



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6  
1445 ROSS AVENUE, SUITE 1200  
DALLAS, TEXAS  
75202-2733

November 17, 2015

Webster Fire District #7 Dixie Inn  
ATTN: Chief Mitch Middleton  
61 Shell Street  
Minden, Louisiana 71055

RE: May 2015 Sampling of Fire Department Substation located on Greene Road  
Minden, Louisiana

Dear Mr. Davis,

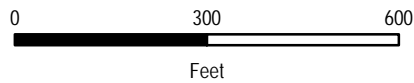
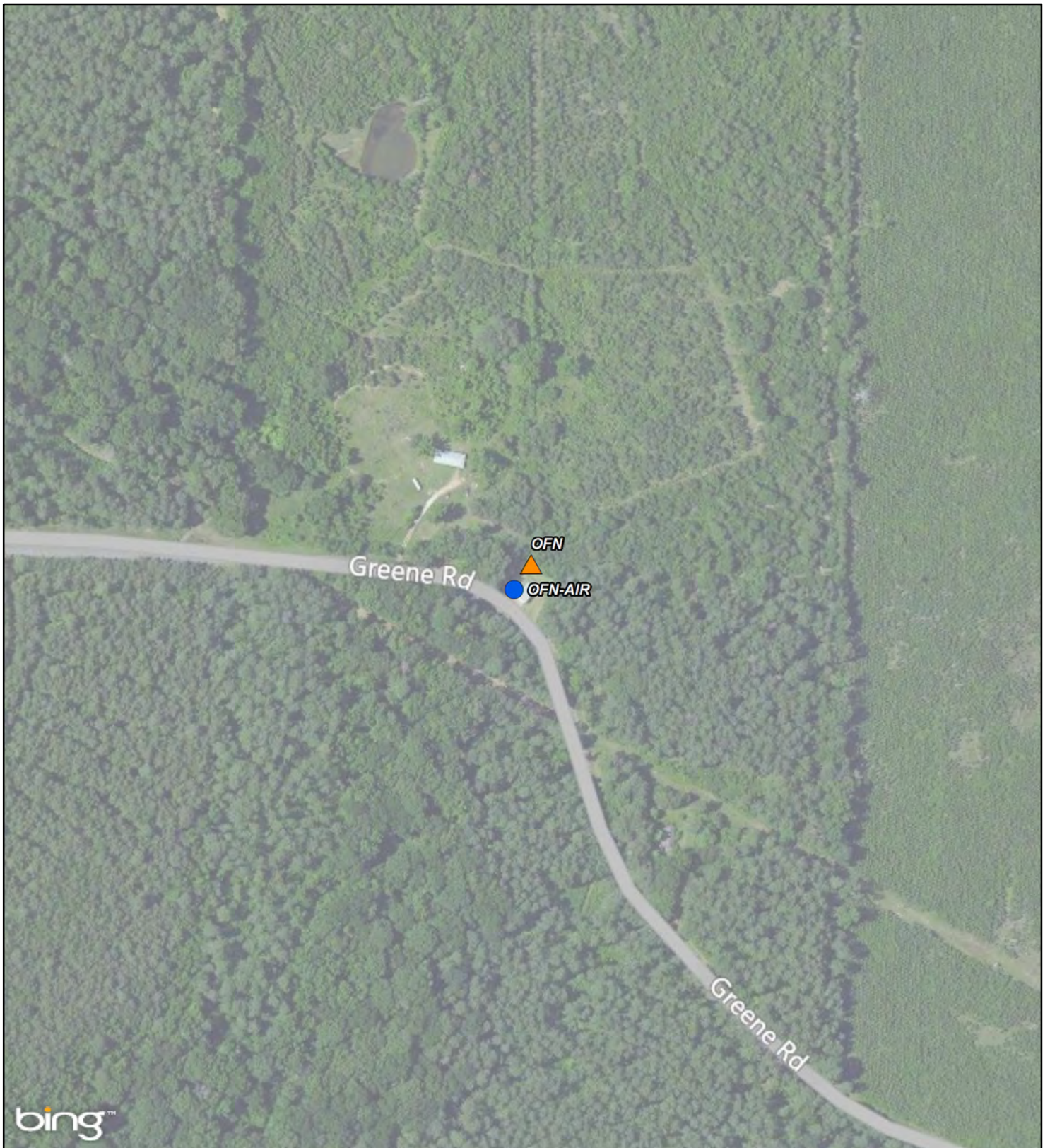
The Environmental Protection Agency (EPA) conducted real-time air monitoring and collected soil and air samples from the fire substation located on Greene Road in May 2015. The monitoring and sampling was conducted to establish a baseline for soil and air prior to implementation of the removal operations at Camp Minden. Air monitoring was for carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxide (NO), nitrogen dioxide (NO<sub>2</sub>), NOX, sulfur dioxide (SO<sub>2</sub>), and fine particulates (2.5 micrometers [PM<sub>2.5</sub>]). Soil samples were analyzed for dioxin/furans, semi-volatile organic compounds (SVOCs), pH, and volatile organic compounds (VOCs). The air samples were analyzed for dioxin/furans, SVOCs, particulates (PM<sub>10</sub> and PM<sub>2.5</sub>), and volatile organic compounds (VOCs).

Maximum detections for air monitoring are summarized on Table 1 - Air Monitoring Summary, and the data collected during the monitoring period is presented as graphs. The analytical results for the soil samples are summarized on the attached Table 2 - Soil Analytical Results. The results for the air samples are summarized on Tables 3 and 4 - Air Analytical Results. The monitoring and sampling location is shown on the attached figure.



Thank you for your cooperation. Please contact me at 214-665-2779 (office), [Adam.Adams@epa.gov](mailto:Adam.Adams@epa.gov) (email), or the EPA toll free number 800-533-3508 if you have any questions.

Adam Adams  
On-Scene Coordinator  
Prevention and Response Branch  
USEPA Region 6 Dallas, TX

Enclosures: Table 1 – Air Monitoring Summary with graphs by analyte  
Table 2 – Soil Analytical Results  
Table 3 – Air Analytical Results – Dioxin/Furans  
Table 4 – Air Analytical Results – SVOCs, Particulates and VOCs  
Figure 1 - Sample Location Map  
Toxicology Summary



**LEGEND**

-  Soil Sampling Location
-  Air Sampling Location



**US EPA REGION 6**

**FIGURE 1  
FIRE DEPARTMENT  
SUBSTATION NORTH  
GREENE RD  
MINDEN, WEBSTER PARISH  
LOUISIANA**

DATE NOVEMBER 2015	PROJECT NO 20406.012.005.0934.01	SCALE AS SHOWN
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TDD NO: 5/WESTON-042-15-006  
CONTRACT NO: EP-W-06-042

SOURCE: 2010 Microsoft Corporation and its data suppliers

U.S. ENVIRONMENTAL PROTECTION AGENCY

Region VI



Air Monitoring Summary

Camp Minden Baseline Event

Fire Department Substation – Greene Rd

Start Time: 05-19-2015 10:00 - End Time: 05-21-2015 11:00

Below is a summary of Fire Department Substation – Greene Rd Air Monitoring Data collected at the location referenced above. The table contains a detailed listing of the following:

- 1 Total count of readings from May 19, 2015 10:00 through May 21, 2015 11:00
- 2 Average reading of each analyte from May 19, 2015 10:00 through May 21, 2015 11:00
- 3 Maximum reading of each analyte from May 19, 2015 10:00 through May 21, 2015 11:00

