93E-07	4.74E-08	4.34E-08	
5.007	74006	NPTEC generator	236	1180	IN	0.00E+00	2.03E-04	1.41E-04	1.28E-03	1.94E-05	5.85E-04	3.80E-04	4.58E-05	4.20E-05	
Area 6						4.17E-05	1.55E-05	1.07E-05	1.46E-04	2.01E-07	9.83E-06	5.15E-06	8.52E-07	6.62E-06	2.37E-04
6.052	76724	generator	2	10	IN	9.33E-08	4.09E-08	2.85E-08	2.58E-07	3.91E-09	1.18E-07	7.67E-08	9.25E-09	8.48E-09	
6.077	76964	generator/CP-1	1	10	PER	1.96E-06	8.59E-07	5.99E-07	5.42E-06	8.21E-08	2.48E-06	1.61E-06	1.94E-07	1.78E-07	
6.080	76312	generator/CP-18	13	65	IN	1.55E-06	6.81E-07	4.74E-07	4.29E-06	6.51E-08	1.96E-06	1.28E-06	1.54E-07	1.41E-07	
6.083	76338	generator/CP-70	6.5	32.5	IN	1.29E-06	5.67E-07	3.95E-07	3.58E-06	5.42E-08	1.64E-06	1.06E-06	1.28E-07	1.18E-07	
S2.105	78005	generator	1	10	PER	1.96E-06	8.59E-07	5.99E-07	5.42E-06	8.21E-08	2.48E-06	1.61E-06	1.94E-07	1.78E-07	
S2.107	78008	generator DAF	11	110	PER	2.39E-05	8.65E-06	5.94E-06	8.59E-05	0.00E+00	2.43E-06	7.76E-07	2.43E-07	4.00E-06	
S2.108	78009	generator DAF	6	60	PER	1.30E-05	4.72E-06	3.24E-06	4.69E-05	0.00E+00	1.33E-06	4.23E-07	1.32E-07	2.18E-06	
Area 23 - Mercury						4.74E-07	2.70E-05	1.88E-05	1.70E-04	2.58E-06	7.78E-05	5.06E-05	6.10E-06	5.59E-06	3.59E-04
23.06	78466	generator/B425	4.2	21	IN	1.34E-07	5.87E-08	4.09E-08	3.70E-07	5.61E-09	1.69E-07	1.10E-07	1.33E-08	1.22E-08	
6.082	76303	generator/B600	3	15	IN	2.87E-07	1.26E-07	8.76E-08	7.93E-07	1.20E-08	3.62E-07	2.36E-07	2.84E-08	2.61E-08	
23.01	535085	generator/B1000	3	15	IN	1.62E-10	4.29E-08	2.99E-08	2.71E-07	4.11E-09	1.24E-07	8.05E-08	9.71E-09	8.90E-09	
23.02	78787	generator/B1010	2	10	IN	5.25E-10	1.40E-07	9.73E-08	8.81E-07	1.33E-08	4.03E-07	2.62E-07	3.16E-08	2.89E-08	
23.08	76949	generator/Angel Peak	4	20	IN	3.73E-07	1.64E-07	1.14E-07	1.03E-06	1.56E-08	4.72E-07	3.07E-07	3.70E-08	3.39E-08	
S2.111	76921	generator/B650	31	1240	PER	1.00E-07	2.66E-05	1.86E-05	1.68E-04	2.55E-06	7.68E-05	4.99E-05	6.02E-06	5.52E-06	
Area 27						2.90E-05	8.73E-06	6.00E-06	8.67E-05	0.00E+00	2.45E-06	7.83E-07	2.45E-07	4.04E-06	1.38E-04
S2.101	76360	generator (Baker)	11.1	444	PER	2.90E-05	8.73E-06	6.00E-06	8.67E-05	0.00E+00	2.45E-06	7.83E-07	2.45E-07	4.04E-06	
													1st Quarter Total		***3.53E-03***

