WEEKLY PROGRESS UPDATE
FOR OCTOBER 24-OCTOBER 30, 1997

EPA REGION I ADMINISTRATIVE ORDER SDWA I-97-1019
MASSACHUSETTS MILITARY RESERVATION
TRAINING RANGE AND IMPACT AREA

The following summary of progress is for the period from October 24 to October 30, 1997.

1. SUMMARY OF ACTIONS TAKEN

UXO

No UXO surveys were performed this week.

Drilling

Ogden, D.L. Maher (the drilling contractor), and Valeri Construction (Maher's road building subcontractor) continued work on the site. TRC (EPA's oversight contractor) was present on site to observe drilling and groundwater sampling activities. As of October 30 the Barber rig was drilling at 35 feet below ground surface (bgs) on the pilot hole for MW-5, and the Sonic rig was drilling at 155 feet bgs at MW-13. Table 3 presents a summary of wells completed to date.

Sampling and Analysis

Soil and groundwater samples have been analyzed or submitted for borings that have been drilled to date. Also, hand auger samples have been collected from 0-6 inches at future drilling locations in the Impact Area, and at the areas of potential concern identified in the Field Sampling Plans. The types of samples being analyzed, dates of submittal, and preliminary results are summarized in Table 1 and Table 2. Table 1 presents soil sampling and groundwater profiling results, and Table 2 provides results for samples from monitoring wells. All results in Table 1 and Table 2 are unvalidated. Concentrations of specific compounds will be presented in tabular form after the results for all samples in a sample data group are available and have been validated.

Explosive Compounds --

Explosive compounds have been detected in soil samples collected from 0-6 inches at MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW- 7, MW-8, MW-9, MW-12, MW-15, MW-19, MW-25, MW-26, MW-27, MW-28, and MW-29, using the screening methods. Explosives were also detected using the screening method at 10 feet bgs in MW-1; at 20 feet bgs in MW-8; at 70, 80, 90, and 100 feet bgs in MW-25; at 10 and 20 feet bgs in MW-27; at 20 feet bgs in MW-2; at 20

feet in MW-9; and at 10 feet in MW-30. No explosives have been detected from the confirmatory Method 8330 analysis of 0-6 inch samples from MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-9, MW-12, MW-15, MW-26, MW-27, MW-28, and MW-29, of the 10 foot interval from MW-1, of the 70, 80, 90, and 100 foot intervals from MW-25, and of the 20 foot interval from MW-9. The results from the 8330 analysis of 0-6 inch samples from MW-8, MW-19, and MW-25 confirm that explosive compounds are present in surface soil at these locations. No explosive compounds have been detected in deeper soil samples analyzed to date by screening or confirmatory 8330 methods.

Explosive compounds have been detected using the screening method in composite surface soil samples from 0-6 inches in 8 grids from Area 1; 12 grids from Area 2; 11 grids from Area 3; 5 grids from Area 6; 4 grids from Area 7; 4 grids from Area 8; 4 grids from Area 9; 5 grids from Area 10; 4 grids from Area 11; 5 grids from Area 14; and 2 grids from Area 15. Method 8330 confirmatory analysis of these hits is complete for all samples from Area 1, 8 samples from Area 2, all samples from Area 3, no samples from Area 6, no samples from Area 7, no samples from Area 8, no samples from Area 9, 4 samples from Area 10, no samples from Area 11, no samples from Area 14, and no samples from Area 15, with no detected explosive compounds in any of these samples. Method 8330 results from the remaining grids that had screening hits are not yet available.

RDX was reported at an estimated concentration below the detection limit by the screening method in a groundwater profiling sample collected from 160 feet bgs in MW-17. When this sample was analyzed using Method 8330 no explosive compounds were detected. Explosive compounds were detected using Method 8330 in a groundwater profiling sample collected from 44 feet bgs in MW-18. RDX was reported at an estimated concentration below the detection limit by the screening method in a groundwater profiling sample collected from 176 feet bgs in MW-18. When this sample was analyzed using Method 8330 no explosive compounds were detected. RDX was detected in groundwater profiling samples from 120, 130, 162, 202, 222, 232, and 252 feet bgs in MW-1 by screening methods. Explosive compounds were detected using Method 8330 in groundwater profiling samples collected at 120, 130, 140, 150, 162, 182, 202, 212, 222, 232, 252, 262, 272, and 282 feet bgs in MW-1. In MW-15, explosive compounds were detected in groundwater profiling samples from 110, 120, 130, 140, 150, 160, 280, and 300 feet bgs using Method 8330. In MW-21, explosive compounds were detected in groundwater profiling samples from 176, 186, 196, and 270 feet bgs using Method 8330. Explosives have been detected in groundwater profiling samples using Method 8330 at 125 feet in MW-9, 109 feet in MW-6, at 120 feet in MW-25, at 110 feet in MW-8, at 130 feet in MW-27, at 170 feet in MW-2, and at 212 feet in MW-16.