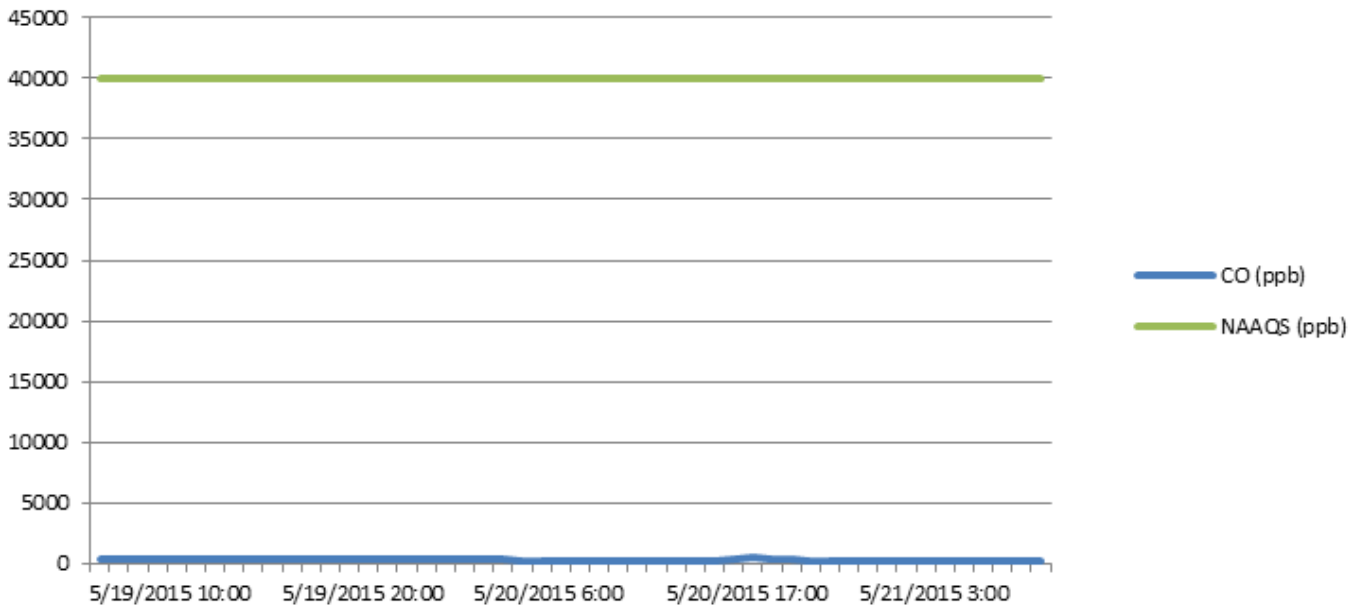
National Ambient Air Quality Standards (NAAQS) are listed with specific time frames and calculation formulas. Please visit NAAQS website for more in-depth information on how these are calculated - <http://www.epa.gov/air/criteria.html>.

\*\* Note: PM2.5 was captured in 60-min averages. All other analytes were captured in 1-min averages.

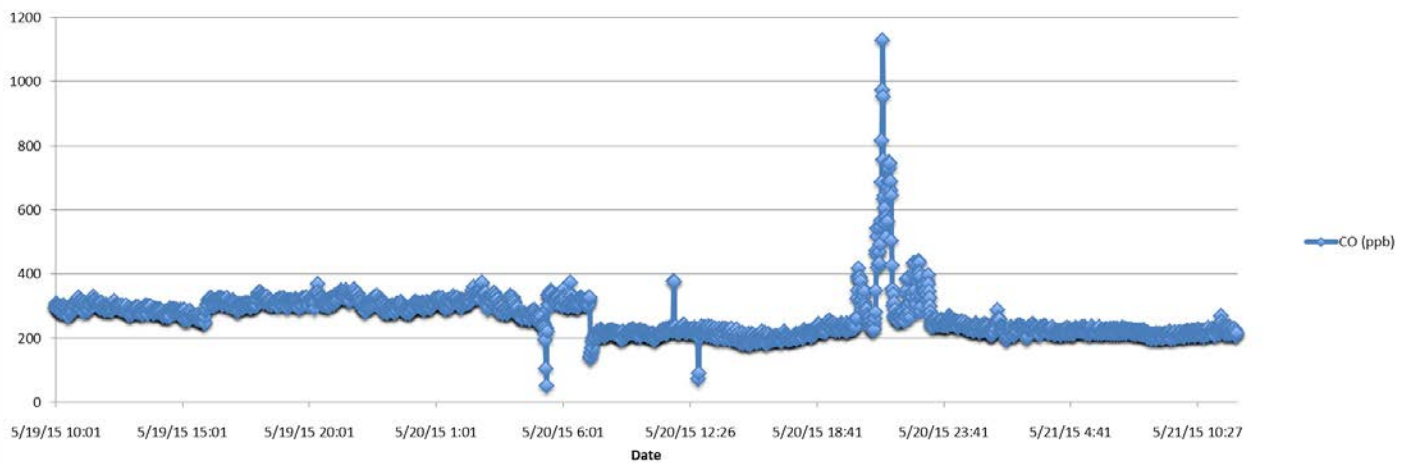
Summary of Location: Fire Department Substation – Greene Rd

Parameter	Count of 1-min Readings	Maximum Average Concentration	Maximum Detection	Units	NAAQS Standard
CO	2794	495.6	1129	ppb	40,000 (1-hour)
CO2	2842	501200	555300	ppb	
NO	2776	1.063	3.7	ppb	
NO2	2776	2.64	4.5	ppb	100 (1-hour)
NOX	2776	3.64	5.6	ppb	188 (1-hour)
SO2	2669	1.002	1.457	ppb	365 (3-hour)
Parameter	Count of 60-min Readings	Maximum Average Concentration	Maximum Detection	Units	NAAQS Standard
PM 2.5	45	3.08	44.2	ug/m3	35 (24-hour)

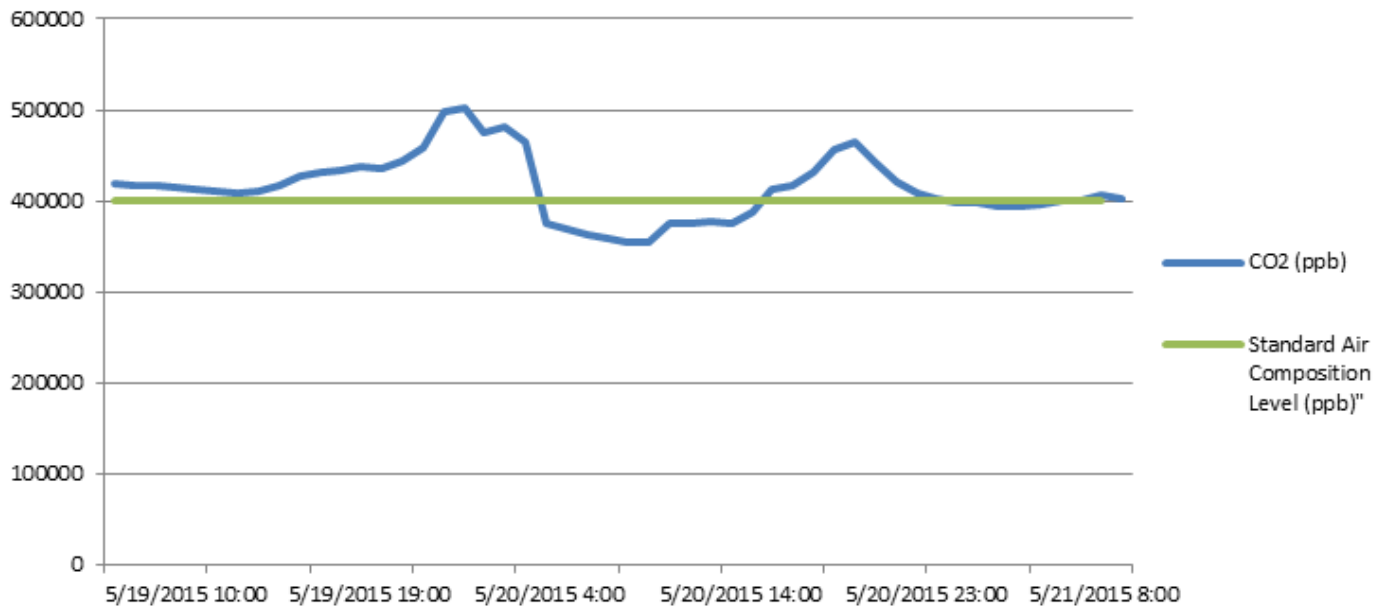
### Fire Department Substation - Greene Road - Hourly Averages CO (ppb)