Hazardous Air Pollutant Emissions - Tons/Yr

						Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	TOTAL HAPS
1st Qtr 2008 / 2nd Qtr 2008															
3rd Qtr 2008 / 4th Qtr 2008						2.25E-03	1.06E-03	7.28E-04	9.43E-03	2.76E-05	1.05E-03	6.09E-04	8.67E-05	4.15E-04	1.56E-02
Emission Source Number	NTS Number	Equipment	Operating Hours (hr/qtr)	Fuel Used (Gallons)	Current Status	Benzene (ton/yr)	Toluene (ton/yr)	Xylenes (ton/yr)	Propylene (ton/yr)	1,3-Butadiene (ton/yr)*	Formaldahyde (ton/yr)	Acetaldehyde (ton/yr)	Acrolein (ton/yr)	Napthalene (ton/yr)	
DIESEL GENERATORS/COMPRESSORS - 2ND QTR 2008															
Area 1 - U1A/U1G						4.43E-05	1.94E-05	1.35E-05	1.22E-04	1.85E-06	5.60E-05	3.64E-05	4.39E-06	4.02E-06	3.02E-04
1.77	78711	generator/U1a	101	505	IN	9.65E-06	4.23E-06	2.95E-06	2.67E-05	4.04E-07	1.22E-05	7.93E-06	9.57E-07	8.77E-07	
76784	76784	generator/U1a	3	15	IN	9.80E-07	4.29E-07	2.99E-07	2.71E-06	4.11E-08	1.24E-06	8.05E-07	9.71E-08	8.90E-08	
1.76	76786	generator/U1a	103	515	IN	3.36E-05	1.47E-05	1.03E-05	9.30E-05	1.41E-06	4.25E-05	2.77E-05	3.33E-06	3.06E-06	
79016	79016	hoist, mine rescue	4	20	IN	6.37E-07	2.79E-07	1.95E-07	1.76E-06	2.67E-08	8.05E-07	5.24E-07	6.31E-08	5.79E-08	
Area 5 Checkpoint Pass						1.91E-07	8.38E-08	5.84E-08	5.28E-07	8.01E-09	2.42E-07	1.57E-07	1.89E-08	1.74E-08	1.30E-06
5.001	76506	generator/Checkpoint Pass	2	10	IN	1.91E-07	8.38E-08	5.84E-08	5.28E-07	8.01E-09	2.42E-07	1.57E-07	1.89E-08	1.74E-08	
Area 6 - Const. Equipment Yard						1.83E-03	6.62E-04	4.55E-04	6.57E-03	1.24E-07	1.89E-04	6.17E-05	1.88E-05	3.06E-04	1.01E-02
6.080	76312	generator/CP-18	11	55	IN	1.31E-06	5.76E-07	4.01E-07	3.63E-06	5.51E-08	1.66E-06	1.08E-06	1.30E-07	1.19E-07	
6.081	78076	generator/CP-40	2	10	IN	3.18E-07	1.40E-07	9.73E-08	8.81E-07	1.33E-08	4.03E-07	2.62E-07	3.16E-08	2.89E-08	
6.083	76338	generator/CP-70	6.7	25	IN	1.33E-06	5.85E-07	4.07E-07	3.69E-06	5.59E-08	1.69E-06	1.10E-06	1.32E-07	1.21E-07	
S2.107	78008	generator DAF	512	5120	PER	1.11E-03	4.03E-04	2.77E-04	4.00E-03	0.00E+00	1.13E-04	3.61E-05	1.13E-05	1.86E-04	
S2.108	78009	generator DAF	328	3280	PER	7.13E-04	2.58E-04	1.77E-04	2.56E-03	0.00E+00	7.25E-05	2.31E-05	7.24E-06	1.19E-04	
Area 19						1.62E-10	4.29E-08	2.99E-08	2.71E-07	4.11E-09	1.24E-07	8.05E-08	9.71E-09	8.90E-09	5.71E-07
S2.680	78712	generator/Echo Peak	3	15	IN	1.62E-10	4.29E-08	2.99E-08	2.71E-07	4.11E-09	1.24E-07	8.05E-08	9.71E-09	8.90E-09	
Area 23 - Mercury						3.91E-07	8.45E-06	5.89E-06	5.33E-05	8.08E-07	2.44E-05	1.59E-05	1.91E-06	1.75E-06	1.13E-04
23.01	535085	generator/B1000	4	20	IN	2.16E-10	5.73E-08	3.99E-08	3.61E-07	5.47E-09	1.65E-07	1.07E-07	1.30E-08	1.19E-08	
23.02	78787	generator/B1010	7.3	36.5	IN	1.92E-09	5.10E-07	3.55E-07	3.21E-06	4.87E-08	1.47E-06	9.55E-07	1.15E-07	1.06E-07	
23.06	78466	generator/B425	2.3	10	IN	7.33E-08	3.21E-08	2.24E-08	2.03E-07	3.07E-09	9.27E-08	6.02E-08	7.27E-09	6.66E-09	
23.10	76010	generator/B725	6	240	IN	1.94E-08	5.15E-06	3.59E-06	3.25E-05	4.93E-07	1.49E-05	9.66E-06	1.17E-06	1.07E-06	
23.58	76303	generator/B600	3	15	IN	2.87E-07	1.26E-07	8.76E-08	7.93E-07	1.20E-08	3.62E-07	2.36E-07	2.84E-08	2.61E-08	
S2.111	76921	generator/B650	3	120	PER	9.70E-09	2.58E-06	1.80E-06	1.63E-05	2.46E-07	7.43E-06	4.83E-06	5.83E-07	5.34E-07	
Area 27						3.16E-05	9.52E-06	6.54E-06	9.45E-05	0.00E+00	2.67E-06	8.54E-07	2.67E-07	4.40E-06	1.50E-04
S2.101	76360	generator (Baker)	12.1	484	PER	3.16E-05	9.52E-06	6.54E-06	9.45E-05	0.00E+00	2.67E-06	8.54E-07	2.67E-07	4.40E-06	
Area 29						2.07E-06	9.07E-07	6.32E-07	5.72E-06	8.67E-08	2.62E-06	1.70E-06	2.05E-07	1.88E-07	1.41E-05
29.01	78713	generator/B2901	13	65	IN	2.07E-06	9.07E-07	6.32E-07	5.72E-06	8.67E-08	2.62E-06	1.70E-06	2.05E-07	1.88E-07	
													2nd Quarter Total		***1.07E-02***

