Final Interim L Range Source Remediation Report

No.: 2010-JV09-0007

Client, Project and Location:
Impact Area Groundwater Study Program
L Range
Camp Edwards, MA
Subject: Final Interim L Range Source Remediation Report

Date: April 23, 2010

PURPOSE

The purpose of this report is to summarize the recently completed L Range source remediation project. The project consisted of the excavation and on-site treatment of approximately 2,700 cubic yards of explosives contaminated soil.

BACKGROUND

L Range is a 40mm grenade launcher familiarization range located on Greenway Road in the southeastern portion of the Camp Edwards training and maneuver area. In 2008 soil sampling conducted following a mechanized UXO clearance project in the 8-acre range floor revealed widespread contamination by explosives compounds in the mid-range target area of the range. The contaminated soil was excavated and materials greater than 1-inch in size were screened out during stockpiling on-site as described in the *Revised Draft L Range Soil Removal Activities Project Note*, dated July 30, 2009. Following excavation and stockpiling, four thousand five hundred sixty five tons (approximately 2,700 cubic yards) of screened soil were treated by alkaline hydrolysis, using a hydrated lime amendment as described in the *Final On-Site Soil Treatment Activities Project Note*, dated October 29, 2009.

SUMMARY

Treatment Cell Construction

The L Range treatment cell layout is shown on Figure 1. Site preparations for the treatment cell construction included grading the existing range floor to ensure adequate drainage, improving the range access road, and mobilizing heavy equipment. Construction of the treatment cell was accomplished using concrete blocks stacked and aligned to form an 80’ wide x 280’ long x 4’ high containment cell. A 40-mil HDPE liner was then installed in the containment area to create a treatment cell with an impermeable base. A 1,000 gallon leachate collection/storage vault was installed below grade, outside the treatment cell, and connected to the cell through a standard distribution box and a 4-inch drainage pipe. This piping and vault system allowed for the collection and reuse of leachate water from the cell.

SDMS DocID 464174

Treatment and Monitoring Activities

Upon completion of treatment cell construction, a pugmill was mobilized to mix hydrated lime and water into the soil. A front end loader transported screened soil from the on-site stockpile to the pugmill where hydrated lime was added from a silo connected to the pugmill (the silo prevented the lime dust from becoming an inhalation/contact hazard). Water for the mixing operation was obtained from a fire hydrant located on Greenway Road. The bulk lime was analyzed for explosives, perchlorate and metals prior to its use in treatment. Explosives and perchlorate results for the bulk lime were all non-detects and the metal results were within acceptable concentrations (Table 1). After mixing in the pugmill, the slurry was directed into the treatment cell. Moisture content and pH were monitored during the mixing process and a minimum 30 percent water content and pH above 11 were maintained. The pH calibration log is attached as Table 2. Along with pH and soil moisture, soil tonnage processed and water and lime added were recorded during the mixing process. Approximately 38 lbs. of lime (2 percent) and 28 gallons of water were added per ton of soil processed (Table 3). The soil/lime mixture was loaded into the treatment cell from the pugmill via conveyor belt and was spread within the cell using two long stick excavators.

Upon completion of the mixing and cell loading, eleven sub-cells of approximately 250 cubic yards each were established for sampling purposes to monitor the first 21-day cycle of the treatment process (Figure 1). Twenty-one composite soil samples, including two replicate samples from five of the eleven sub-cells, were collected for explosives, nitrate and nitrite, and total organic carbon analyses on November 24, 2009. The twenty-one soil composite samples were collected as described in the approved *Draft On-Site Soil Treatment Activities Project Note*, dated October 29, 2009.

A polypropylene cover was then spread over the material in the treatment cell to help retain moisture within the cell and prevent rainwater intrusion. A separate drainage system was installed for accumulating rain water, to prevent any mixing with leachate within the cell. The accumulated storm water was periodically discharged and any leachate was recycled back into the treatment cell or removed from the cell and treated. During the first week of treatment, the eleven sub-cells were monitored daily for moisture content and pH. During the second and third week of treatment, the readings were taken weekly. All readings for moisture content were above 27% and all pH readings were above 11 (Table 4). Thus, the design parameters for successful treatment using alkaline hydrolysis were maintained throughout the treatment cycle.

Two leachate samples were collected, one on November 23 near the beginning of the 21-day treatment cycle, and one on December 3, 2009 toward the end of the treatment cycle. These samples were analyzed for explosives, metals, percent solids, and silica. These samples were not filtered and so represent both the suspended soil and dissolved components of the sample. The leachate analytical results are presented in Table 5 and indicate that none of the explosives analytes were detected. Twenty-four metals were detected in these unfiltered samples. The first leachate sample was the most turbid as it was taken while soil was being processed. Both samples included particulates and results are therefore higher than anticipated for an aqueous aliquot in these naturally

occurring metals. Since the leachate samples were digested and analyzed for total metals, they were significantly elevated compared to possible dissolved metal species.

Analytical results (included as Appendix A) from the initial sampling of the eleven sub-cells were received on December 16, 2009. No explosives compounds were detected in any of the soil samples (Table 6). Therefore, treatment of contaminated soil from L Range has been successfully completed.

CONCLUSIONS and FOLLOW-UP ACTION

1. The design parameters for successful treatment using alkaline hydrolysis were maintained throughout the treatment cycle and all components of the treatment system functioned as planned.