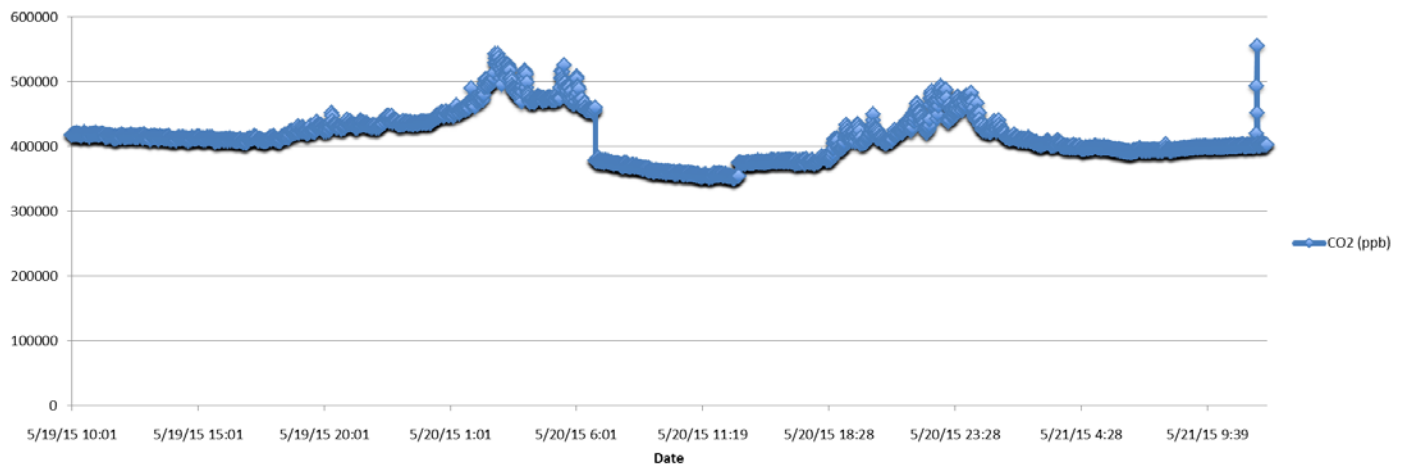
### Fire Department Substation - Greene Rd - 1 Minute Averages CO (ppb)



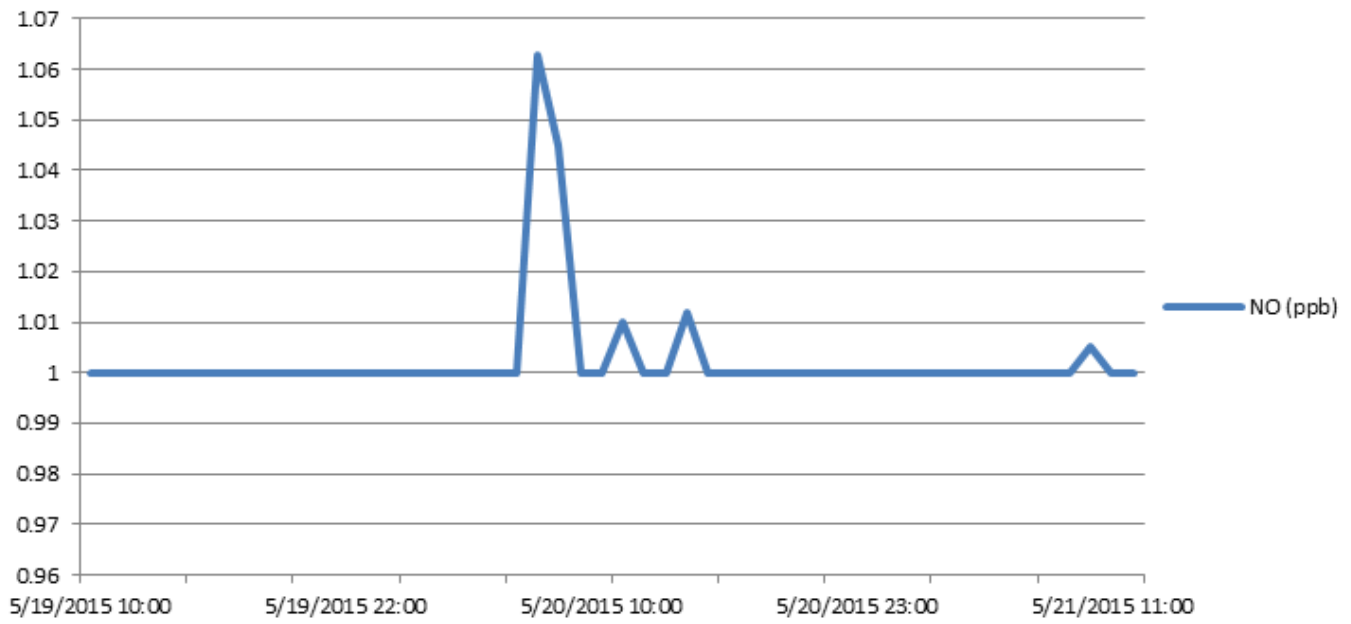
### Fire Department Substation - Greene Road - Hourly Averages CO2 (ppb)



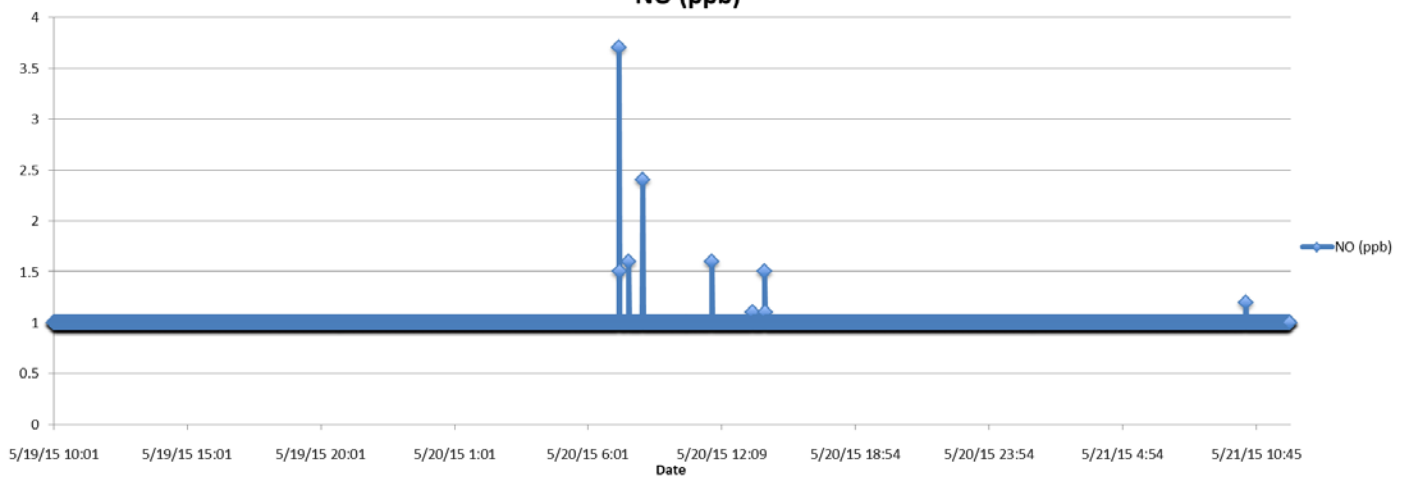
### Fire Department Substation - Greene Rd - 1 Minute Averages CO2 (ppb)



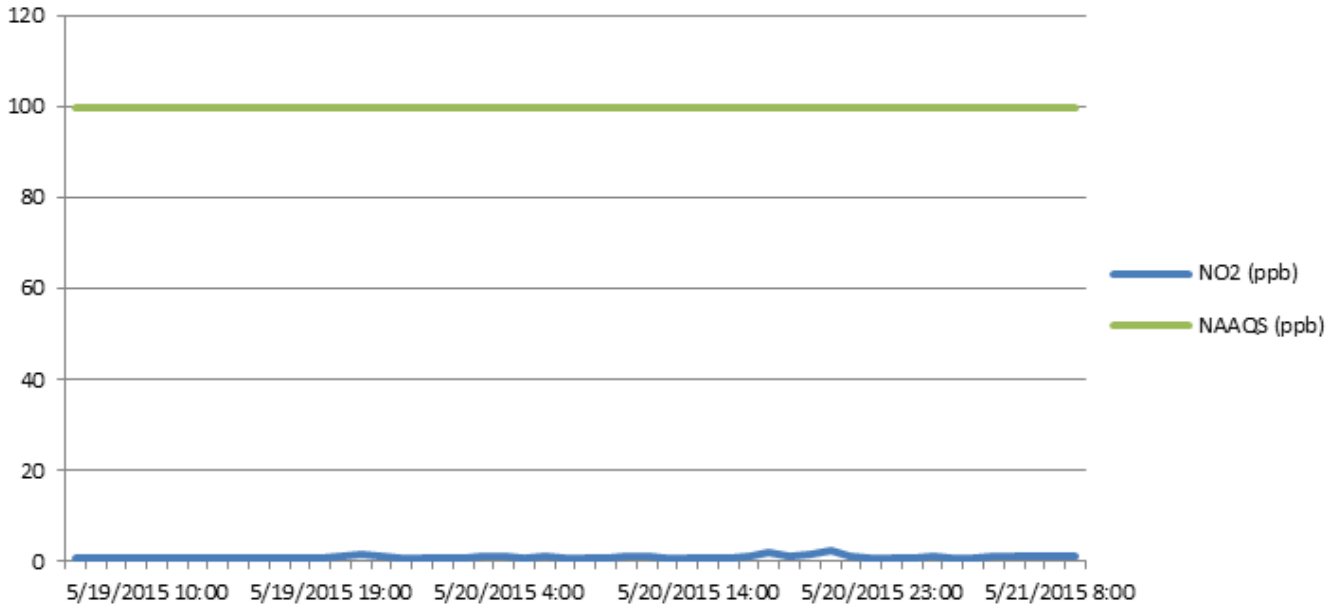
### Fire Department Substation - Greene Road - Hourly Averages NO (ppb)