Hazardous Air Pollutant Emissions - Tons/Yr

1st Qtr 2008 / 2nd Qtr 2008						Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	TOTAL HAPS
3rd Qtr 2008 / 4th Qtr 2008						2.25E-03	1.06E-03	7.28E-04	9.43E-03	2.76E-05	1.05E-03	6.09E-04	8.67E-05	4.15E-04	1.56E-02
Emission Source Number	NTS Number	Equipment	Operating Hours (hr/qtr)	Fuel Used (Gallons)	Current Status	Benzene (ton/yr)	Toluene (ton/yr)	Xylenes (ton/yr)	Propylene (ton/yr)	1,3-Butadiene (ton/yr)*	Formaldahyde (ton/yr)	Acetaldehyde (ton/yr)	Acrolein (ton/yr)	Napthalene (ton/yr)	
DIESEL GENERATORS/COMPRESSORS - 3RD QTR 2008															
Area 1 - U1a						1.47E-05	6.47E-06	4.51E-06	4.08E-05	6.18E-07	1.87E-05	1.21E-05	1.46E-06	1.34E-06	1.01E-04
1.76	76786	generator	40	200	IN	1.31E-05	5.73E-06	3.99E-06	3.61E-05	5.47E-07	1.65E-05	1.07E-05	1.30E-06	1.19E-06	
79016	79016	hoist, mine rescue	1	5	IN	1.59E-07	6.98E-08	4.86E-08	4.40E-07	6.67E-09	2.01E-07	1.31E-07	1.58E-08	1.45E-08	
Area 5 Checkpoint Pass						7.64E-07	3.35E-07	2.33E-07	2.11E-06	3.20E-08	9.67E-07	6.28E-07	7.58E-08	6.95E-08	5.22E-06
5.001	76506	generator/Checkpoint Pass	8	40	IN	7.64E-07	3.35E-07	2.33E-07	2.11E-06	3.20E-08	9.67E-07	6.28E-07	7.58E-08	6.95E-08	
Area 6 - Const. Equipment Yard						3.52E-05	1.30E-05	8.91E-06	1.24E-04	1.10E-07	6.64E-06	3.22E-06	5.91E-07	5.70E-06	1.98E-04
6.052	76724	generator	2	10	IN	9.33E-08	4.09E-08	2.85E-08	2.58E-07	3.91E-09	1.18E-07	7.67E-08	9.25E-09	8.48E-09	
6.080	76312	generator/CP-18	11	55	IN	1.31E-06	5.76E-07	4.01E-07	3.63E-06	5.51E-08	1.66E-06	1.08E-06	1.30E-07	1.19E-07	
6.081	78076	generator/CP-40	2	10	IN	3.18E-07	1.40E-07	9.73E-08	8.81E-07	1.33E-08	4.03E-07	2.62E-07	3.16E-08	2.89E-08	
6.083	76338	generator/CP-70	6.1	137.25	IN	9.95E-07	4.36E-07	3.04E-07	2.75E-06	4.17E-08	1.26E-06	8.18E-07	9.87E-08	9.04E-08	
S2.107	78008	generator DAF	9	202.5	PER	1.96E-05	7.08E-06	4.86E-06	7.03E-05	0.00E+00	1.99E-06	6.35E-07	1.99E-07	3.28E-06	
S2.108	78009	generator DAF	6	135	PER	1.30E-05	4.72E-06	3.24E-06	4.69E-05	0.00E+00	1.33E-06	4.23E-07	1.32E-07	2.18E-06	
Area 19						9.55E-08	4.29E-08	2.99E-08	2.71E-07	4.11E-09	1.24E-07	8.05E-08	9.71E-09	8.90E-09	6.66E-07
S2.680	78712	generator/Echo Peak	1	5	IN	9.55E-08	4.29E-08	2.99E-08	2.71E-07	4.11E-09	1.24E-07	8.05E-08	9.71E-09	8.90E-09	
Area 23 - Mercury						4.13E-07	4.90E-06	3.41E-06	3.09E-05	4.68E-07	1.41E-05	9.19E-06	1.11E-06	1.02E-06	6.56E-05
23.01	535085	generator/B1000	5	20	IN	9.16E-10	2.43E-07	1.70E-07	1.54E-06	2.33E-08	7.02E-07	4.56E-07	5.50E-08	5.05E-08	
23.02	78787	generator/B1010	6.2	31	IN	1.63E-09	4.33E-07	3.02E-07	2.73E-06	4.14E-08	1.25E-06	8.12E-07	9.79E-08	8.97E-08	
23.06	78466	generator/B425	3.4	17	IN	1.08E-07	4.75E-08	3.31E-08	3.00E-07	4.54E-09	1.37E-07	8.91E-08	1.07E-08	9.85E-09	
23.10	76010	generator/B725	2	80	IN	6.47E-09	1.72E-06	1.20E-06	1.08E-05	1.64E-07	4.96E-06	3.22E-06	3.89E-07	3.56E-07	
6.082	76303	generator/B600	3	15	IN	2.87E-07	1.26E-07	8.76E-08	7.93E-07	1.20E-08	3.62E-07	2.36E-07	2.84E-08	2.61E-08	
S2.111	76921	generator/B650	3	120	PER	9.70E-09	2.58E-06	1.80E-06	1.63E-05	2.46E-07	7.43E-06	4.83E-06	5.83E-07	5.34E-07	
Area 27						8.46E-05	2.55E-05	1.75E-05	2.53E-04	0.00E+00	7.16E-06	2.29E-06	7.15E-07	1.18E-05	4.03E-04
S2.101	76360	generator (Baker)	32.4	1296	PER	8.46E-05	2.55E-05	1.75E-05	2.53E-04	0.00E+00	7.16E-06	2.29E-06	7.15E-07	1.18E-05	
													3rd Quarter Total		***7.73E-04***