Explosives have been detected in groundwater samples from monitoring wells at locations MW-1S, MW-1M, CS19 MW0011E, CS19 MW0006E, CS19 MW0009E, and MW-25S.

Inorganic Compounds --

Inorganic compounds have been detected in all soil samples analyzed to date. There are a large number of detected compounds and many of these are expected to be naturally occurring. The identification of compounds exceeding background concentrations will be reported after determination of background levels.

Other Analytes --

A number of "other" analytes have been detected in soil and groundwater profiling samples as indicated in Table 1, including VOC, SVOC, pesticides, and herbicides. Some of these compounds may have background concentrations; i.e., they may result from anthropogenic or natural sources which are not related to activities at the Impact Area and Training Ranges. Some of these compounds have been detected in laboratory blanks, which suggests that they may not be present in all of the samples indicated. Many of these compounds have been reported at estimated concentrations due to quality control issues. The quantity of data for these analytes does not allow a detailed description of the occurrence of each analyte for this progress update report. Ogden is currently importing these data into a database to allow some summary information on the concentrations of each compound to be developed, to be presented in a future progress update report.

Water Level Measurements

Water level recording devices that were installed in LRWS-2, CS-19 (MW-7E), and CS-10 (AEHA- 11) continue to record water levels. The data loggers were down loaded last week and the summary of the data will be provide after it is evaluated.

Plans and Reports

NGB is preparing Field Sampling Plans for the remaining areas identified in the Action Plan.

2. SUMMARY OF DATA RECEIVED

Laboratory results for soil and groundwater samples were received during the week and are summarized in Section 1 above. Concentrations for specific compounds will be presented in tabular form after the results for all samples in a sample data group are available and have been validated. The types of samples being analyzed, dates of submittal, and preliminary results are summarized in Tables 1 and 2. All results in Table 1 and 2 are unvalidated.

3. DELIVERABLES SUBMITTED

Deliverables submitted during the reporting period included the following:

Weekly Progress Update (October 17 - October 23)	October 24, 1997
Final Field Sampling Plan for Background	October 27, 1997
Final Field Sampling Plan for Groundwater	October 28, 1997
Final Field Sampling Plan for Area 15	October 30, 1997

4. SCHEDULED ACTIONS

The Barber drill rig is expected to complete the pilot hole on MW-5, complete the pilot hole for MW-19, and then begin drilling the intermediate depth well at MW-7. The Sonic rig is expected to complete drilling at MW-13, and begin drilling at MW-19. Groundwater sampling will continue at monitoring wells located at MW-28S, MW-29S, MW-14S, MW-4S, MW-6S, MW-10S, MW-10D, and MW-22S.

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
MW-14	Soil: 0.5 feet	ND[S]	Inorganics	ND
	Soil: 2 feet			
	Soil: 10 feet	ND[S]	Inorganics	Ace TCB BEHP DIHP
	Soil: 20 feet	ND[S]	Inorganics	
	Soil: 30, 40, 50, 60, 70, 80, 90 feet	ND[S]	Inorganics	
MW-23	Soil: 40 feet			Ace TCB BEHP
	Soil: 70 feet			Ace TCB

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As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Groundwater: 140, 150, 160, 170, 180, 190, 200, 210, 220	ND[S]		ND (V)
	Groundwater: 230	ND[S]		Tol (V*)
	Groundwater: 240, 250, 260	ND[S]		THM (V*)
	Groundwater: 270, 290	ND[S]		ND (V)
MW-28	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	ND
	Soil: 2 feet	ND[S] **ND**		
	Soil: 10 feet	ND[S]	Inorganics	ND
	Soil: 20 feet	ND[S]	Inorganics	
	Soil: 30, 40, 50, 60, 70, 80, 90 feet		Inorganics	
	Soil: 100 feet		Inorganics	ND
MW-7	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	ND
	Soil: 2 feet			
	Soil: 10 feet	ND[S]	Inorganics	ND
	Soil: 20 feet	ND[S]	Inorganics	
	Soil: 30, 40, 50, 60, 70, 80, 90, 100 feet		Inorganics	
	Groundwater: 130 feet	ND[S]		THM (V) MP Hex Ace But
	Groundwater: 140 feet	ND[S]		ND (V)
	Groundwater: 150, 160 feet	ND[S]		THM (V) Ace