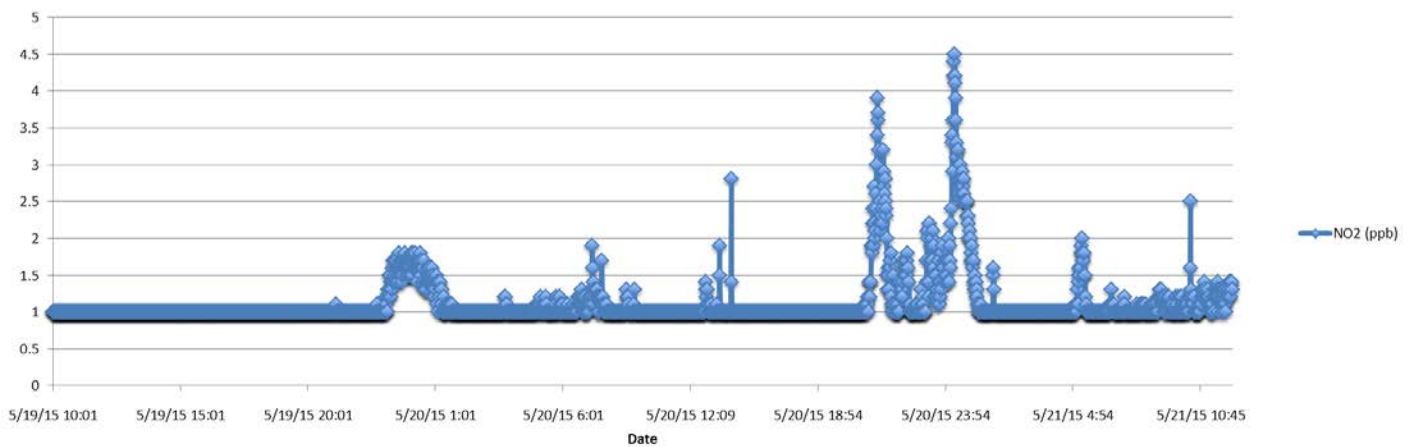
### Fire Department Substation - Greene Rd - 1 Minute Averages NO (ppb)



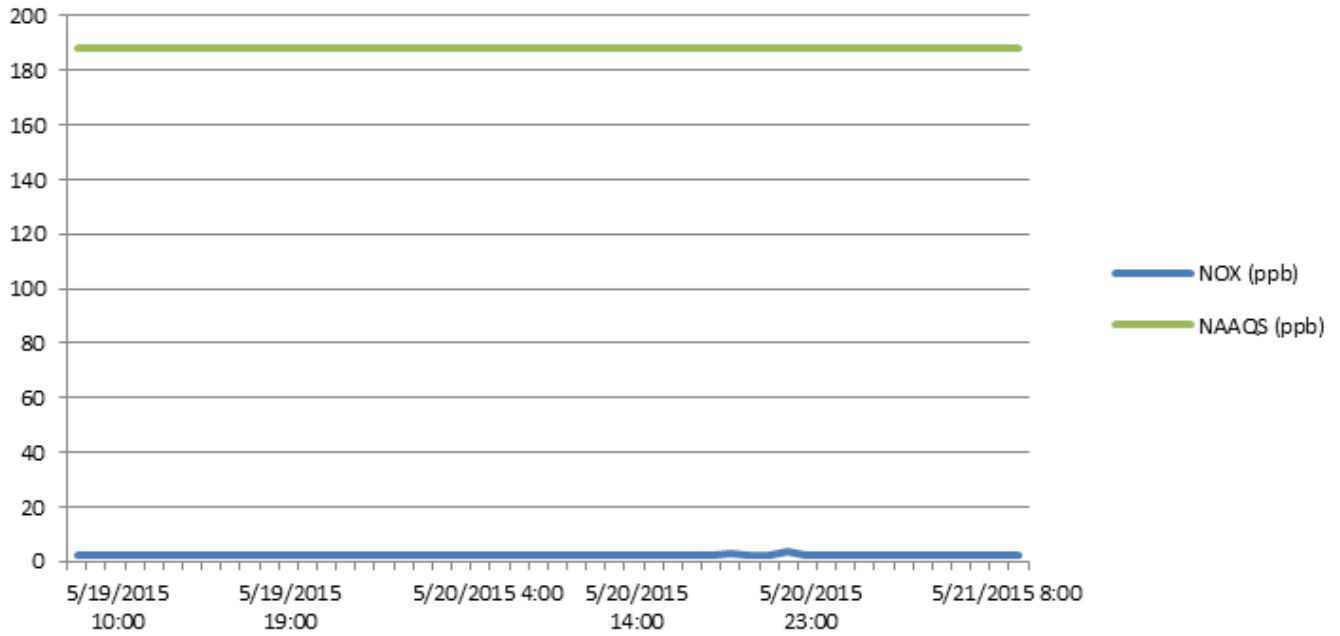
### Fire Department Substation - Greene Road - Hourly Averages NO2 (ppb)



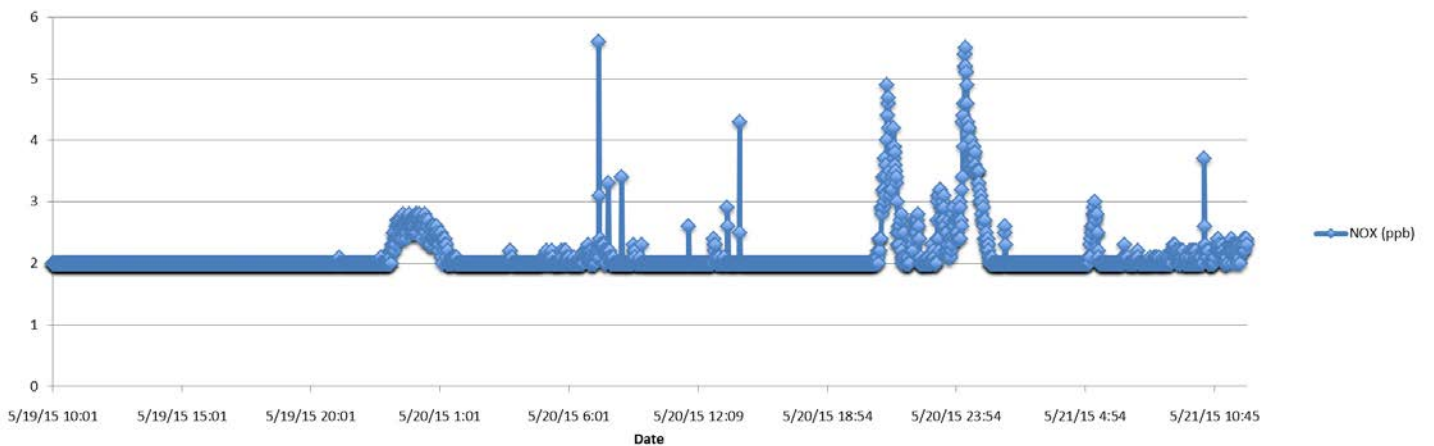
### Fire Department Substation - Greene Rd - 1 Minute Averages NO2 (ppb)