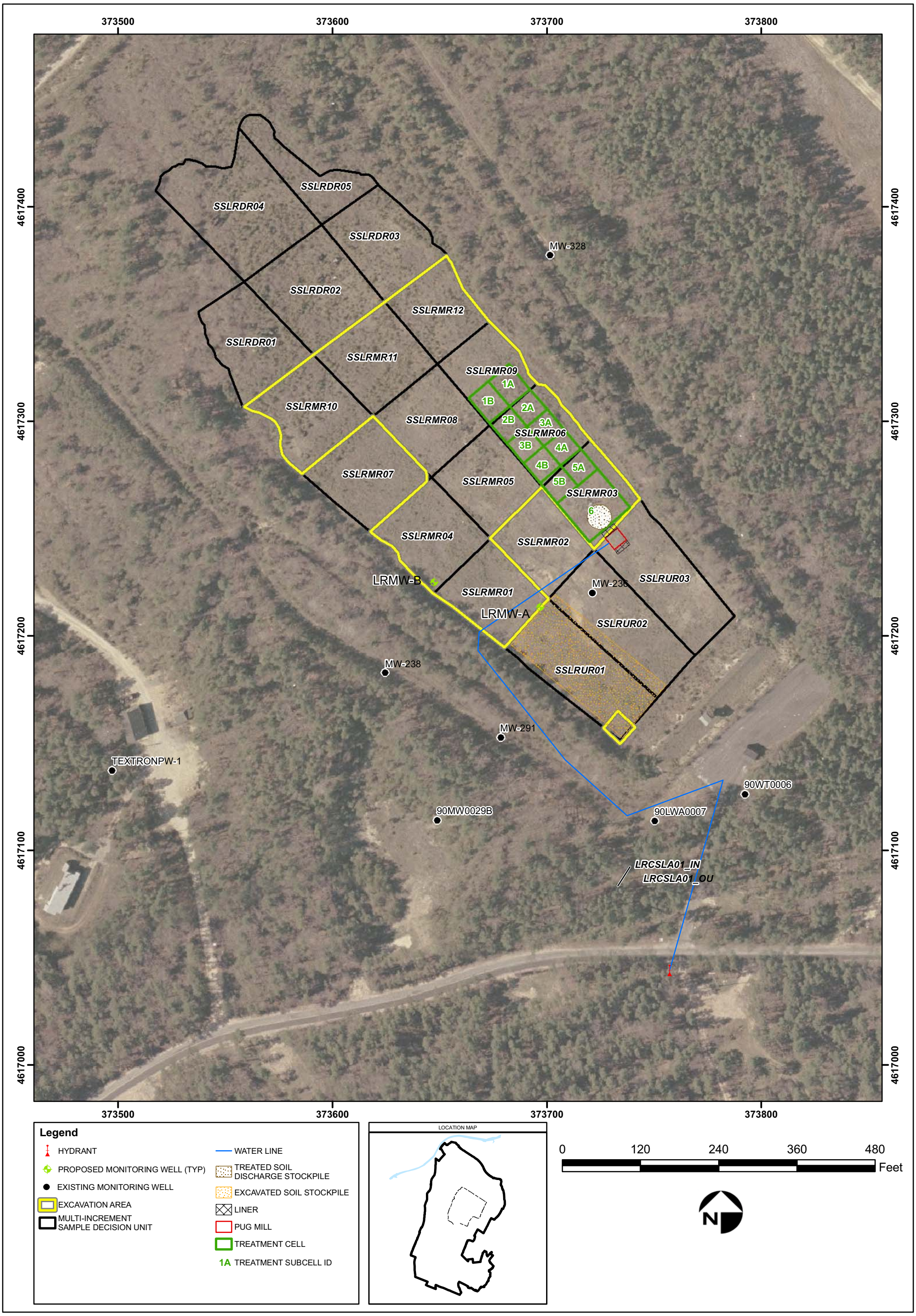
2. Soil samples collected one to eleven days after the soil was treated were non-detect for explosives. It appears that the alkaline hydrolysis treatment process was successful for explosives contaminated soil. Further soil sampling is not needed to quantify the treatment process.

3. The unfiltered leachate samples were also non-detect for explosives and within reasonable concentration levels for total metals in a water matrix containing high levels of total suspended solids.

4. Mixing of rainwater with the soil is anticipated to be able to reduce the pH to approximately 11 or less in a short amount of time (which is the upper limit of what is recommended for human consumption). Therefore, there should be no impact to the environment once the soil is removed from the cell.

5. The soil currently in the treatment cell will be backfilled within the excavation footprint at L Range.

FIGURES & TABLES



L-Range Soil Treatment Layout

FIGURE

1

TETRA TECH EC, INC.

J:/mmr/ReportFigs2006/O500/O500_Fig1_01.pdf
G:/MMR_COE/Work2006/O500/O500_Fig1_01.mxd
September 1, 2006 DWN: KMP CHKD: AP

Impact Area Groundwater Study Program

Table 1
Final Interim L Range Source Remediation Report
Treatment Lime Sample, SGD TT42
Analytical Data QA/QC Review
January 2010

Sample Name	LIME - 1		
Sampling Date	11/2/2009		
Analyte			Units
EPA Method SW6010B/7471A			
Silver	0.022	U	mg/Kg
Arsenic	10.2		mg/Kg
Barium	15.5	B	mg/Kg
Cadmium	0.0077	U	mg/Kg
Chromium	3.2		mg/Kg
Mercury	0.017	U	mg/Kg
Lead	3.8		mg/Kg
Selenium	0.7	B	mg/Kg
EPA Method SW8330			
2,6-Diamino-4nitrotoluene	340	U	ug/Kg
2,4-Diamino-4nitrotoluene	160	U	ug/Kg
HMX	160	U	ug/Kg
RDX	160	U	ug/Kg
1,3,5-Trinitrobenzene	160	U	ug/Kg
Picric acid	160	U	ug/Kg
1,3-Dinitrobenzene	160	U	ug/Kg
Nitrobenzene	160	U	ug/Kg
Tetryl	160	U	ug/Kg
Nitroglycerine	3400	U	ug/Kg
2,4,6-Trinitrotoluene	160	U	ug/Kg
4-Amino-2,6-dinitrotoluene	160	U	ug/Kg
2-Amino-2,6-dinitrotoluene	160	U	ug/Kg
2,6-Dinitrotoluene	160	U	ug/Kg
2,4-Dinitrotoluene	160	U	ug/Kg
2-Nitrotoluene	160	U	ug/Kg
4-Nitrotoluene	160	U	ug/Kg
3-Nitrotoluene	160	U	ug/Kg
PETN	6800	U	ug/Kg
TNX	160	U	ug/Kg
DNX	160	U	ug/Kg
MNX	160	U	ug/Kg
EPA Method SW6850			
Perchlorate	4.8	U	ug/Kg
EPA Method 353.2			
Nitrate/Nitrite	353.2	ND	mg/Kg

U = Analyte was analyzed for but not detected above the reporting limit
B = The result reported is less than the reporting limit but greater than the instrument detection limit
ND = non-detect
ug/L = micrograms per liter
mg/Kg = milligrams per kilogram

Table 2
Final Interim L Range Source Remediation Report

Calibration Log

for

Spectrum Technologies Soil Stik pH Meter

Date	4.0 Standard		7.0 Standard		10.0 Standard	
	Pre-Cal. Reading	Post-Cal. Reading	Pre-Cal. Reading	Post-Cal. Reading	Pre-Cal. Reading	Post-Cal. Reading
11/13/2009	3.93	4.00	7.09	7.00	9.87	10.00
11/16/2009	3.91	4.00	7.01	7.00	9.92	10.00
11/17/2009	4.00	4.00	6.98	7.00	10.12	10.00
11/18/2009	4.02	4.00	7.01	7.00	10.11	10.00
11/19/2009	4.01	4.00	7.02	7.00	10.08	10.00
11/20/2009	4.01	4.00	7.00	7.00	9.98	10.00
11/21/2009	4.02	4.00	6.89	7.00	10.35	10.00
11/23/2009	3.98	4.00	6.96	7.00	10.09	10.00
11/24/2009	3.91	4.00	7.11	7.00	10.00	10.00
11/28/2009	4.00	4.00	6.99	7.00	10.00	10.00
11/30/2009	4.35	4.00	7.04	7.00	9.95	10.00
12/1/2009	3.78	4.00	6.92	7.00	10.00	10.00
12/2/2009	4.23	4.00	7.15	7.00	9.89	10.00
11/28/2009	4.02	4.00	7.00	7.00	9.98	10.00
11/30/2009	4.01	4.00	6.98	7.00	9.97	10.00
12/1/2009	3.98	4.00	7.02	7.00	10.01	10.00
12/8/2009	4.01	4.00	7.01	7.00	9.99	10.00
12/15/2009	3.86	4.00	6.89	7.00	9.94	10.00

Table 3
Final Interim L Range Source Remediation Report
Treatment Activity Monitoring Parameters