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Groundwater: 165, 175 feet	ND[S]		Ace (V)
	Groundwater: 185 feet	ND[S]		ND (V)
	Groundwater: 195, 205, 215 feet	ND[S]		THM (V) Ace
	Groundwater: 225 feet	ND[S]		Ace (V)
	Groundwater: 235, 245 feet	ND[S]		Ace (V) CD
	Groundwater: 255, 265, 275 feet	ND[S]		ND (V)
	Groundwater: 285, 295 feet	ND[S]		THM (V)
	Groundwater: 310, 320, 330 feet	ND[S]		ND (V)
	Groundwater: 340 feet	ND[S]		Ace (V) CD But
	Groundwater: 347 feet	ND[S]		ND (V)
MW-29	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace
	Soil: 2 feet			
	Soil: 10 feet	ND[S] **ND**	Inorganics	Ace
	Soil: 20 feet	ND[S]	Inorganics	
	Soil: 30 feet		Inorganics	
	Soil: 40 feet		Inorganics	Ace
	Soil: 50, 60, 70, 80, 90, 100 feet		Inorganics	
MW-10	Soil: 140 feet			Ace (V*)
	Groundwater: 185, 195, 205 feet	ND[S]		THM (V)

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As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Groundwater: 285, 295 feet	ND[S]		ND (V)
	Groundwater: 305, 315, 330 feet	ND[S]		THM (V)
	Groundwater: 355 feet	ND[S]		ND (V)
MW-12	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace Phe bBHC dBHC
	Soil: 2 feet			
	Soil: 10 feet	ND[S]	Inorganics	Ace Phe bBHC dBHC gBHC DIEP
	Soil: 20 feet	ND[S]	Inorganics	
	Soil: 30, 40, 50, 60, 70, 80, 90, 100 feet		Inorganics	
MW-11	Soil: 0.5 feet	ND[S]	Inorganics	Ace
	Soil: 2 feet			
	Soil: 10 feet	ND[S]	Inorganics	Ace
	Soil: 20 feet	ND[S]	Inorganics	ND
	Soil: 30 feet		Inorganics	Ace BEHP But
	Soil: 40 feet		Inorganics	ND
	Soil: 50 feet		Inorganics	Ace BEHP
	Soil: 60, 70 feet		Inorganics	Ace
	Soil: 80 feet		Inorganics	ND

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Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 90, 100, 110 feet		Inorganics	Ace
	Soil: 120 feet		Inorganics	Ace THM
	Soil: 130 feet		Inorganics	Ace DCBA
MW-17	Soil: 3.5 feet			Ace
	Soil: 17.5 feet			Ace TCB DCB
	Soil: 53 feet			Ace BEHP bBHC
	Groundwater: 120, 130, 140, 150 feet	ND[S]		ND (V)
	Groundwater: 160 feet	RDX[S] **ND**		ND (V)
	Groundwater: 170, 180, 190 feet	ND[S]		ND (V)
	Groundwater: 200 feet	ND[S]		Ace (V) THM
	Groundwater: 210, 220, 230, 240, 250, 260, 270, 280, 290, 320 feet	ND[S]		THM (V)
	Groundwater: 330 feet	ND[S]		ND (V)
MW-4	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace MCPA BEHP DDE DDT
	Soil: 2 feet			
	Soil: 10 feet	ND[S]	Inorganics	ND