Hazardous Air Pollutant Emissions - Tons/Yr

1st Qtr 2008 / 2nd Qtr 2008						Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	TOTAL HAPS
3rd Qtr 2008 / 4th Qtr 2008						2.25E-03	1.06E-03	7.28E-04	9.43E-03	2.76E-05	1.05E-03	6.09E-04	8.67E-05	4.15E-04	1.56E-02
Emission Source Number	NTS Number	Equipment	Operating Hours (hr/qtr)	Fuel Used (Gallons)	Current Status	Benzene (ton/yr)	Toluene (ton/yr)	Xylenes (ton/yr)	Propylene (ton/yr)	1,3-Butadiene (ton/yr)*	Formaldahyde (ton/yr)	Acetaldehyde (ton/yr)	Acrolein (ton/yr)	Napthalene (ton/yr)	
DIESEL GENERATORS/COMPRESSORS - 4TH QTR 2008															
Area 1 - T-1						6.35E-06	2.78E-06	1.94E-06	1.76E-05	2.66E-07	8.03E-06	5.22E-06	6.30E-07	5.77E-07	4.34E-05
76005	76005	generator T-1	39.3	196.5	IN	6.26E-06	2.74E-06	1.91E-06	1.73E-05	2.62E-07	7.91E-06	5.14E-06	6.20E-07	5.69E-07	
Area 1 - U1a						4.67E-08	2.05E-08	1.43E-08	1.29E-07	1.96E-09	5.90E-08	3.84E-08	4.63E-09	4.24E-09	3.19E-07
76784	76784	generator	1	5	IN	4.67E-08	2.05E-08	1.43E-08	1.29E-07	1.96E-09	5.90E-08	3.84E-08	4.63E-09	4.24E-09	
Area 5 Checkpoint Pass						1.91E-07	8.38E-08	5.84E-08	5.28E-07	8.01E-09	2.42E-07	1.57E-07	1.89E-08	1.74E-08	1.30E-06
5.001	76506	generator/Checkpoint Pass	2	10	IN	1.91E-07	8.38E-08	5.84E-08	5.28E-07	8.01E-09	2.42E-07	1.57E-07	1.89E-08	1.74E-08	
Area 6 - Const. Equipment & DAF						8.28E-05	3.02E-05	2.07E-05	2.96E-04	1.02E-07	1.12E-05	4.61E-06	1.06E-06	1.37E-05	4.60E-04
6.047	78005	generator	320	1600	PER	6.27E-04	2.75E-04	1.92E-04	1.73E-03	2.63E-05	7.93E-04	5.15E-04	6.22E-05	5.70E-05	
6.052	76724	generator	1	5	IN	4.67E-08	1.40E-07	9.73E-08	8.81E-07	1.33E-08	4.03E-07	2.62E-07	3.16E-08	2.89E-08	
6.080	76312	generator/CP-18	11	55	IN	1.31E-06	5.76E-07	4.01E-07	3.63E-06	5.51E-08	1.66E-06	1.08E-06	1.30E-07	1.19E-07	
6.081	78076	generator/CP-40	2	10	IN	3.18E-07	1.40E-07	9.73E-08	8.81E-07	1.33E-08	4.03E-07	2.62E-07	3.16E-08	2.89E-08	
6.083	76338	generator/CP-70	4	20	IN	7.96E-07	3.49E-07	2.43E-07	2.20E-06	3.34E-08	1.01E-06	6.54E-07	7.89E-08	7.24E-08	
S2.107	78008	generator DAF	16	160	PER	3.48E-05	1.26E-05	8.65E-06	1.25E-04	0.00E+00	3.53E-06	1.13E-06	3.53E-07	5.82E-06	
S2.108	78009	generator DAF	21	210	PER	4.56E-05	1.65E-05	1.13E-05	1.64E-04	0.00E+00	4.64E-06	1.48E-06	4.63E-07	7.64E-06	
Area 19						1.15E-06	4.29E-08	2.99E-08	2.71E-07	4.11E-09	1.24E-07	8.05E-08	9.71E-09	8.90E-09	1.72E-06
S2.680	78712	generator/Echo Peak	1	5	IN	1.15E-06	4.29E-08	2.99E-08	2.71E-07	4.11E-09	1.24E-07	8.05E-08	9.71E-09	8.90E-09	
Area 23 - Mercury						7.46E-08	2.91E-06	2.03E-06	1.84E-05	2.78E-07	8.40E-06	5.46E-06	6.59E-07	6.04E-07	3.88E-05
23.01	535085	generator/B1000	2	10	IN	1.08E-10	2.86E-08	2.00E-08	1.81E-07	2.74E-09	8.26E-08	5.37E-08	6.48E-09	5.94E-09	
23.02	78787	generator/B1010	4	20	IN	1.05E-09	2.79E-07	1.95E-07	1.76E-06	2.67E-08	8.05E-07	5.24E-07	6.31E-08	5.79E-08	
23.06	78466	generator/B425	2	10	IN	6.37E-08	2.79E-08	1.95E-08	1.76E-07	2.67E-09	8.06E-08	5.24E-08	6.32E-09	5.79E-09	
S2.111	76921	generator/B650	3	120	PER	9.70E-09	2.58E-06	1.80E-06	1.63E-05	2.46E-07	7.43E-06	4.83E-06	5.83E-07	5.34E-07	
6.082	76303	generator/B600	3	15	IN	2.87E-07	1.26E-07	8.76E-08	7.93E-07	1.20E-08	3.62E-07	2.36E-07	2.84E-08	2.61E-08	
Area 27						2.64E-05	7.95E-06	5.46E-06	7.89E-05	0.00E+00	2.23E-06	7.13E-07	2.23E-07	3.68E-06	1.26E-04
S2.101	76360	generator (Baker)	10.1	404	PER	2.64E-05	7.95E-06	5.46E-06	7.89E-05	0.00E+00	2.23E-06	7.13E-07	2.23E-07	3.68E-06	
													4th Quarter Total		***6.71E-04***