TIME Date, Time	pH pH Units	MIN WATER CONTENT %	MAX WATER CONTENT %	HOURLY TONNAGE tons	DAILY TONNAGE TOTALS tons	LIME TONAGE tons	Water Meter Readings gallons	DAILY WATER USAGE gallons
11/12/09 12:00				0		23.7		0
11/13/2009 0700		-	-	0	-		3254448	
11/13/2009 0750	12.63	26	38	41				
11/13/2009 0900	12.57	24	39	157				
11/13/2009 0945	12.50	26	33	220				
11/13/2009 1100	12.53	30	34	340				
11/13/2009 1200	12.51	30	40	446				
11/13/2009 1235	12.56	35	40	489				
DAILY AVERAGE	**12.55**	**28.50**	**37.33**		489			13252
11/16/09 7:40	-	-	-	489			3267700	
11/16/09 9:30	13.11	24	37.5	583				
11/16/09 10:25	13.43	25.2	41.1	668				
11/16/09 11:20	12.73	26.5	33.8	756				
11/16/09 12:30	13.14	26.6	40.8	866				
11/16/09 12:50	RELOAD WITH LIME					20.9		
11/16/09 14:50	RESUME PRODUCTION							
11/16/09 15:30	13.58	24.2	46.6	967				
11/16/09 16:25	13.45	30.5	41.5	1,059				
11/16/09 16:40	-	-	-	1,061	572		3282600	
DAILY AVERAGE	**13.24**	**26.2**	**40.2**					14900
11/17/09 7:00	-	-	-	1,061			3282600	
11/17/09 7:30	13.64	30.3	43.8	1,083				
11/17/09 8:30	13.08	25.4	40.6	1,193				
11/17/09 9:40	13.02	27.3	43.2	1,293				
11/17/09 10:40	REFUEL EQUIPMENT			-				
11/17/09 11:00	13.05	28.8	39.6	1,381				
11/17/09 11:55	13.04	36.4	46.8	1,456				
11/17/09 13:07	13.24	28.6	44.2	1,567				
11/17/09 14:10	13.14	29.2	41.6	1,671				
11/17/09 15:10	13.44	30.3	46.2	1,770				
11/17/09 16:30	13.37	32.8	47.9	1,881	820		3306300	
DAILY AVERAGE	**13.22**	**29.9**	**43.8**					23700
11/18/09 8:00	-	-	-	1,881			3306300	
11/18/09 8:00	13.42	31.1	41.8	1,881				
11/18/09 9:00	13.65	33.6	46.2	1,956				
11/18/09 9:00	LOAD WITH LIME					22.5		
11/18/09 10:25	RESUME PRODUCTION							
11/18/09 10:35	13.18	30.4	47.1	2,008				
11/18/09 11:45	12.32	32.3	42.6	2,096				
11/18/09 12:15	12.78	38.9	44.6	2,115	234		3312600	
DAILY AVERAGE	**13.07**	**33.3**	**44.5**					6300
11/19/09 14:10	-	-	-	2,115			3312600	
11/19/09 14:20	13.2	33.6	46.5	2,121				
11/19/09 15:20	13.44	30.4	44.8	2,210				
11/19/09 16:20	13.15	29.7	41.6	2,281				
11/19/09 16:20	11.51	30.5	42.6					
11/19/09 16:20	-	-	-	2,303	188		3319100	
DAILY AVERAGE	**12.83**	**31.1**	**43.9**					6500

Table 3
Final Interim L Range Source Remediation Report
Treatment Activity Monitoring Parameters

TIME Date, Time	pH pH Units	MIN WATER CONTENT %	MAX WATER CONTENT %	HOURLY TONNAGE tons	DAILY TONNAGE TOTALS tons	LIME TONAGE tons	Water Meter Readings gallons	DAILY WATER USAGE gallons
11/20/09 7:35	-	-	-	2,303			3319100	
11/20/09 7:35	13.25	33.4	44.6	2,332				
11/20/09 8:35	13.23	32.8	46.5	2,407				
11/20/09 11:15	RESUME PRODUCTION							
11/20/09 11:15	12.99	39.7	48.2	2,573				
11/20/09 12:50	12.75	33.8	45.4	2,700				
11/20/09 13:50	12.98	34.6	44.8	2,770				
11/20/09 14:00	RELOAD WITH LIME					20.3		
11/20/09 16:30	-	-	-	2,811	508		3335700	
DAILY AVERAGE	**13.04**	**34.9**	**45.9**					16600
11/21/09 7:00	-	-	-	2,811			3335700	
11/21/09 7:30	13.56	33.7	46.4	2,856				
11/21/09 8:30	13.73	40.8	44.6	2,931				
11/21/09 10:00	13.62	39.8	48.8	3,028				
11/21/09 11:10	13.4	33.9	50.1	3,110				
11/21/09 11:55	13.46	37.6	48.1	3,167				
11/21/09 13:00	13.53	34.9	45.8	3,242				
11/21/09 14:50	13.41	31.9	46.2	3,351				
11/21/09 15:55	-	-	-	3,426	615		3354900	
DAILY AVERAGE	**13.53**	**36.1**	**47.1**					19200
11/23/09 7:20	-	-	-	3,426				
11/23/09 8:00	13.6	40	48	3,484				
11/23/09 9:05	12.8	33.4	46.9	3,573				
11/23/09 10:15	12.92	34.1	47.2	3,639				
11/23/09 11:20	12.79	41.6	46.4	3,763				
11/23/09 11:40	RELOAD WITH LIME							
11/23/09 12:30	RESUME PRODUCTION							
11/23/09 12:55	12.98	39.5	46.3	3,853				
11/23/09 14:00	12.96	39.4	46.8	3,935				
11/23/09 14:55	13.02	35.4	42.1	3,986				
11/23/09 16:05	12.96	41.1	46.8	4,052				
11/23/09 16:50	-	-	-	4,123	697		3377100	
DAILY AVERAGE	**13.00**	**38.1**	**46.3**					22200
11/24/09 8:00	**-**	**-**	**-**	4,123				
11/24/09 14:10	12.83	36.4	44.8	4,324				
11/24/09 15:20	12.57	38.1	47.7	4,511	388		3383100	6000
DAILY AVERAGE	**12.70**	**37.25**	**46.25**					
11/25/09 8:30	-	-	-	-				
11/25/09 8:45	11.52	33.5	34.2	4,511				
11/25/09 9:40	11.89	30.5	31.3	4,565	54		3383500	400
DAILY AVERAGE	**11.71**	**32.00**	**32.75**					
				Total Tons Processed;	**4,565**	**87.4**	**Total Water Used;**	**129052**

Table 4
Final Interim L Range Source Remediation Report
Daily and Weekly Status Parameters