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 20 feet	ND[S]	Inorganics	
	Soil: 30, 40, 50 feet		Inorganics	ND
	Soil: 60 feet		Inorganics	bBHC dBHC
	Soil: 70, 80, 90, 100 feet		Inorganics	
	Soil: 110, 120, 130 feet		Inorganics	ND
	Soil: 140 feet		Inorganics	
MW-1	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace DIEP
	Soil: 2 feet			
	Soil: 10 feet	RDX/HMX[S] **ND**	Inorganics	Ace DIEP DIHP BEHP
	Soil: 20 feet	ND[S]	Inorganics	
	Soil: 30, 40 feet	**ND**	Inorganics	
	Soil: 50 feet			
	Soil: 60, 70, 80, 90, 100, 110, 120 feet	**ND**	Inorganics	
	Groundwater: 120 feet	RDX[S] **EXP**		Ace (V) But MP Hex
	Groundwater: 130 feet	RDX[S] **EXP**		Ace (V) But MP Hex MeCl

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As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Groundwater: 140 feet	ND[S] **EXP**		Ace (V) But Benz
	Groundwater: 150 feet	ND[S] **EXP**		Ace (V) But Hex
	Groundwater: 162 feet	RDX[S] **EXP**		Ace (V) But
	Groundwater: 182 feet	**EXP**		Ace (V) THM
	Groundwater: 192 feet	**ND**		Ace (V) But
	Groundwater: 202 feet	RDX[S] **EXP**		Ace (V) THM
	Groundwater: 212 feet	ND[S] **EXP**		Ace (V) THM
	Groundwater: 222, 232 feet	RDX[S] **EXP**		9/2 (V)
	Groundwater: 252 feet	RDX[S] TNT[S] **EXP**		9/10 (V)
	Groundwater: 262, 272, 282 feet	**EXP**		9/10 (V)
	Groundwater: 292 feet	**ND**		9/10 (V)
MW-3	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace PCP
MW-5	Soil: 0.5 feet	TNT/DNT[S] RDX/HMX[S] **ND**	Inorganics	Ace BEHP
MW-6	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace BEHP

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Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 2 feet			
	Soil: 10 feet	ND[S] **ND**	9/24	9/24
	Soil: 25 feet	ND[S] **ND**	9/24	
	Soil: 35, 48, 55, 67, 75, 87, 94, 107, 114 feet		9/24-25	
	Groundwater: 109 feet	**EXP**		9/25 (V)
MW-16	Soil: 0.5 feet	ND[S] **ND**	Inorganics	Ace
	Soil: 2 feet	**ND**		dBHC
	Soil: 10 feet	**ND**	9/30	9/30
	Soil: 20 feet	ND[S] **ND**	9/30	
	Soil: 30, 40, 50, 60, 70, 80, 90 feet	**ND**	10/1-7	
	Soil: 117,123,127,132 feet		10/1-7	
	Groundwater: 130, 140, 162, 172, 182, 192, 202, 212, 252, 262, 272 feet	**ND**		10/7-8(V)
	Groundwater: 292, 332, 352, 362 feet	**ND**		10/7-8(V)
MW-26	Soil: 0.5 feet	TNT/DNT[S] RDX/HMX[S] **ND**	Inorganics	Ace DIEP DDT
MW-27	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace
	Soil: 2 feet			
	Soil: 12 feet	RDX/HMX[S] **10/8**	10/1	10/1

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As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 22 feet	RDX/HMX[S] **10/8**	10/1	
	Soil: 40, 52 feet	**10/8**	10/7	
	Soil: 60,70,80,90,100,110,120 feet		10/7	
	Groundwater: 130 feet	**EXP**		10/8(V)
MW-2	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace TCE MeCl DDT DDE
	Soil: 2 feet			
	Soil: 10 feet	ND[S] **ND**	10/8	10/8
	Soil: 20 feet	RDX/HMX[S] **ND**	10/8	
	Soil: 30, 40, 50 feet	**ND**	10/8-9	
	Soil: 60, 70, 80, 90, 100, 110, 130 feet		10/8-9	
	Groundwater: 135, 145, 160 feet	**ND**		10/17 (V)
	Groundwater: 170 feet	**EXP**		10/18 (V)
	Groundwater: 182, 192, 202, 212, 222, 232, 242 feet	**ND**		10/21 (V)
	Groundwater: 252, 262, 272, 282, 292 feet	**10/22**		10/22 (V)
	Groundwater: 302 feet	**ND**		10/23 (V)
	Groundwater: 312, 322, 332, 342, 352 feet	**10/23-10/24**		10/23-10/24 (V)
MW-8	Soil: 0.5 feet	TNT/DNT[S] **EXP**	Inorganics	Ace