**There is no emission factor for 1,3 Butadiene for diesel generators > 600 hp, i.e. DAF and Area 27 generators*

Hazardous Air Pollutant Emissions - Tons/Yr

Emission Source Number	Equipment Location	Operating Hours (hrs/qtr)	Gallons of Fuel Used (gal/qtr)	As (ton/yr)	Beryllium (ton/yr)	Cd (ton/yr)	Cr (ton/yr)	Pb (ton/yr)	Hg (ton/yr)	Mn (ton/yr)	Ni (ton/yr)	Se (ton/yr)	Benzene (ton/yr)	Toluene (ton/yr)	Formaldehyde (ton/yr)	Napthalene (ton/yr)	Ethyl Benzene (ton/yr)	o-Xylene (ton/yr)	TOTAL HAPS
1st Quarter 2008 / 2nd Quarter 2008				Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	Totals	
3rd Quarter 2008 / 4th Quarter 2008				8.19E-05	6.14E-05	6.14E-05	6.14E-05	1.84E-04	6.14E-05	1.23E-04	6.14E-05	3.07E-04	3.15E-05	9.13E-04	8.99E-03	1.66E-04	9.37E-06	1.61E-05	1.11E-02
BOILERS - 1ST QTR 2008																			
AREA 6				**1.31E-05**	**9.81E-06**	**9.81E-06**	**9.81E-06**	**2.94E-05**	**9.81E-06**	**1.96E-05**	**9.81E-06**	**4.91E-05**	**5.04E-06**	**1.46E-04**	**1.44E-03**	**2.66E-05**	**1.50E-06**	**2.56E-06**	**1.78E-03**
6.08	CP-9	16	92.8	2.68E-08	2.01E-08	2.01E-08	2.01E-08	6.02E-08	2.01E-08	4.01E-08	2.01E-08	1.00E-07	1.03E-08	2.98E-07	2.94E-06	5.44E-08	3.06E-09	5.25E-09	
6.075	CP-1	526.6	4792.1	1.76E-06	1.32E-06	1.32E-06	1.32E-06	3.96E-06	1.32E-06	2.64E-06	1.32E-06	6.60E-06	6.78E-07	1.96E-05	1.93E-04	3.58E-06	2.01E-07	3.45E-07	
6.076	CP-1	319.4	2906.5	1.07E-06	8.01E-07	8.01E-07	8.01E-07	2.40E-06	8.01E-07	1.60E-06	8.01E-07	4.01E-06	4.11E-07	1.19E-05	1.17E-04	2.17E-06	1.22E-07	2.09E-07	
6.089	DAF	1092	1834.56	5.11E-06	3.83E-06	3.83E-06	3.83E-06	1.15E-05	3.83E-06	7.67E-06	3.83E-06	1.92E-05	1.97E-06	5.70E-05	5.61E-04	1.04E-05	5.85E-07	1.00E-06	
6.090	DAF	1092	1834.56	5.11E-06	3.83E-06	3.83E-06	3.83E-06	1.15E-05	3.83E-06	7.67E-06	3.83E-06	1.92E-05	1.97E-06	5.70E-05	5.61E-04	1.04E-05	5.85E-07	1.00E-06	
AREA 23				**3.24E-05**	**2.43E-05**	**2.43E-05**	**2.43E-05**	**7.28E-05**	**2.43E-05**	**4.86E-05**	**2.43E-05**	**1.21E-04**	**1.25E-05**	**3.61E-04**	**3.55E-03**	**6.58E-05**	**3.70E-06**	**6.35E-06**	**4.40E-03**
23.07	B536	483	4830	1.71E-06	1.28E-06	1.28E-06	1.28E-06	3.85E-06	1.28E-06	2.56E-06	1.28E-06	6.41E-06	6.58E-07	1.91E-05	1.88E-04	3.47E-06	1.96E-07	3.35E-07	
23.11	B754 HW	1453	27897.6	9.30E-06	6.97E-06	6.97E-06	6.97E-06	2.09E-05	6.97E-06	1.39E-05	6.97E-06	3.49E-05	3.58E-06	1.04E-04	1.02E-03	1.89E-05	1.06E-06	1.82E-06	
23.12	B753	1503	17434.8	1.94E-05	1.45E-05	1.45E-05	1.45E-05	4.36E-05	1.45E-05	2.90E-05	1.45E-05	7.26E-05	7.45E-06	2.16E-04	2.12E-03	3.93E-05	2.21E-06	3.80E-06	
23.57	B754 Steam	312.4	3249	2.00E-06	1.50E-06	1.50E-06	1.50E-06	4.50E-06	1.50E-06	3.00E-06	1.50E-06	7.50E-06	7.70E-07	2.23E-05	2.19E-04	4.06E-06	2.29E-07	3.92E-07	
																	1st Quarter Total		**6.18E-03**
BOILERS - 2ND QTR 2008																			
AREA 6				**9.55E-06**	**7.16E-06**	**7.16E-06**	**7.16E-06**	**2.15E-05**	**7.16E-06**	**1.43E-05**	**7.16E-06**	**3.58E-05**	**3.68E-06**	**1.07E-04**	**1.05E-03**	**1.94E-05**	**1.09E-06**	**1.87E-06**	**1.30E-03**
6.084	CP-9	11	63.8	1.84E-08	1.38E-08	1.38E-08	1.38E-08	4.14E-08	1.38E-08	2.76E-08	1.38E-08	6.90E-08	7.08E-09	2.05E-07	2.02E-06	3.74E-08	2.10E-09	3.61E-09	
6.075	CP-1	208.2	1894.6	6.96E-07	5.22E-07	5.22E-07	5.22E-07	1.57E-06	5.22E-07	1.04E-06	5.22E-07	2.61E-06	2.68E-07	7.77E-06	7.64E-05	1.42E-06	7.97E-08	1.37E-07	
6.076	CP-1	175.5	1597.1	5.87E-07	4.40E-07	4.40E-07	4.40E-07	1.32E-06	4.40E-07	8.80E-07	4.40E-07	2.20E-06	2.26E-07	6.55E-06	6.44E-05	1.19E-06	6.71E-08	1.15E-07	