TIME Date, Time	pH pH Units	MIN WATER CONTENT %	MAX WATER CONTENT %
11/25/09 10:20	START	-	-
11/25/2009 1a	12.37	32.6	38.5
11/25/2009 1b	12.25	34.2	39.8
11/25/2009 2a	12.21	37.4	38.8
11/25/2009 2b	12.50	38.9	42.8
11/25/2009 3a	12.08	36.7	42.1
11/25/2009 3b	12.51	40.1	47.7
11/25/2009 4a	12.40	42.2	48.2
11/25/2009 4b	12.32	39.5	41.0
11/25/2009 5a	12.46	45.6	47.9
11/25/2009 5b	12.63	40.3	47.2
11/25/2009 6	12.59	39.5	41.2
11/25/09 11:00	END	-	-
DAILY AVERAGE	**12.39**	**38.8**	**43.2**
11/28/09 11:00	START	-	-
11/28/2009 1a	12.45	35.0	43.0
11/28/2009 2a	12.37	37.1	38.9
11/28/2009 2b	12.31	39.1	40.3
11/28/2009 3a	12.20	38.0	40.0
11/28/2009 3b	12.39	38.8	40.7
11/28/2009 4a	12.68	32.9	40.1
11/28/2009 4b	12.55	41.2	46.8
11/28/2009 5a	12.61	39.1	42.3
11/28/2009 5b	12.56	44.7	46.1
11/28/2009 6	12.70	42.1	51.9
11/28/09 12:30	END	-	-
DAILY AVERAGE	**12.46**	**38.4**	**42.0**
11/30/09 7:55	START	-	-
11/30/2009 1a	11.95	31.5	37.6
11/30/2009 1b	11.76	35.2	44.4
11/30/2009 2a	11.48	38.6	42.1
11/30/2009 2b	11.54	34.8	44.1
11/30/2009 3a	12.19	38.0	40.0
11/30/2009 3b	11.76	33.5	43.8
11/30/2009 4a	12.49	34.2	44.8
11/30/2009 4b	11.72	34.4	45.1
11/30/2009 5a	12.59	33.2	45.2
11/30/2009 5b	12.02	35.2	41.6
11/30/2009 6	12.21	28.8	40.4
11/30/2009	END	-	-
DAILY AVERAGE	**11.97**	**34.3**	**42.6**
12/1/2009	START	-	-
12/01/2009 1a	12.04	37.5	43.8
12/01/2009 1b	12.26	35.2	41.7
12/01/2009 2a	12.39	36.1	40.8
12/01/2009 2b	12.07	38.1	43.6
12/01/2009 3a	12.26	35.5	44.1
12/01/2009 3b	12.14	36.8	42.8
12/01/2009 4a	12.41	37.2	43.8
12/01/2009 4b	12.38	31.1	40.3
12/01/2009 5a	12.31	32.4	42.1
12/01/2009 5b	12.13	33.5	44.2
12/01/2009 6	12.08	35.6	44.3
12/1/2009	END	-	-
DAILY AVERAGE	**12.22**	**35.4**	**42.9**

Table 4
Final Interim L Range Source Remediation Report
Daily and Weekly Status Parameters

TIME Date, Time	pH pH Units	MIN WATER CONTENT %	MAX WATER CONTENT %
12/2/2009	START	-	-
12/02/2009 1a	12.33	34.1	40.7
12/02/2009 1b	12.21	32.4	38.1
12/02/2009 2a	12.58	36.4	46.9
12/02/2009 2b	12.41	35.6	43.1
12/02/2009 3a	12.41	34.7	42.6
12/02/2009 3b	12.52	34.2	47.1
12/02/2009 4a	12.32	31.9	45.3
12/02/2009 4b	12.18	33.1	39.2
12/02/2009 5a	12.59	36.3	45.7
12/02/2009 5b	12.61	36.2	43.4
12/02/2009 6	12.36	34.8	41.4
12/2/2009	END	-	-
DAILY AVERAGE	**12.41**	**34.5**	**43.0**
12/8/2009	START	-	-
12/08/2009 1a	12.43	40.0	45.0
12/08/2009 1b	12.41	36.0	39.0
12/08/2009 2a	12.52	35.0	41.0
12/08/2009 2b	12.61	34.0	40.0
12/08/2009 3a	12.63	32.0	43.0
12/08/2009 3b	12.58	33.0	44.0
12/08/2009 4a	12.63	37.0	42.0
12/08/2009 4b	12.60	31.0	42.0
12/08/2009 5a	12.55	37.0	41.0
12/08/2009 5b	12.58	32.0	38.0
12/08/2009 6	12.42	37.0	41.0
12/8/2009	END	-	-
DAILY AVERAGE	**12.54**	**34.9**	**41.5**
12/15/2009	START	-	-
12/15/2009 1a	12.32	35.7	43.5
12/15/2009 1b	12.63	36.8	44.7
12/15/2009 2a	12.41	33.1	44.9
12/15/2009 2b	12.44	32.5	40.1
12/15/2009 3a	12.48	36.2	43.1
12/15/2009 3b	12.59	36.2	41.2
12/15/2009 4a	12.57	35.1	41.3
12/15/2009 4b	12.45	37.4	42.3
12/15/2009 5a	12.52	38.9	44.3
12/15/2009 5b	12.31	33.5	40.2
12/15/2009 6	12.36	37.7	45.1
12/15/2009	END	-	-
DAILY AVERAGE	**12.46**	**35.7**	**42.8**

Table 5
Final Interim L Range Source Remediation Report
Leachate Samples, SDGs TT53 and TT55
Validated Data
January 2010

Sample Name	TTLRL1A		TTLRL2A-1D		
Sampling Date	11/23/2009		12/4/2009		
Analyte					**Units**
EPA Methods SW6010/7470A					
Silver	0.26	U	0.26	U	ug/L
Aluminum	74800		23300		ug/L
Antimony	4.0	B	3.9	B	ug/L
Arsenic	48.0		31.7		ug/L
Boron	14.4	B	3.4	B	ug/L
Barium	79.8	B	1.8	U	ug/L
Beryllium	0.98	B	0.067	U	ug/L
Calcium	865000		207000		ug/L
Cadmium	0.39	B	0.091	U	ug/L
Cobalt	11.0	B	6.7	B	ug/L
Chromium	67.4		5.0	B	ug/L
Copper	118		150		ug/L
Iron	57300		2910		ug/L
Magnesium	6370		276	B	ug/L
Manganese	272		12.0	B	ug/L
Mercury	0.28		0.10	U	ug/L
Molybdenum	7.6	B	9.9	B	ug/L
Sodium	2500	B	353	B	ug/L
Nickel	38.8	B	29.0	B	ug/L
Lead	130		6.0	B	ug/L
Potassium	3320	B	421	B	ug/L
Selenium	18.7	B	20.1	B	ug/L
Silicon	25500		2330		ug/L
Thallium	0.50	U	0.50	U	ug/L
Vanadium	106		10.7	B	ug/L
Zinc	162		7.3	B	ug/L