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Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 2 feet			
	Soil: 10 feet	ND[S]	10/2	10/2
	Soil: 20 feet	RDX/HMX[S] **10/8**	10/2	
	Soil: 30, 40 feet	**10/8**	10/3	
	Soil: 50, 60, 70, 80, 90, 100, 110 feet		10/3	
	Groundwater 110 feet	**EXP**		
MW-9	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace MCPA MeCl TCE
	Soil: 2 feet			
	Soil: 10 feet	ND[S] **ND**	9/25	9/25
	Soil: 20 feet	RDX/HMX[S] **ND**	9/25	
	Soil: 30, 40, 50, 60, 70, 80, 90, 100, 120 feet		9/26	
	Groundwater: 120 feet	**EXP**		9/26 (V)
MW-15	Soil: 0.5 feet	TNT/DNT[S] **ND**	Inorganics	Ace MCPA DCBA MeCl BEHP
	Soil: 2 feet			
	Soil: 10 feet	ND[S]	8/29	8/29
	Soil: 20 feet	ND[S]	8/29	
	Soil: 30 feet		8/29	8/29

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 50, 60, 70 feet	ND[S]	8/29	
	Soil: 80, 90, 100 feet	**9/5**	9/2	
	Groundwater: 110, 120 feet	ND[S] **EXP**		ND (V)
	Groundwater: 130 feet	ND[S] **EXP**		Ace (V) 1,1-DCE TCE Benz Tol CB
	Groundwater: 140 feet	ND[S] **EXP**		Ace (V) 1,1-DCE Benz Tol CB
	Groundwater: 150, 160 feet	ND[S] **EXP**		ND (V)
	Groundwater: 170, 180, 190, 200, 210 feet	ND[S] **ND**		ND (V)
	Groundwater: 220, 230, 240 feet	ND[S] **ND**		THM (V)
	Groundwater: 250, 260, 270 feet	ND[S] **ND**		ND (V)
	Groundwater: 280 feet	**EXP**		9/11-12 (V)
	Groundwater: 290 feet	**ND**		9/11-12 (V)
	Groundwater: 300 feet	**EXP**		9/11-12 (V)
	Groundwater: 310, 320, 330, 340 feet	**ND**		9/13 (V)

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
MW-19	Soil: 0.5 feet	RDX/HMX[S] **EXP**	Inorganics	Ace PCP TCE Hept Endo MCPP Die Bent Nn HCB gBHC
	Soil: 2 feet			
	Soil: 10 feet	ND	10/24	10/24
	Soil: 20, 30, 40 feet	10/24	10/24	
MW-25	Soil: 0.5 feet	TNT/DNT[S] RDX/HMX[S] **EXP**	Inorganics	MeCl Ace TCE MCPA Pic BEHP DDT
	Soil: 2 feet			
	Soil: 10 feet	**ND**	9/20	9/20
	Soil: 20 feet	**ND**	9/20	
	Soil: 30 feet		9/20	
	Soil: 40, 50, 60 feet	ND[S] **ND**	9/20-23	
	Soil: 70, 80, 90, 100 feet	RDX/HMX[S] **ND**	9/20-23	
	Groundwater: 120 feet	**EXP**		9/23 (V)

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
MW-18	Groundwater: 44 feet	ND[S] **EXP**		Ace (V) THM CD
	Groundwater: 60 feet	ND[S]		ND (V)
	Groundwater: 76, 86, 96 feet	ND[S] **ND**		ND (V)
	Groundwater: 106, 116, 126, 136 feet	ND[S] **ND**		Ace (V)
	Groundwater: 146 feet	ND[S] **ND**		Ace (V) THM
	Groundwater: 156 feet	ND[S] **ND**		THM (V)
	Groundwater: 166 feet	ND[S] **ND**		ND (V)
	Groundwater: 176 feet	ND[S] **ND**		TCE (V)
	Groundwater: 186 feet	ND[S] **ND**		Ace (V) CD THM TCE
	Groundwater: 196 feet	ND[S] **ND**		THM (V) TCE
	Groundwater: 206 feet	ND[S] **ND**		THM (V)
	Groundwater: 216 feet	ND[S] **ND**		ND (V)
	Groundwater: 226 feet	ND[S] **ND**		THM (V)
	Groundwater: 236 feet	ND[S] **ND**		Ace (V) THM