### Fire Department Substation - Greene Road - Hourly Averages NOX (ppb)

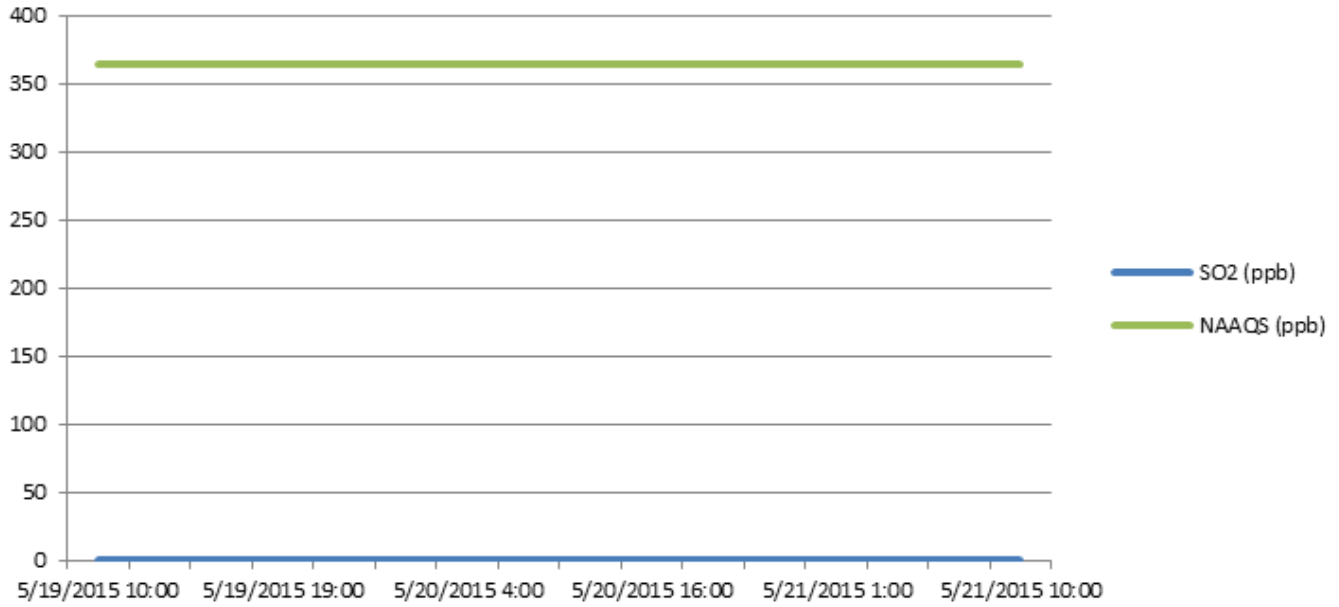


### Fire Department Substation - Greene Rd - 1 Minute Averages NOX (ppb)

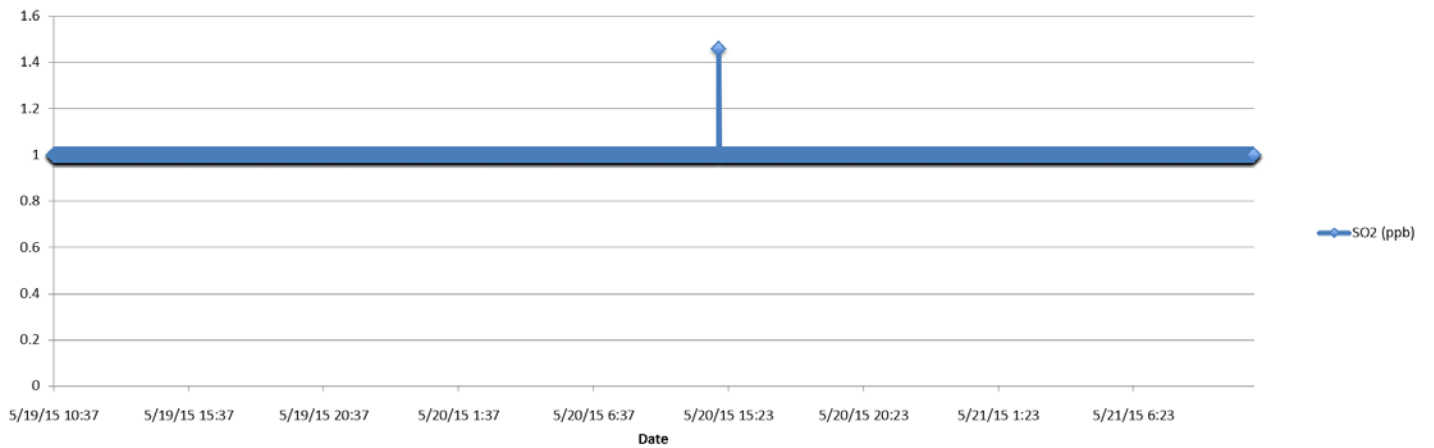




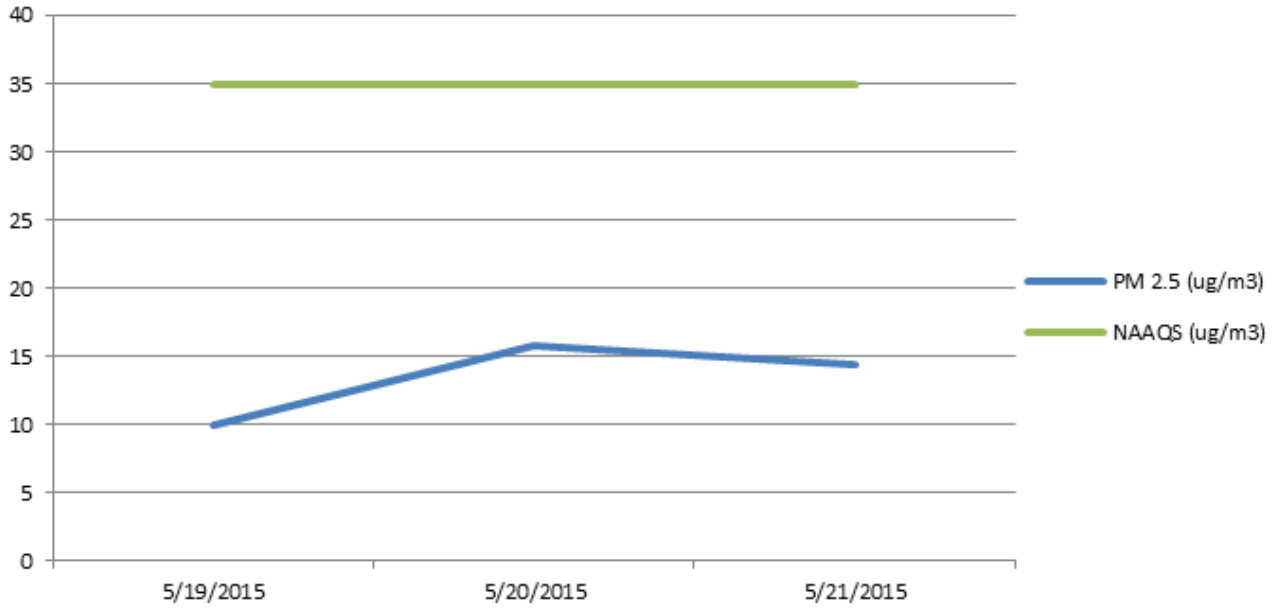
### Fire Department Substation - Greene Road - 3 Hour Averages SO2 (ppb)



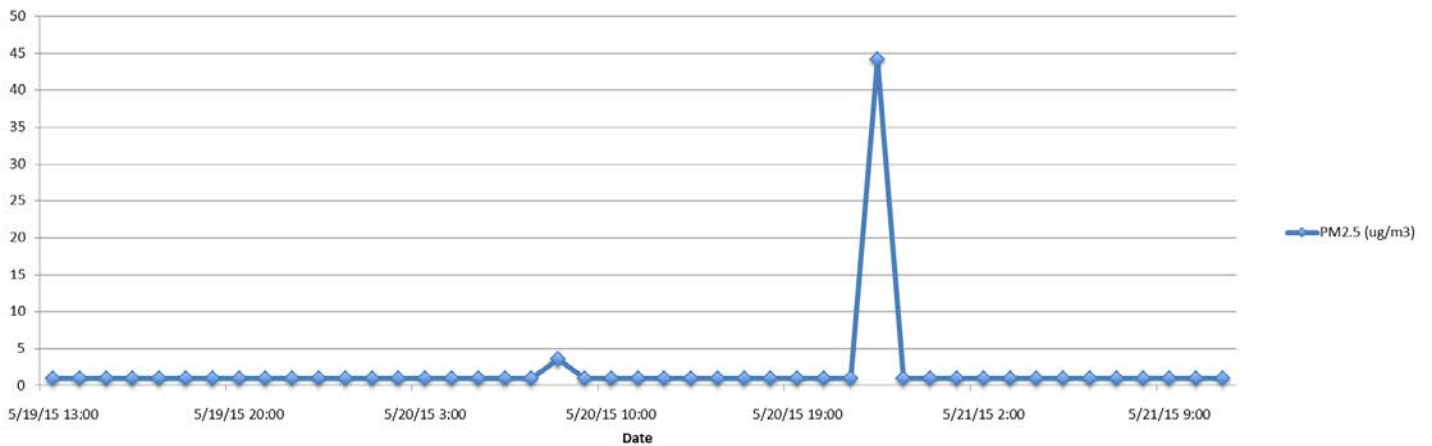
### Fire Department Substation - Greene Rd - 1 Minute Averages SO2 (ppb)