Sample Name	TTLRL1A		TTLRL2A-1D		
Sampling Date	11/23/2009		12/4/2009		
Analyte					**Units**
EPA Method SW6010					
Silica Calculation	54.5		5.0		mg/L
EPA Method SW8330, Modified					
2,6-Diamino-4-nitrotoluene	0.50	U	0.50	U	ug/L
TNX	0.25	U	0.25	U	ug/L
HMX	0.25	U	0.25	U	ug/L
2,4-Diamino-6-nitrotoluene	0.25	U	0.25	U	ug/L
DNX	0.25	U	0.25	U	ug/L
MNX	0.25	U	0.25	U	ug/L
RDX	0.25	U	0.25	U	ug/L
Picric acid	0.25	U	0.25	U	ug/L
1,3,5-Trinitrobenzene	0.25	U	0.25	U	ug/L
1,3-Dinitrobenzene	0.25	U	0.25	U	ug/L
Nitrobenzene	0.25	U	0.25	U	ug/L
Tetryl	0.25	U	0.25	U	ug/L
Nitroglycerin	1.0	U	1.0	U	ug/L
2,4,6-Trinitrotoluene	0.25	U	0.25	U	ug/L
4-Amino-2,6-dinitrotoluene	0.25	U	0.25	U	ug/L
2-Amino-4,6-dinitrotoluene	0.25	U	0.25	U	ug/L
2,6-Dinitrotoluene	0.25	U	0.25	U	ug/L
2,4-Dinitrotoluene	0.25	U	0.25	U	ug/L
2-Nitrotoluene	0.25	U	0.25	U	ug/L
4-Nitrotoluene	0.25	U	0.25	U	ug/L
3-Nitrotoluene	0.25	U	0.25	U	ug/L
PETN	1.0	U	1.0	U	ug/L
EPA Method 9040					
pH	11.8		12		pH units

U = Compound was not detected at this quantitation limit.

J = Compound was detected and the associated numerical value is estimated due to limitations found during the data validation.

UJ = Compound was not detected and the associated numerical value is estimated due to limitations found during the data validation.

R = The data was rejected due to major limitations found during the data validation.

B = The result reported is less than the reporting limit but greater than the instrument detection limit.

ug/L = micrograms per Liter

mg/L = milligrams per Liter

Table 6
Final Interim L Range Source Remediation Report
Soil Samples, SDGs TT53 and TT54
Validated Data
January 2010

Sample Name / Location within Cell	TTLRT1AA	TTLRT1AB	TTLRT1AC	TTLRT1BA	TTLRT1BB	TTLRT1BC	TTLRT2AA	TTLRT2AB	TTLRT2AC	TTLRT3AA	TTLRT3AB	TTLRT3AC	TTLRT4AA	TTLRT4AB	TTLRT4AC	TTLRT6AC	TTLRT5BA	TTLRT4BA	TTLRT3BA	TTLRT2BA	TTLRT5AA
Sampling Date	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009	11/24/2009
Analyte																					
EPA Method 353.2 (mg/Kg)																					
Nitrate/Nitrite	1.8	1.4	1.5	1.2	1.3	1.1	1.5	1.5	1.8	1.7	1.7	1.5	1.7	2.0	2.1	2.6	2.6	1.8	1.9	1.6	2.4
EPA Method SW8330, Modified (ug/Kg)																					
2,6-Diamino-4-nitrotoluene	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	260 U	250 U	250 U	R	240 U	240 U	250 U	250 U	250 U	260 U
TNX	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
HMX	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
2,4-Diamino-6-nitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	R	120 U	110 U	120 U	120 U	120 U	120 U
DNX	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
MNX	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
RDX	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
Picric acid	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
1,3,5-Trinitrobenzene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
1,3-Dinitrobenzene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
Nitrobenzene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
Tetryl	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
Nitroglycerin	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2500 U	2600 U	2500 U	2500 U	R	2400 U	2400 U	2500 U	2500 U	2500 U	2600 U
2,4,6-Trinitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
4-Amino-2,6-dinitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	R	120 U	110 U	120 U	120 U	120 U	120 U
2-Amino-4,6-dinitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 UJ	120 U	110 U	120 U	120 U	120 U	120 U
2,6-Dinitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
2,4-Dinitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
2-Nitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
4-Nitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
3-Nitrotoluene	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	120 U	110 U	120 U	110 U	120 U	120 U	120 U	120 U
PETN	5100 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	5000 U	4900 U	5200 U	5100 U	4900 U	4800 UJ	4900 U	4700 U	5000 U	5000 U	4900 U	5200 U
EPA Method 9040 (pH units)																					
pH - (after adjustment for analysis)	6	6	4	4	5	6	5	6	5	6	6	5	5	6	4	6	4	5	4	4	8
TOC - Lloyd Kahn Method (mg/Kg)																					
Total Organic Carbon	16200	17300	15800	17100	17700	16500	17200	16500	16000	15200	15900	14400	14900	16000	15800 J	16100	15200	15000	16000	16700	15000

U = Compound was not detected at this quantitation limit.

J = Compound was detected and the associated numerical value is estimated due to limitations found during the data validation.

UJ = Compound was not detected and the associated numerical value is estimated due to limitations found during the data validation.

R = The data was rejected due to major limitations found during the data validation.

ug/Kg = micrograms per Kilogram

mg/Kg = milligrams per Kilogram

APPENDIX A

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT1AA	Matrix:	SOIL
Lab Sample ID:	814608	Weight extracted (g):	9.9
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	15-DEC-2009 00:26	15-DEC-2009 02:45
Dilution factor:	1.0	1.0
Data File:	14dec091137-r151.d	14dec091139-r231.d
Surrogate recovery:		
1,2-DNB	90%	113%

	Primary Analysis						Confirmation Analysis			
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.444	16.453	74495		180	1800	11.276	11.301	1037111		2300
2,6-DA		9.577						4.557			
TNX		9.604						4.516			
HMX		10.572						5.392			
2,4-DA		11.070						4.557			
DNX		11.470						4.979			
MNX	13.122	13.184	9140	M	20	200	NC	5.796			
RDX		14.330						6.457			
PICRICACID		15.263						7.015			
1,3,5-TNB	16.151	16.124	5379	a	6.9	70		18.257			
1,3-DNB		17.324						13.713			
NB		18.221						10.875			
Tetryl		18.514						19.249			
NG		19.402						9.496			
2,4,6-TNT		19.669						21.566			
4-am-2,6-DNT	19.944	20.042	1548	aM	3.2	32		11.731			
2-am-4,6-DNT		20.344						11.932			
2,6-DNT		20.824						16.959			
2,4-DNT		21.019						19.249			
2-NT	22.520	22.574	2270	a	6.0	61		14.971			
4-NT		23.249						16.233			
3-NT	23.986	23.959	1515	a	1.5	15		16.233			
PETN	24.883	25.052	1738	aM	470	4700		15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT1AB	Matrix:	SOIL
Lab Sample ID:	814609	Weight extracted (g):	10.1
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 14:38	15-DEC-2009 03:19
Dilution factor:	1.0	1.0
Data File:	11dec090953-r411.d	14dec091139-r241.d
Surrogate recovery:		
1,2-DNB	96%	105%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.506	16.497	78976		190	1900	11.279	11.301	966509		2100
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA	11.070	11.099	245	a	1.3	13		4.557			
DNX		11.505						4.979			
MNX	13.184	13.211	8526		18	180	NC	5.796			
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.213	16.141	1890	a	2.4	24		18.257			
1,3-DNB	17.288	17.346	531	a	0.29	2.8		13.713			
NB		18.239					10.809	10.875	12373	a	7.9
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT	21.019	21.062	491	a	0.44	4.4		19.249			
2-NT	22.583	22.615	2139	a	5.6	56		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT1AC	Matrix:	SOIL
Lab Sample ID:	814610	Weight extracted (g):	10.1
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 15:17	15-DEC-2009 03:54
Dilution factor:	1.0	1.0
Data File:	11dec090953-r421.d	14dec091139-r251.d
Surrogate recovery:		
1,2-DNB	99%	104%