6.089	DAF	1020	1713.6	4.78E-06	3.58E-06	3.58E-06	3.58E-06	1.07E-05	3.58E-06	7.16E-06	3.58E-06	1.79E-05	1.84E-06	5.33E-05	5.24E-04	9.71E-06	5.46E-07	9.36E-07	
6.090	DAF	1020	1713.6	4.78E-06	3.58E-06	3.58E-06	3.58E-06	1.07E-05	3.58E-06	7.16E-06	3.58E-06	1.79E-05	1.84E-06	5.33E-05	5.24E-04	9.71E-06	5.46E-07	9.36E-07	
AREA 23				**5.26E-06**	**3.95E-06**	**3.95E-06**	**3.95E-06**	**1.18E-05**	**3.95E-06**	**7.90E-06**	**3.95E-06**	**1.97E-05**	**2.03E-06**	**5.87E-05**	**5.78E-04**	**1.07E-05**	**6.02E-07**	**1.03E-06**	**7.15E-04**
23.07	B536	32	320	1.13E-07	8.50E-08	8.50E-08	8.50E-08	2.55E-07	8.50E-08	1.70E-07	8.50E-08	4.25E-07	4.36E-08	1.26E-06	1.24E-05	2.30E-07	1.30E-08	2.22E-08	
23.11	B754 HW	193	3705.6	1.24E-06	9.26E-07	9.26E-07	9.26E-07	2.78E-06	9.26E-07	1.85E-06	9.26E-07	4.63E-06	4.75E-07	1.38E-05	1.36E-04	2.51E-06	1.41E-07	2.42E-07	
23.12	B753	165	1914	2.13E-06	1.59E-06	1.59E-06	1.59E-06	4.78E-06	1.59E-06	3.19E-06	1.59E-06	7.97E-06	8.18E-07	2.37E-05	2.33E-04	4.32E-06	2.43E-07	4.17E-07	
23.57	B754 Steam	279.7	2908.9	1.79E-06	1.34E-06	1.34E-06	1.34E-06	4.03E-06	1.34E-06	2.69E-06	1.34E-06	6.71E-06	6.89E-07	2.00E-05	1.96E-04	3.64E-06	2.05E-07	3.51E-07	
																	2nd Quarter Total		**2.01E-03**
BOILERS - 3RD QTR 2008																			
AREA 6				**9.10E-06**	**6.83E-06**	**6.83E-06**	**6.83E-06**	**2.05E-05**	**6.83E-06**	**1.37E-05**	**6.83E-06**	**3.41E-05**	**3.50E-06**	**1.02E-04**	**9.99E-04**	**1.85E-05**	**1.04E-06**	**1.78E-06**	**1.24E-03**
6.089	DAF	972	1632.96	4.55E-06	3.41E-06	3.41E-06	3.41E-06	1.02E-05	3.41E-06	6.83E-06	3.41E-06	1.71E-05	1.75E-06	5.08E-05	5.00E-04	9.25E-06	5.21E-07	8.92E-07	
6.090	DAF	972	1632.96	4.55E-06	3.41E-06	3.41E-06	3.41E-06	1.02E-05	3.41E-06	6.83E-06	3.41E-06	1.71E-05	1.75E-06	5.08E-05	5.00E-04	9.25E-06	5.21E-07	8.92E-07	
AREA 23				**1.87E-06**	**1.40E-06**	**1.40E-06**	**1.40E-06**	**4.20E-06**	**1.40E-06**	**2.80E-06**	**1.40E-06**	**7.00E-06**	**7.19E-07**	**2.08E-05**	**2.05E-04**	**3.79E-06**	**2.14E-07**	**3.66E-07**	**2.54E-04**
23.57	B754 Steam	269.7	2804.9	1.87E-06	1.40E-06	1.40E-06	1.40E-06	4.20E-06	1.40E-06	2.80E-06	1.40E-06	7.00E-06	7.19E-07	2.08E-05	2.05E-04	3.79E-06	2.14E-07	3.66E-07	
																	3rd Quarter Total		**1.49E-03**
BOILERS - 4TH QTR 2008																			
AREA 6				**9.10E-06**	**6.83E-06**	**6.83E-06**	**6.83E-06**	**2.05E-05**	**6.83E-06**	**1.37E-05**	**6.83E-06**	**3.41E-05**	**3.50E-06**	**1.02E-04**	**9.99E-04**	**1.85E-05**	**1.04E-06**	**1.78E-06**	**1.24E-03**
6.075	CP-1	218.5	1988.4	7.31E-07	5.48E-07	5.48E-07	5.48E-07	1.64E-06	5.48E-07	1.10E-06	5.48E-07	2.74E-06	2.81E-07	8.15E-06	8.02E-05	1.49E-06	8.36E-08	1.43E-07	
6.076	CP-1	93.8	853.6	5.13E-07	3.85E-07	3.85E-07	3.85E-07	1.15E-06	3.85E-07	7.70E-07	3.85E-07	1.92E-06	1.97E-07	5.72E-06	5.63E-05	1.04E-06	5.87E-08	1.01E-07	
6.089	DAF 500-1	972	1632.96	4.55E-06	3.41E-06	3.41E-06	3.41E-06	1.02E-05	3.41E-06	6.83E-06	3.41E-06	1.71E-05	1.75E-06	5.08E-05	5.00E-04	9.25E-06	5.21E-07	8.92E-07	
6.090	DAF 500-2	972	1632.96	4.55E-06	3.41E-06	3.41E-06	3.41E-06	1.02E-05	3.41E-06	6.83E-06	3.41E-06	1.71E-05	1.75E-06	5.08E-05	5.00E-04	9.25E-06	5.21E-07	8.92E-07	
AREA 23				**1.53E-06**	**1.15E-06**	**1.15E-06**	**1.15E-06**	**3.45E-06**	**1.15E-06**	**2.30E-06**	**1.15E-06**	**5.76E-06**	**5.91E-07**	**1.71E-05**	**1.68E-04**	**3.12E-06**	**1.76E-07**	**3.01E-07**	**2.09E-04**
23.57	B754 Steam	239.8	2493.9	1.53E-06	1.15E-06	1.15E-06	1.15E-06	3.45E-06	1.15E-06	2.30E-06	1.15E-06	5.76E-06	5.91E-07	1.71E-05	1.68E-04	3.12E-06	1.76E-07	3.01E-07	
																	4th Quarter Total		**1.45E-03**