### Fire Department Substation - Greene Road - 24 Hour Averages PM 2.5 (ug/m3)



### Fire Department Substation - Greene Rd - 1 Hour Averages PM 2.5 (ug/m3)



**Table 2**  
**Soil Analytical Results**  
**Fire Department Substation - Greene Road**  
**Camp Minden - Explo Baseline Study**

				Fire Department Substation - Greene Road
				OFN01
				5/14/2015
				FS
Analyte	CAS.NO	Units	--	--
<b>Dioxin TEQ</b>				
TEQ WHO2005 ND=0	3333-30-0	ng/kg	--	<b>0.711</b>
TEQ WHO2005 ND=0.5	3333-30-1	ng/kg	--	<b>2.21</b>
<b>Dioxin/Furans</b>				
1,2,3,4,6,7,8,9-OCDD	3268-87-9	ng/kg	--	<b>1040</b>
1,2,3,4,6,7,8,9-OCDF	39001-02-0	ng/kg	--	8.71 U
1,2,3,4,6,7,8-HpCDD	35822-46-9	ng/kg	--	<b>8.96</b>
1,2,3,4,6,7,8-HpCDF	67562-39-4	ng/kg	--	4.35 U
1,2,3,4,7,8,9-HpCDF	55673-89-7	ng/kg	--	4.35 U
1,2,3,4,7,8-HxCDD	39227-28-6	ng/kg	--	4.35 U
1,2,3,4,7,8-HxCDF	70648-26-9	ng/kg	--	4.35 U
1,2,3,6,7,8-HxCDD	57653-85-7	ng/kg	--	4.35 U
1,2,3,6,7,8-HxCDF	57117-44-9	ng/kg	--	4.35 U
1,2,3,7,8,9-HxCDD	19408-74-3	ng/kg	--	4.35 U
1,2,3,7,8,9-HxCDF	72918-21-9	ng/kg	--	4.35 U
1,2,3,7,8-PeCDD	40321-76-4	ng/kg	--	4.35 U
1,2,3,7,8-PeCDF	57117-41-6	ng/kg	--	4.35 U
2,3,4,6,7,8-HxCDF	60851-34-5	ng/kg	--	4.35 U
2,3,4,7,8-PeCDF	57117-31-4	ng/kg	--	4.35 U
2,3,7,8-TCDD	1746-01-6	ng/kg	--	<b>0.308 J</b>
2,3,7,8-TCDF	51207-31-9	ng/kg	--	0.871 U
Total Heptachlorodibenzofuran	38998-75-3	ng/kg	--	4.35 U
Total Heptachlorodibenzo-p-dioxin	37871-00-4	ng/kg	--	<b>24.1</b>
Total Hexachlorodibenzofuran	55684-94-1	ng/kg	--	4.35 U
Total Hexachlorodibenzo-p-dioxin	34465-46-8	ng/kg	--	4.35 U
Total Pentachlorodibenzofuran	30402-15-4	ng/kg	--	4.35 U
Total Pentachlorodibenzo-p-dioxin	36088-22-9	ng/kg	--	4.35 U
Total Tetrachlorodibenzofuran	30402-14-3	ng/kg	--	0.871 U
Total Tetrachlorodibenzo-p-dioxin	41903-57-5	ng/kg	--	<b>0.308 J</b>
<b>pH</b>				
pH	C-006	pH Units	--	<b>5.8</b>
<b>SVOCs</b>				
2,4-Dinitrotoluene	121-14-2	µg/Kg	--	242 U
2,6-Dinitrotoluene	606-20-2	µg/Kg	--	242 U
2-Methylnaphthalene	91-57-6	µg/Kg	--	242 U
Acenaphthene	83-32-9	µg/Kg	--	242 U
Acenaphthylene	208-96-8	µg/Kg	--	242 U
Anthracene	120-12-7	µg/Kg	--	242 U
Benzo (a) anthracene	56-55-3	µg/Kg	--	242 U
Benzo (a) pyrene	50-32-8	µg/Kg	--	242 U
Benzo (b) fluoranthene	205-99-2	µg/Kg	--	242 U
Benzo (g,h,i) perylene	191-24-2	µg/Kg	--	242 U



**Table 2**  
**Soil Analytical Results**  
**Fire Department Substation - Greene Road**  
**Camp Minden - Explo Baseline Study**

				Fire Department Substation - Greene Road
				OFN01
				5/14/2015
				FS
Analyte	CAS.NO	Units	--	--
Benzo (k) fluoranthene	207-08-9	µg/Kg	--	242 U
Chrysene	218-01-9	µg/Kg	--	242 U
Dibenz (a,h) anthracene	53-70-3	µg/Kg	--	242 U
Di-n-butyl phthalate	84-74-2	µg/Kg	--	242 U
Fluoranthene	206-44-0	µg/Kg	--	242 U
Fluorene	86-73-7	µg/Kg	--	242 U
Indeno (1,2,3-cd) pyrene	193-39-5	µg/Kg	--	242 U
Naphthalene	91-20-3	µg/Kg	--	242 U
N-Nitrosodiphenylamine/Diphenylamine	86-30-6/122-39-4	µg/Kg	--	242 U
Phenanthrene	85-01-8	µg/Kg	--	242 U
Pyrene	129-00-0	µg/Kg	--	242 U
<b>VOCs</b>				
1,1,1-Trichloroethane	71-55-6	µg/Kg	--	4.4 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/Kg	--	4.4 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/Kg	--	4.4 U
1,1,2-Trichloroethane	79-00-5	µg/Kg	--	4.4 U
1,1-Dichloroethane	75-34-3	µg/Kg	--	4.4 U
1,1-Dichloroethene	75-35-4	µg/Kg	--	4.4 U
1,2,4-Trichlorobenzene	120-82-1	µg/Kg	--	4.4 U
1,2-Dibromo-3-chloropropane	96-12-8	µg/Kg	--	4.4 U
1,2-Dibromoethane	106-93-4	µg/Kg	--	4.4 U
1,2-Dichlorobenzene	95-50-1	µg/Kg	--	4.4 U
1,2-Dichloroethane	107-06-2	µg/Kg	--	4.4 U
1,2-Dichloropropane	78-87-5	µg/Kg	--	4.4 U
1,3-Dichlorobenzene	541-73-1	µg/Kg	--	4.4 U
1,4-Dichlorobenzene	106-46-7	µg/Kg	--	4.4 U
2-Butanone	78-93-3	µg/Kg	--	4.4 U
2-Hexanone	591-78-6	µg/Kg	--	4.4 U
4-Methyl-2-pentanone	108-10-1	µg/Kg	--	4.4 U
Acetone	67-64-1	µg/Kg	--	<b>27 B, J</b>
Benzene	71-43-2	µg/Kg	--	4.4 U
Bromodichloromethane	75-27-4	µg/Kg	--	4.4 U
Bromoform	75-25-2	µg/Kg	--	4.4 U
Bromomethane	74-83-9	µg/Kg	--	4.4 U
Carbon disulfide	75-15-0	µg/Kg	--	4.4 U
Carbon tetrachloride	56-23-5	µg/Kg	--	4.4 U
Chlorobenzene	108-90-7	µg/Kg	--	4.4 U
Chloroethane	75-00-3	µg/Kg	--	4.4 U
Chloroform	67-66-3	µg/Kg	--	4.4 U
Chloromethane	74-87-3	µg/Kg	--	4.4 U
cis-1,2-Dichloroethene	156-59-2	µg/Kg	--	4.4 U
cis-1,3-Dichloropropene	10061-01-5	µg/Kg	--	4.4 U