	Primary Analysis						Confirmation Analysis			
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.515	16.497	81714		200	2000	11.274	11.301	957732		2100
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.202	13.211	8710		19	190	NC	5.796			
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.213	16.141	2665	a	3.4	34		18.257			
1,3-DNB		17.346						13.713			
NB		18.239						10.875			
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT		21.062						19.249			
2-NT	22.556	22.615	1858	a	4.8	47		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT1BA	Matrix:	SOIL
Lab Sample ID:	814611	Weight extracted (g):	10.0
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 15:55	15-DEC-2009 05:36
Dilution factor:	1.0	1.0
Data File:	11dec090953-r431.d	14dec091139-r281.d
Surrogate recovery:		
1,2-DNB	98%	105%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.506	16.497	80626		200	2000	11.272	11.301	961692		2100
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			LRL
MNX	13.193	13.211	8891		19	190	5.928	5.796	27098	aM	80
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.204	16.141	1472	a	1.8	18		18.257			
1,3-DNB	17.270	17.346	386	a	0.13	1.3		13.713			
NB		18.239					10.834	10.875	17599	a	24
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT		21.062						19.249			
2-NT	22.565	22.615	1928	a	5.0	49		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT1BB	Matrix:	SOIL
Lab Sample ID:	814612	Weight extracted (g):	10.1
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 16:33	15-DEC-2009 06:10
Dilution factor:	1.0	1.0
Data File:	11dec090953-r441.d	14dec091139-r291.d
Surrogate recovery:		
1,2-DNB	96%	105%

		Primary Analysis					Confirmation Analysis				
	Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$	1,2-DNB	16.524	16.497	79052		190	1900	11.285	11.301	962389		2100
	2,6-DA		9.613						4.557			
	TNX		9.640						4.516			
	HMX		10.627						5.392			
	2,4-DA		11.099						4.557			
	DNX		11.505						4.979			
	MNX	13.211	13.211	8252		18	180	5.986	5.796	33443	aM	90
	RDX		14.358						6.457			
	PICRICACID		15.267						7.015			
	1,3,5-TNB	16.213	16.141	2606	a	3.3	33		18.257			
	1,3-DNB		17.346						13.713			
	NB		18.239					10.878	10.875	45624	a	110
	Tetryl		18.530						19.249			
	NG		19.427						9.496			
	2,4,6-TNT		19.700						21.566			
	4-am-2,6-DNT		20.088						11.731			
	2-am-4,6-DNT		20.399						11.932			
	2,6-DNT		20.864						16.959			
	2,4-DNT		21.062						19.249			
	2-NT	22.565	22.615	2457	a	6.5	65		14.971			
	4-NT		23.315						16.233			
	3-NT		24.020						16.233			
	PETN		25.137					15.428	15.331	18077	a	2600

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT1BC	Matrix:	SOIL
Lab Sample ID:	814613	Weight extracted (g):	10.1
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 17:11	15-DEC-2009 06:44
Dilution factor:	1.0	1.0
Data File:	11dec090953-r451.d	14dec091139-r301.d
Surrogate recovery:		
1,2-DNB	93%	103%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.524	16.497	76239		190	1800	11.280	11.301	940205		2000
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.193	13.211	9087		20	190	5.968	5.796	28894	aM	82
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.222	16.141	3260	a	4.2	41		18.257			
1,3-DNB		17.346						13.713			
NB		18.239						10.875			
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864					16.862	16.959	23044	a	43
2,4-DNT	21.223	21.062	9531	aM	10	100		19.249			
2-NT	22.538	22.615	2935	a	8.0	79		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT2AA	Matrix:	SOIL
Lab Sample ID:	814614	Weight extracted (g):	10.0
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 17:50	15-DEC-2009 07:19
Dilution factor:	1.0	1.0
Data File:	11dec090953-r461.d	14dec091139-r311.d
Surrogate recovery:		
1,2-DNB	95%	109%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.524	16.497	78465		190	1900	11.278	11.301	998649		2200
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.202	13.211	8252		18	180	5.951	5.796	21581	aM	70
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.213	16.141	4473	a	5.8	57		18.257			
1,3-DNB		17.346						13.713			
NB		18.239						10.875			
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864					16.876	16.959	21673	a	41
2,4-DNT	21.215	21.062	5393	aM	5.8	58		19.249			
2-NT	22.529	22.615	1512	a	3.7	37		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT2AB	Matrix:	SOIL
Lab Sample ID:	814615	Weight extracted (g):	10.0
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 18:28	15-DEC-2009 07:53
Dilution factor:	1.0	1.0
Data File:	11dec090953-r471.d	14dec091139-r321.d
Surrogate recovery:		
1,2-DNB	94%	104%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.533	16.497	77461		190	1900	11.286	11.301	953431		2100
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.220	13.211	8209		18	180	6.004	5.796	23202	aM	73
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.231	16.141	2428	a	3.1	31		18.257			
1,3-DNB		17.346						13.713			
NB		18.239					10.805	10.875	20578	a	33
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT	20.104	20.088	1637	a	3.4	34		11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT		21.062						19.249			
2-NT	22.574	22.615	1921	a	4.9	49		14.971			
4-NT		23.315					16.137	16.233	28516	a	100
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT2AC	Matrix:	SOIL
Lab Sample ID:	814616	Weight extracted (g):	10.0
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 19:06	15-DEC-2009 08:27
Dilution factor:	1.0	1.0
Data File:	11dec090953-r481.d	14dec091139-r331.d
Surrogate recovery:		
1,2-DNB	95%	103%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.542	16.497	78631		190	1900	11.279	11.301	942259		2000
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX	10.634	10.627	305	a	1.2	12		5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.220	13.211	8638		19	190	5.928	5.796	18014	aM	64
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.231	16.141	805	a	0.95	9.4		18.257			
1,3-DNB		17.346						13.713			
NB		18.239						10.875			
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT		21.062						19.249			
2-NT	22.583	22.615	1480	a	3.6	36		14.971			
4-NT		23.315					16.145	16.233	51023		220
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT3AA	Matrix:	SOIL
Lab Sample ID:	814617	Weight extracted (g):	10.0
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 19:44	15-DEC-2009 09:01
Dilution factor:	1.0	1.0
Data File:	11dec090953-r491.d	14dec091139-r341.d
Surrogate recovery:		
1,2-DNB	95%	101%