Hazardous Air Pollutant Emissions - Tons/Yr

1st Qtr 2008 / 2nd Qtr 2008				Totals	Totals	Totals	Totals	Totals	Totals	Totals					TOTAL HAPS
3rd Qtr 2008 / 4th Qtr 2008			1.76E-03	3.00E-03	5.03E-03	2.86E-02	4.09E-03	9.78E-04	9.58E-04	2.04E-03	1.84E-04	3.08E-06	2.09E-02	1.50E-02	2.02E-01
Emission Source Number	Equipment / Activity	Operating hours (hr/qtr)	Chlorine (Cl2) (ton/yr)	1,1-Dimethyl Hydrazine (UDMH)(C2N2H8) (ton/yr)	Hydrazine (N2H4) (ton/yr)	Hydrogen Fluoride (HF) (ton/yr)	Methyl Hydrazine (Monomethyl Hydrazine)	Nitric Acid (HNO3) (ton/yr)	H2SO4 (ton/yr)	HCl (ton/yr)	Lead	Methanol	Ammonia (NH3) (tons/yr)	R134a (tons/yr)	
CHEMICAL RELEASES/FUME HOODS - 1ST QUARTER, 2008															
Area 5 - NPTEC Chemical Releases/Detonations															
F1.002	Chemical Releases					1.67E-02									1.67E-02
Area 23 Fume Hoods															
23.50	Building 652 Hoods	800				4.00E-04		2.61E-04	3.19E-04	6.69E-04					1.65E-03
													1st Quarter Total		***1.84E-02***
CHEMICAL RELEASES/FUME HOODS - 2ND QUARTER, 2008															
Area 4 - BEEF Detonations															
F1.001						5.20E-04									5.20E-04
Area 5 - NPTEC Chemical Releases															
F1.002			1.76E-03			4.63E-04									4.63E-04
Area 23 Fume Hoods															
23.49	Building 650 Hoods	550						2.54E-05			1.84E-04	3.08E-06			2.13E-04
23.50	Building 652 Hoods	800				4.00E-04		2.61E-04	3.19E-04	6.69E-04					1.65E-03
													2nd Quarter Total		***2.85E-03***
CHEMICAL RELEASES/FUME HOODS - 3rd QUARTER, 2008															
Area 5 - NPTEC Chemical Releases															
F1.002				3.00E-03	5.03E-03	9.70E-03	4.09E-03						2.09E-02	1.50E-02	5.77E-02
Area 23 Fume Hoods															
23.49	Building 650 Hoods	2208						1.69E-04		3.38E-05					2.03E-04
23.50	Building 652 Hoods	800				4.00E-04		2.61E-04	3.19E-04	6.69E-04					1.65E-03
Site-Wide Chemical Releases															
F1.004	Test Cell C (Area 25)					5.15E-03									5.15E-03
													3rd Quarter Total		***6.47E-02***
CHEMICAL RELEASES/FUME HOODS - 4TH QUARTER, 2008															
Area 4 - BEEF Detonations*															
F1.001															9.87E-02
Area 5 - NPTEC Chemical Releases															
F1.002													8.86E-03	6.29E-03	1.52E-02
Area 23 Fume Hoods															
23.49	Building 650 Hoods	2208						1.69E-04		3.38E-05					2.03E-04
23.50	Building 652 Hoods	800				4.00E-04		2.61E-04	3.19E-04	6.69E-04					1.65E-03
													4th Quarter Total		***1.16E-01***