**Table 2**  
**Soil Analytical Results**  
**Fire Department Substation - Greene Road**  
**Camp Minden - Explo Baseline Study**

				Fire Department Substation - Greene Road
				OFN01
				5/14/2015
				FS
Analyte	CAS.NO	Units	--	--
Cyclohexane	110-82-7	µg/Kg	--	4.4 U
Dibromochloromethane	124-48-1	µg/Kg	--	4.4 U
Dichlorodifluoromethane	75-71-8	µg/Kg	--	4.4 U
Ethylbenzene	100-41-4	µg/Kg	--	4.4 U
Isopropylbenzene	98-82-8	µg/Kg	--	4.4 U
meta-/para-Xylene	na	µg/Kg	--	8.7 U
Methyl acetate	79-20-9	µg/Kg	--	4.4 U
Methyl tert-butyl ether	1634-04-4	µg/Kg	--	4.4 U
Methylcyclohexane	108-87-2	µg/Kg	--	4.4 U
Methylene chloride	75-09-2	µg/Kg	--	4.4 U
ortho-Xylene	95-47-6	µg/Kg	--	4.4 U
Styrene	100-42-5	µg/Kg	--	4.4 U
Tetrachloroethene	127-18-4	µg/Kg	--	4.4 U
Toluene	108-88-3	µg/Kg	--	4.4 U
trans-1,2-Dichloroethene	156-60-5	µg/Kg	--	4.4 U
trans-1,3-Dichloropropene	10061-02-6	µg/Kg	--	4.4 U
Trichloroethene	79-01-6	µg/Kg	--	4.4 U
Trichlorofluoromethane	75-69-4	µg/Kg	--	4.4 U
Vinyl chloride	75-01-4	µg/Kg	--	4.4 U
Xylenes (total)	1330-20-7	µg/Kg	--	<b>0</b>

**Notes:**

ng/kg - nanograms per kilogram

µg/kg - micrograms per kilogram

FS - Field Sample

TEQ - Toxicity Equivalency Quotient calculated based on 2005 World Health Organization (WHO) dioxin toxicity equivalency factors (TEF).

B - Found in blank

J - Estimated value

U - Below detection limit

Bolded values denote detections



**Table 3**  
**Air Analytical Results - Dioxin/Furans**  
**Fire Department Substation - Greene Road**  
**Camp Minden - Explo Baseline Study**

				Station	Fire Department Substation - Greene Road
				Station Code	OFN01-Air
				Date	5/20/2015
				Type	FS
Analyte	CAS.NO	Units	--	--	
<b>TEQ Calculation 2005</b>					
TEQ (Dioxin) ND = DL	1746-01-6	pg/m3	--	<b>0.0051608625051</b>	
TEQ (Dioxin) ND = 0	1746-01-6	pg/m3	--	<b>0.0001847473647</b>	
TEQ (Dioxin) ND = DL/2	1746-01-6	pg/m3	--	<b>0.0026728049349</b>	
<b>Dioxins/Furans</b>					
1,2,3,4,6,7,8-HpCDD	35822-46-9	pg/m3	--	<b>0.011226695 J</b>	
1,2,3,4,6,7,8-HpCDF	67562-39-4	pg/m3	--	<b>0.006214537 J</b>	
1,2,3,4,7,8,9-HpCDF	55673-89-7	pg/m3	--	0.00131451 U	
1,2,3,4,7,8-HxCDD	39227-28-6	pg/m3	--	0.00198595 U	
1,2,3,4,7,8-HxCDF	70648-26-9	pg/m3	--	0.001823831 U	
1,2,3,6,7,8-HxCDD	57653-85-7	pg/m3	--	0.002202108 U	
1,2,3,6,7,8-HxCDF	57117-44-9	pg/m3	--	0.001823831 U	
1,2,3,7,8,9-HxCDD	19408-74-3	pg/m3	--	0.002053499 U	
1,2,3,7,8,9-HxCDF	72918-21-9	pg/m3	--	0.0019184 U	
1,2,3,7,8-PeCDD	40321-76-4	pg/m3	--	0.001418536 U	
1,2,3,7,8-PeCDF	57117-41-6	pg/m3	--	0.001796812 U	
2,3,4,6,7,8-HxCDF	60851-34-5	pg/m3	--	0.00193191 U	
2,3,4,7,8-PeCDF	57117-31-4	pg/m3	--	0.001823831 U	
2,3,7,8-TCDD	1746-01-6	pg/m3	--	0.001405026 U	
2,3,7,8-TCDF	51207-31-9	pg/m3	--	0.001634693 U	
OCDD	3268-87-9	pg/m3	--	<b>0.034450149 J</b>	
OCDF	39001-02-0	pg/m3	--	0.003107268 U	
Total HpCDD	37871-00-4	pg/m3	--	<b>0.028776006 J</b>	
Total HpCDF	38998-75-3	pg/m3	--	<b>0.006214537 J</b>	
Total HxCDD	34465-46-8	pg/m3	--	<b>0.010699811 J</b>	
Total HxCDF	55684-94-1	pg/m3	--	<b>0.012820859 J</b>	
Total PeCDD	36088-22-9	pg/m3	--	<b>0.004269116 J</b>	
Total PeCDF	30402-15-4	pg/m3	--	<b>0.022831667 J</b>	
Total TCDD	41903-57-5	pg/m3	--	<b>0.008740881 J</b>	
Total TCDF	55722-27-5	pg/m3	--	<b>0.036206431</b>	

Notes:

pg/m3 - picograms per cubic meter

AAS - State of Louisiana Limit Values

**Bolded values denote detections**

FS - Field Sample

J - Estimated concentration, detected between the sample detection limit (SDL) and the practical quantitation limit (PQL).

NP - Limit Not Published

TEQ - Toxicity Equivalency Quotient calculated based on 2005 World Health Organization (WHO) dioxin toxicity equivalency factors (TEF).

U - Not detected above the indicated detection limit.



**Table 4**  
**Air Analytical Results - SVOCs, Particulates and VOCs**  
**Fire Department Substation - Greene Road**  
**Camp Minden - Explo Baseline Study**