	Primary Analysis						Confirmation Analysis			
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.542	16.497	78549		190	1900	11.277	11.301	922199		2000
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.237	13.211	7269		15	150		5.796			NC
RDX	14.374	14.358	2193	a	6.2	62		6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.240	16.141	712	a	0.82	8.2		18.257			
1,3-DNB		17.346						13.713			
NB		18.239						10.875			
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT		21.062						19.249			
2-NT	22.600	22.615	1373	a	3.3	33		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT3AB	Matrix:	SOIL
Lab Sample ID:	814618	Weight extracted (g):	10.1
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 20:23	15-DEC-2009 09:35
Dilution factor:	1.0	1.0
Data File:	11dec090953-r501.d	14dec091139-r351.d
Surrogate recovery:		
1,2-DNB	97%	99%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.533	16.497	80261		190	1900	11.276	11.301	911878		2000
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX	10.626	10.627	197	a	0.83	8.2		5.392			
2,4-DA		11.099						4.557			
DNX	11.603	11.505	178	a	0.028	0.28		4.979			
MNX	13.193	13.211	7625		16	160	5.988	5.796	20731	aM	68
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.222	16.141	1056	a	1.3	13		18.257			
1,3-DNB	17.279	17.346	793	a	0.56	5.5		13.713			
NB		18.239						10.875			
Tetryl		18.530						19.249			
NG	19.456	19.427	140	aM	50	490		9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT	21.215	21.062	4674	aM	5.0	50		19.249			
2-NT	22.591	22.615	1424	a	3.5	34		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT3AC	Matrix:	SOIL
Lab Sample ID:	814619	Weight extracted (g):	9.7
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 21:01	15-DEC-2009 10:10
Dilution factor:	1.0	1.0
Data File:	11dec090953-r511.d	14dec091139-r361.d
Surrogate recovery:		
1,2-DNB	96%	98%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.533	16.497	79078		190	2000	11.275	11.301	896459		2000
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX	11.603	11.505	402	a	0.47	4.9		4.979			
MNX	13.220	13.211	7432		16	160	5.968	5.796	14224	aM	59
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.222	16.141	1337	a	1.6	17		18.257			
1,3-DNB		17.346						13.713			
NB		18.239					10.822	10.875	16294	a	20
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT	21.215	21.062	4977	aM	5.4	55		19.249			
2-NT	22.538	22.615	1548	a	3.8	40		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT4AA	Matrix:	SOIL
Lab Sample ID:	814620	Weight extracted (g):	9.8
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 22:56	15-DEC-2009 10:44
Dilution factor:	1.0	1.0
Data File:	11dec090953-r541.d	14dec091139-r371.d
Surrogate recovery:		
1,2-DNB	94%	101%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.542	16.497	77836		190	1900	11.273	11.301	922275		2000
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			LR
MNX	13.211	13.211	7479		16	160	5.999	5.796	21376	aM	71
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.231	16.141	2035	a	2.6	26		18.257			
1,3-DNB	17.288	17.346	337	a	0.083	0.84		13.713			
NB		18.239					10.856	10.875	23487	a	42
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT		21.062						19.249			
2-NT	22.556	22.615	1935	a	5.0	51		14.971			
4-NT		23.315					16.185	16.233	26737	a	96
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT4AB	Matrix:	SOIL
Lab Sample ID:	814621	Weight extracted (g):	10.1
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	12-DEC-2009 23:34	15-DEC-2009 12:26
Dilution factor:	1.0	1.0
Data File:	11dec090953-r551.d	14dec091139-r401.d
Surrogate recovery:		
1,2-DNB	97%	102%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.542	16.497	80001		190	1900	11.281	11.301	938790		2000
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.202	13.211	7512		16	160	5.846	5.796	12548	aM	54
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.231	16.141	767	a	0.90	8.9		18.257			
1,3-DNB		17.346						13.713			
NB		18.239						10.875			
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864					16.893	16.959	23500	a	44
2,4-DNT	21.241	21.062	5101	aM	5.5	54		19.249			
2-NT	22.591	22.615	1420	a	3.4	34		14.971			
4-NT		23.315						16.233			
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT4AC	Matrix:	SOIL
Lab Sample ID:	814622	Weight extracted (g):	10.5
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	13-DEC-2009 00:12	15-DEC-2009 13:01
Dilution factor:	1.0	1.0
Data File:	11dec090953-r561.d	14dec091139-r411.d
Surrogate recovery:		
1,2-DNB	94%	95%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.551	16.497	77281		190	1800	11.281	11.301	874617		1800
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.220	13.211	7658		16	160	5.869	5.796	14721	aM	55
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.240	16.141	126	a	0.057	0.54		18.257			
1,3-DNB		17.346						13.713			
NB		18.239						10.875			
Tetryl		18.530						19.249			
NG		19.427						9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864					16.863	16.959	12306	a	24
2,4-DNT	21.250	21.062	10826	aM	12	110		19.249			
2-NT	22.583	22.615	1988	a	5.1	49		14.971			
4-NT		23.315					16.148	16.233	30690	a	110
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT6CA	Matrix:	SOIL
Lab Sample ID:	814623	Weight extracted (g):	10.2
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	13-DEC-2009 00:51	15-DEC-2009 13:35
Dilution factor:	1.0	1.0
Data File:	11dec090953-r571.d	14dec091139-r421.d
Surrogate recovery:		
1,2-DNB	94%	110%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.551	16.497	77401		190	1800	11.282	11.301	1011207		2200
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX	10.661	10.627	364	a	1.3	13		5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.220	13.211	7438		16	160	5.902	5.796	14914	aM	57
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.240	16.141	5438	a	7.0	69		18.257			
1,3-DNB		17.346						13.713			
NB		18.239					10.865	10.875	22168	a	37
Tetryl		18.530						19.249			
NG	19.473	19.427	177	aM	62	610		9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864					16.894	16.959	18510	a	35
2,4-DNT	21.250	21.062	4328	aM	4.6	45		19.249			
2-NT	22.556	22.615	1617	a	4.0	39		14.971			
4-NT		23.315					16.134	16.233	26822	a	92
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT5BA	Matrix:	SOIL
Lab Sample ID:	814624	Weight extracted (g):	10.6
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	13-DEC-2009 01:29	15-DEC-2009 14:09
Dilution factor:	1.0	1.0
Data File:	11dec090953-r581.d	14dec091139-r431.d
Surrogate recovery:		
1,2-DNB	94%	99%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.533	16.497	77783		190	1800	11.276	11.301	911361		1900
2,6-DA		9.613						4.557			
TNX		9.640						4.516			
HMX		10.627						5.392			
2,4-DA		11.099						4.557			
DNX		11.505						4.979			
MNX	13.175	13.211	8910		19	180	5.960	5.796	22760	aM	68
RDX		14.358						6.457			
PICRICACID		15.267						7.015			
1,3,5-TNB	16.231	16.141	839	aM	0.99	9.4	18.297	18.257	10460	a	22
1,3-DNB		17.346						13.713			
NB		18.239					10.848	10.875	28424	a	53
Tetryl		18.530						19.249			
NG	19.465	19.427	167	aM	59	560		9.496			
2,4,6-TNT		19.700						21.566			
4-am-2,6-DNT		20.088						11.731			
2-am-4,6-DNT		20.399						11.932			
2,6-DNT		20.864						16.959			
2,4-DNT	21.223	21.062	4357	aM	4.7	44		19.249			
2-NT	22.538	22.615	1431	a	3.5	33		14.971			
4-NT		23.315					16.184	16.233	15297	a	32
3-NT		24.020						16.233			
PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT4BA	Matrix:	SOIL
Lab Sample ID:	814625	Weight extracted (g):	10.0
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	13-DEC-2009 02:07	15-DEC-2009 14:43
Dilution factor:	1.0	1.0
Data File:	11dec090953-r591.d	14dec091139-r441.d
Surrogate recovery:		
1,2-DNB	95%	101%