*Note: as per agreement with the Bureau of Air Pollution Control, the total quantity of 4th quarter hazardous air pollutants (HAPS) was listed, rather than including separate quantities for each HAP.

SUMMARY EMISSIONS REPORT

CLASS II AIR QUALITY OPERATING PERMIT
AP9711-0549.01

NONPROLIFERATION TEST AND EVALUATION COMPLEX (NPTEC)

4TH QUARTER, CALENDAR YEAR 2008

Submitted by
National Security Technologies, LLC
On behalf of
The National Nuclear Security Administration
Nevada Site Office

January 28, 2009

SUMMARY REPORT: **Tarantula Project (NPTEC)**

1. **Dates of Testing:**

Tarantula is a year long effort with periodic releases throughout the year. This report covers the releases executed in the 90 day period from October 1st through December 30th, 2008.

2. **Date Test Plan Submitted to NDEP Air Quality Division:**

December 2007.

3. **Weather Conditions:**

Weather conditions conformed to those proposed.

4. **Chemicals Released and Amounts:**

The chemicals releases, their total quantity, maximum release rate, and date releases are all listed in the attached tables.

5. **Environmental Monitoring:**

NSTec Ecological Services performs biological surveys/desert tortoise surveys for the NPTEC Facility in accordance with the Biological Assessment for NPTEC operations.

A PM 10 particulate meter records particulate levels at the eastern edge of Frenchman Flat, down wind from the NPTEC release area. Data from the PM 10 meter is provided in the attached tables.

6. **Transportation:**

Chemical transfer/movement and transportation was performed according to plan without incident.

7. **Short Summary of Project:**

The Tarantula III project is a Department of Energy sponsored series of tests designed to provide data for the testing and development of chemical sensor technologies.

Table 1. NPTEC Chemical Releases for the Tarantula Project (Oct 08 – Dec 08)

Chemical	CAS Number	10/06/2008		10/07/2008		Source
		Max Rate (kg/hr)	Total Release (kg)	Max Rate (kg/hr)	Total Release (kg)	
Acetone	67-64-1			22.00	5.48	Para Pump
Ammonia (NH3)	7664-41-7	6.4	1.45	6.4	2.99	PPG Sys #31
Nitrous Oxide (N2)	10024-97-2	32.1	7.02	32.0	7.04	PPG Sys #13
Propylene	115-07-1	10.3	2.50	10.8	2.67	PPG Sys #23
Sulfur Hexafluoride	2551-62-4	8.0	5.75	8.02	6.05	PPG Sys #21
Freon 134a	811-97-2	10.0	2.9	10.1	2.81	PPG Sys #22

Chemical	CAS Number	10/08/2008		10/09/2008		Source
		Max Rate (kg/hr)	Total Release (kg)	Max Rate (kg/hr)	Total Release (kg)	
Acetone	67-64-1	22.00	17.23	20.00	13.33	Para Pump
Ammonia (NH3)	7644-41-7			6.00	3.6	PPG Sys #31
Sulfur Hexafluoride	2551-62-4	8.00	0.67			PPG Sys #21

Chemical	CAS Number	12/16/2008				Source
		Max Rate (kg/hr)	Total Release (kg)			
Dimethyl Methyl Phosphonate (DMMP)	756-79-6	22.00	2.32			Para Pump

Table 2. PM10 Readings (From NPTEC Meter)

DATE	o.k.%	$\mu g/m^3$
10/06/2008	47	-25
10/07/2008	100	5
10/08/2008	100	6
10/09/2008	100	15
10/10/2008	97	36
10/11/2008	100	10
10/12/2008	100	7
12/16/2008	64	-21
12/17/2008	100	3
12/18/2008	100	3
12/19/2008	97	5
12/20/2008	100	11
12/21/2008	100	6
12/22/2008	100	5
12/23/2008	100	2
12/24/2008	100	3
12/25/2008	100	6
12/26/2008	100	3
12/27/2008	100	2
12/28/2008	100	3
12/29/2008	100	3