				Fire Department Substation - Greene Road	
				Station	Road
				Station Code	OFN01-Air
				Date	5/20/2015
				Type	FS
Analyte	CAS.NO	Units	--	--	--
<b>Semi-volatile Organic Compounds (SVOC)</b>					
2,4-Dinitrotoluene	121-14-2	µg/m3	--	0.014 U	0.014 U
2,6-Dinitrotoluene	606-20-2	µg/m3	--	0.014 U	0.014 U
2-Chloronaphthalene	91-58-7	µg/m3	--	0.0028 U	0.0027 U
2-Methylnaphthalene	91-57-6	µg/m3	--	0.0028 U	<b>0.0063</b>
Acenaphthene	83-32-9	µg/m3	--	0.0028 U	0.0027 U
Acenaphthylene	208-96-8	µg/m3	--	0.0028 U	0.0027 U
Anthracene	120-12-7	µg/m3	--	0.0028 U	0.0027 U
Benzo(a)anthracene	56-55-3	µg/m3	--	0.0028 U	0.0027 U
Benzo(a)pyrene	50-32-8	µg/m3	--	0.0028 U	0.0027 U
Benzo(b)fluoranthene	205-99-2	µg/m3	--	0.0028 U	0.0027 U
Benzo(g,h,i)perylene	191-24-2	µg/m3	--	0.0028 U	0.0027 U
Benzo(k)fluoranthene	207-08-9	µg/m3	--	0.0028 U	0.0027 U
Chrysene	218-01-9	µg/m3	--	0.0028 U	0.0027 U
Dibenz(a,h)anthracene	53-70-3	µg/m3	--	0.0028 U	0.0027 U
di-n-Butylphthalate	84-74-2	µg/m3	--	0.057 U	0.055 U
Diphenylamine	122-39-4	µg/m3	--	0.028 U	0.027 U
Fluoranthene	206-44-0	µg/m3	--	0.0028 U	0.0027 U
Fluorene	86-73-7	µg/m3	--	0.0028 U	<b>0.0029</b>
Indeno(1,2,3-c,d)pyrene	193-39-5	µg/m3	--	0.0028 U	0.0027 U
Naphthalene	91-20-3	µg/m3	--	<b>0.0044</b>	<b>0.017</b>
Phenanthrene	85-01-8	µg/m3	--	<b>0.0032</b>	<b>0.007</b>
Pyrene	129-00-0	µg/m3	--	0.0028 U	0.0027 U
<b>Particulate Size</b>					
PM10	PM10	µg/m3	--	<b>18.1</b>	<b>16.4</b>
PM2.5	PM2.5	µg/m3	--	<b>9.08</b>	<b>8.91</b>
<b>VOCs</b>					
1,1,1-Trichloroethane	71-55-6	µg/m3	--	3.8 U	4.4 U
1,1,2,2-Tetrachloroethane	79-34-5	µg/m3	--	4.8 U	5.6 U
1,1,2-Trichloroethane	79-00-5	µg/m3	--	3.8 U	4.4 U
1,1-Dichloroethane	75-34-3	µg/m3	--	2.8 U	3.3 U
1,1-Dichloroethene	75-35-4	µg/m3	--	2.8 U	3.2 U
1,2,4-Trichlorobenzene	120-82-1	µg/m3	--	21 U	24 U
1,2,4-Trimethylbenzene	95-63-6	µg/m3	--	3.4 U	4 U
1,2-Dibromoethane (EDB)	106-93-4	µg/m3	--	5.4 U	6.3 U
1,2-Dichlorobenzene	95-50-1	µg/m3	--	4.2 U	4.9 U
1,2-Dichloroethane	107-06-2	µg/m3	--	2.8 U	3.3 U
1,2-Dichloropropane	78-87-5	µg/m3	--	3.2 U	3.8 U
1,3,5-Trimethylbenzene	108-67-8	µg/m3	--	3.4 U	4 U
1,3-Butadiene	106-99-0	µg/m3	--	1.5 U	1.8 U
1,3-Dichlorobenzene	541-73-1	µg/m3	--	4.2 U	4.9 U
1,4-Dichlorobenzene	106-46-7	µg/m3	--	4.2 U	4.9 U
1,4-Dioxane	123-91-1	µg/m3	--	10 U	12 U
2,2,4-Trimethylpentane	540-84-1	µg/m3	--	3.3 U	3.8 U
2-Butanone (Methyl Ethyl Ketone)	78-93-3	µg/m3	--	8.2 U	9.6 U
2-Hexanone	591-78-6	µg/m3	--	11 U	13 U
2-Propanol	67-63-0	µg/m3	--	6.9 U	8 U
3-Chloropropene	107-05-1	µg/m3	--	8.8 U	10 U
4-Ethyltoluene	622-96-8	µg/m3	--	3.4 U	4 U
4-Methyl-2-pentanone	108-10-1	µg/m3	--	2.9 U	3.3 U
Acetone	67-64-1	µg/m3	--	17 U	19 U
alpha-Chlorotoluene	100-44-7	µg/m3	--	3.6 U	4.2 U
Benzene	71-43-2	µg/m3	--	2.2 U	2.6 U
Bromodichloromethane	75-27-4	µg/m3	--	4.7 U	5.5 U
Bromoform	75-25-2	µg/m3	--	7.2 U	8.4 U
Bromomethane	74-83-9	µg/m3	--	27 U	32 U



**Table 4**  
**Air Analytical Results - SVOCs, Particulates and VOCs**  
**Fire Department Substation - Greene Road**  
**Camp Minden - Explo Baseline Study**

				Fire Department Substation - Greene Road	
				OFN01-Air	
				5/20/2015	5/21/2015
				FS	FS
Analyte	CAS.NO	Units	--	--	--
Carbon Disulfide	75-15-0	µg/m3	--	8.7 U	10 U
Carbon Tetrachloride	56-23-5	µg/m3	--	4.4 U	5.1 U
Chlorobenzene	108-90-7	µg/m3	--	3.2 U	3.8 U
Chloroethane	75-00-3	µg/m3	--	7.4 U	8.6 U
Chloroform	67-66-3	µg/m3	--	3.4 U	4 U
Chloromethane	74-87-3	µg/m3	--	14 U	17 U
cis-1,2-Dichloroethene	156-59-2	µg/m3	--	2.8 U	3.2 U
cis-1,3-Dichloropropene	10061-01-5	µg/m3	--	3.2 U	3.7 U
Cumene	98-82-8	µg/m3	--	3.4 U	4 U
Cyclohexane	110-82-7	µg/m3	--	2.4 U	2.8 U
Dibromochloromethane	124-48-1	µg/m3	--	6 U	6.9 U
Ethanol	64-17-5	µg/m3	--	5.3 U	6.1 U
Ethyl Benzene	100-41-4	µg/m3	--	3 U	3.5 U
Freon 11	75-69-4	µg/m3	--	3.9 U	4.6 U
Freon 113	76-13-1	µg/m3	--	5.4 U	6.2 U
Freon 114	76-14-2	µg/m3	--	4.9 U	5.7 U
Freon 12	75-71-8	µg/m3	--	3.5 U	4 U
Heptane	142-82-5	µg/m3	--	2.9 U	3.3 U
Hexachlorobutadiene	87-68-3	µg/m3	--	30 U	35 U
Hexane	110-54-3	µg/m3	--	<b>4.6</b>	<b>36</b>
m,p-Xylene	108-38-3/106-42-3	µg/m3	--	3 U	3.5 U
Methyl tert-butyl ether	1634-04-4	µg/m3	--	2.5 U	2.9 U
Methylene Chloride	75-09-2	µg/m3	--	24 U	28 U
o-Xylene	95-47-6	µg/m3	--	3 U	3.5 U
Propylbenzene	103-65-1	µg/m3	--	3.4 U	4 U
Styrene	100-42-5	µg/m3	--	3 U	3.5 U
Tetrachloroethene	127-18-4	µg/m3	--	4.7 U	5.5 U
Tetrahydrofuran	109-99-9	µg/m3	--	2.1 U	2.4 U
Toluene	108-88-3	µg/m3	--	2.6 U	3.1 U
trans-1,2-Dichloroethene	156-60-5	µg/m3	--	2.8 U	3.2 U
trans-1,3-Dichloropropene	10061-02-6	µg/m3	--	3.2 U	3.7 U
Trichloroethene	79-01-6	µg/m3	--	3.8 U	4.4 U
Vinyl Chloride	75-01-4	µg/m3	--	1.8 U	2.1 U

**Notes:**

µg/m3 - micrograms per cubic meter

**Bolded values denote detections**

FS - Field Sample

J - Estimated concentration, detected between the sample detection limit (SDL) and the practical quantitation limit (PQL).

U - Not detected above the indicated detection limit.





## **Toxicology Summary – Fire Department Substation – Greene Road**

### **Soil Results**

The EPA collected one soil sample from the Fire Department Substation – Greene Road. The soil sample was analyzed for the presence of volatile organic chemicals (VOCs), semivolatile organic chemicals (SVOCs) and dioxin/furans. Analytical results were compared to the Regional Screening Level (RSL) and the Preliminary Remediation Goal (PRG) for residential and industrial soils. The results indicated that VOCs, SVOCs, and dioxin/furans did not exceed the comparison levels

In addition, these dioxin levels may be reflective of background values in the Camp Minden area. A comprehensive evaluation identified 18 studies with data on dioxin background levels in both rural and urban areas. The data from this evaluation found that TEQ concentrations in background rural soils ranged from 0.1 to 22.9 ng/kg, while mean rural TEQ concentrations ranged from 1.1 to 7.1 ng/kg and that the concentration in urban and suburban soils were substantially higher and more variable than those in rural soils, with TEQ concentrations ranging from 0.1 to 186.2 ng/kg. The range of the mean TEQ concentrations in urban/suburban soils was also substantially higher and range from 2.2 to 56.6 ng/kg” (Urban et al, 2013).

### **Air Monitoring/Sampling Data**

The EPA did air monitoring and sampling at one location located at the Fire Department Substation – Greene Road. Analytical result were compared to the National Ambient Air Quality Standards (NAAQS) air quality standards as well as the Regional Screening Level (RSL). The air monitoring and analytical data did not exceed the comparison levels.

### **Reference**

Urban, J.D, Wikoff, D.S, Bunch, A.T, Harris, M.A., Haws, L.C. 2013. A review of background dioxin concentrations in urban/suburban and rural soils across the United States: Implications for site assessment and the establishment of soil cleanup levels. *Science of the Total Environment*, 466-467.