		Primary Analysis					Confirmation Analysis				
	Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$	1,2-DNB	16.542	16.497	78566		190	1900	11.275	11.301	923255		2000
	2,6-DA		9.613						4.557			
	TNX		9.640						4.516			
	HMX		10.627						5.392			
	2,4-DA		11.099						4.557			
	DNX		11.505						4.979			
	MNX	13.220	13.211	7445		16	160	5.964	5.796	20276	aM	68
	RDX		14.358						6.457			
	PICRICACID		15.267						7.015			
	1,3,5-TNB	16.231	16.141	2155	a	2.7	27		18.257			
	1,3-DNB	17.288	17.346	927	a	0.70	7.0		13.713			
	NB		18.239						10.875			
	Tetryl		18.530						19.249			
	NG		19.427						9.496			
	2,4,6-TNT		19.700						21.566			
	4-am-2,6-DNT		20.088						11.731			
	2-am-4,6-DNT		20.399						11.932			
	2,6-DNT		20.864						16.959			
	2,4-DNT	21.232	21.062	5037	aM	5.4	54		19.249			
	2-NT	22.583	22.615	1783	a	4.5	45		14.971			
	4-NT		23.315						16.233			
	3-NT		24.020						16.233			
	PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT53

Client Sample ID:	TTLRT3BA	Matrix:	SOIL
Lab Sample ID:	814626	Weight extracted (g):	10.1
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	13-DEC-2009 02:45	15-DEC-2009 15:17
Dilution factor:	1.0	1.0
Data File:	11dec090953-r601.d	14dec091139-r451.d
Surrogate recovery:		
1,2-DNB	91%	94%

		Primary Analysis					Confirmation Analysis				
	Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$	1,2-DNB	16.569	16.497	74736		180	1800	11.272	11.301	859577		1900
	2,6-DA		9.613						4.557			
	TNX		9.640						4.516			
	HMX		10.627						5.392			
	2,4-DA		11.099						4.557			
	DNX		11.505						4.979			
	MNX	13.299	13.211	7212		15	150	5.900	5.796	18209	aM	64
	RDX	14.365	14.358	250	a	0.57	5.6		6.457			
	PICRICACID		15.267						7.015			
	1,3,5-TNB	16.231	16.141	415	a	0.44	4.3		18.257			
	1,3-DNB		17.346						13.713			
	NB	18.345	18.239	1106	aM	2.2	22		10.875			
	Tetryl		18.530						19.249			
	NG	19.429	19.427	373	aM	130	1300		9.496			
	2,4,6-TNT		19.700						21.566			
	4-am-2,6-DNT		20.088						11.731			
	2-am-4,6-DNT		20.399						11.932			
	2,6-DNT		20.864						16.959			
	2,4-DNT		21.062						19.249			
	2-NT	22.600	22.615	1468	a	3.6	36		14.971			
	4-NT	23.364	23.315	120	a	0.43	4.3		16.233			
	3-NT		24.020						16.233			
	PETN		25.137						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT54

Client Sample ID:	TTLRT2BA	Matrix:	SOIL
Lab Sample ID:	814627	Weight extracted (g):	10.2
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	14-DEC-2009 21:15	14-DEC-2009 23:54
Dilution factor:	1.0	1.0
Data File:	14dec091137-r101.d	14dec091139-r181.d
Surrogate recovery:		
1,2-DNB	96%	104%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.444	16.453	79138		190	1900	11.282	11.301	950420		2000
2,6-DA		9.577						4.557			
TNX		9.604						4.516			
HMX		10.572						5.392			
2,4-DA		11.070						4.557			
DNX		11.470						4.979			
MNX	13.140	13.184	8353		18	180	5.988	5.796	25151	aM	75
RDX		14.330						6.457			
PICRICACID		15.263						7.015			
1,3,5-TNB	16.160	16.124	2667	a	3.4	33		18.257			
1,3-DNB	17.226	17.324	695	a	0.46	4.5		13.713			
NB		18.221					10.891	10.875	10060	a	0.91
Tetryl		18.514						19.249			
NG		19.402						9.496			
2,4,6-TNT		19.669						21.566			
4-am-2,6-DNT	19.997	20.042	1657	a	3.4	34		11.731			
2-am-4,6-DNT		20.344						11.932			
2,6-DNT		20.824						16.959			
2,4-DNT	21.135	21.019	7593	aM	8.2	81		19.249			
2-NT	22.538	22.574	2483	a	6.6	65		14.971			
4-NT		23.249						16.233			
3-NT	24.013	23.959	1741	a	2.2	22		16.233			
PETN		25.052					15.310	15.331	13700	a	2000

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery

TestAmerica Burlington - GC EXPLOSIVES Report

SDG: TT54

Client Sample ID:	TTLRT5AA	Matrix:	SOIL
Lab Sample ID:	814628	Weight extracted (g):	9.7
Sample Type:	SAMPLE	Extract volume (ml):	100.0

	Primary Analysis	Confirmation Analysis
Instrument:	1208_1.i	1488_1.i
Column type:	C-18	BIPHENYL
Injection date/time:	14-DEC-2009 21:53	15-DEC-2009 00:28
Dilution factor:	1.0	1.0
Data File:	14dec091137-r111.d	14dec091139-r191.d
Surrogate recovery:		
1,2-DNB	96%	108%

	Primary Analysis						Confirmation Analysis				
Compound	RT	Exp RT	Area	Flags	Extract Conc. (ug/L)	Sample Conc. (ug/Kg)	RT	Exp RT	Area	Flags	Sample Conc. (ug/Kg)
$ 1,2-DNB	16.435	16.453	78705		190	2000	11.281	11.301	990263		2200
2,6-DA		9.577						4.557			
TNX		9.604						4.516			
HMX		10.572						5.392			
2,4-DA		11.070						4.557			
DNX		11.470						4.979			
MNX	13.113	13.184	10208	M	22	230		5.796			
RDX		14.330						6.457			
PICRICACID	15.192	15.263	756	aM	1.9	20		7.015			
1,3,5-TNB	16.142	16.124	2465	a	3.1	32		18.257			
1,3-DNB		17.324						13.713			
NB	18.168	18.221	716	aM	1.5	16		10.875			
Tetryl		18.514						19.249			
NG		19.402						9.496			
2,4,6-TNT		19.669						21.566			
4-am-2,6-DNT	19.980	20.042	2424	a	4.9	51		11.731			
2-am-4,6-DNT		20.344						11.932			
2,6-DNT		20.824						16.959			
2,4-DNT	21.117	21.019	2340	a	2.5	26		19.249			
2-NT	22.494	22.574	2565	a	6.9	71		14.971			
4-NT		23.249					16.149	16.233	14094	a	29
3-NT	24.013	23.959	1353	a	1.0	11		16.233			
PETN		25.052						15.331			

Flags:
- A - Peak quantitates above calibration range
- a - Peak quantitates below reporting limit
- CP - Confirmed by Photo Diode Array (PDA)
- H - User selected alternate compound hit
- IC - Interference confirmation
- IP - Interference primary
- M - Peak manually integrated or manually identified
- R - Peak fails recovery