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Groundwater: 246, 256, 268 feet	ND[S] **ND**		ND (V)
	Groundwater: 276 feet	**ND**		9/9 (V)
MW-21	Groundwater: 176, 186, 196 feet	**EXP**		9/13-20 (V)
	Groundwater: 206, 216, 225, 246, 255 feet	**ND**		9/13-20 (V)
	Groundwater: 270 feet	**EXP**		9/13-20 (V)
	Groundwater: 277, 296, 306, 340 feet	**ND**		9/13-20 (V)
MW-20	Soil: 60 feet		9/26	9/26
MW-24	Soil: 10 feet	**ND**	10/17	10/17
MW-13	Soil: 0.5 feet			
	Soil: 2 feet			
	Soil: 10 feet	**10/22**	10/22	10/22
	Soil: 20 feet	ND	10/22	
	Soil: 30, 40, 50, 60, 70, 80 feet	10/22	10/22	
	Groundwater: 80, 85, 95, 105, 115 feet	**10/31**		10/31 (V)
MW-30	Soil: 0.5 feet			
	Soil: 2 feet			
	Soil: 10 feet	RDX/HMX[S] **10/30**	10/28	10/28
	Soil: 20 feet	ND **10/30**	10/28	
	Soil: 30 feet	**10/30**	10/28	
	Groundwater: 36 feet	**10/29**		10/29 (V)
Area 3 Grid A	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/10	9/10

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 18-24 inch			
Area 3 Grid B	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S] **ND**	9/10	9/10
	Soil: 18-24 inch			
Area 3 Grid C	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/10	9/10
	Soil: 18-24 inch			
Area 3 Grid D	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/15	9/15
	Soil: 18-24 inch			
Area 3 Grid E	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/10	9/10
	Soil: 18-24 inch			
Area 3 Grid F	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/10	9/10
	Soil: 18-24 inch			
Area 3 Grid G	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/10	9/10
	Soil: 18-24 inch			
Area 3 Grid H	Soil: 0-6 inch	10/29	10/29	10/29
	Soil: 18-24 inch			
Area 3 Grid I	Soil: 0-6 inch	10/29	10/29	10/29
	Soil: 18-24 inch			
Area 3 Grid J	Soil: 0-6 inch	ND[S] **ND**	9/11	9/11

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Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 18-24 inch			
Area 3 Grid K	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 3 Grid L	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 3 Grid M	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 3 Grid N	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 3 Grid O	Soil: 0-6 inch	10/29	10/29	10/29
	Soil: 18-24 inch			
Area 2 Grid A	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 2 Grid B	Soil: 0-6 inch	ND[S] **ND**	9/10	9/10
	Soil: 18-24 inch			
Area 2 Grid C	Soil: 0-6 inch	ND[S] **ND**	9/10	9/10
	Soil: 18-24 inch			
Area 2 Grid D	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 18-24 inch			
Area 2 Grid E	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 2 Grid F	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 2 Grid G	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 2 Grid H	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/15	9/15
	Soil: 18-24 inch			
Area 2 Grid I	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 2 Grid J	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/11	9/11
	Soil: 18-24 inch			
Area 2 Grid K	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/12	9/12
	Soil: 18-24 inch			
Area 2 Grid L	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/15	9/15
	Soil: 18-24 inch			
Area 2 Grid M	Soil: 0-6 inch	ND[S]	9/15	9/15

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 18-24 inch			
Area 2 Grid N	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/15	9/15
	Soil: 18-24 inch			
Area 2 Grid O	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/15	9/15
	Soil: 18-24 inch			
Area 9 Grid A	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/16	9/16
	Soil: 18-24 inch			
Area 9 Grid B	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/16	9/16
	Soil: 18-24 inch			
Area 9 Grid C	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/16	9/16
	Soil: 18-24 inch			
Area 9 Grid D	Soil: 0-6 inch	TNT/DNT[S]	9/16	9/16
	Soil: 18-24 inch			
Area 9 Grid E	Soil: 0-6 inch	ND[S]	9/16	9/16
	Soil: 18-24 inch			
Area 10 Grid A	Soil: 18-24 inch	TNT/DNT[S] RDX/HMX[S]	9/17	9/17
	Soil: 0-6 inch			
Area 10 Grid B	Soil: 18-24 inch	TNT/DNT[S] **ND**	9/17	9/17
	Soil: 18-24 inch			

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
Area 10 Grid C	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S] **ND**	9/17	9/17
	Soil: 18-24 inch			
Area 10 Grid D	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S] **ND**	9/17	9/17
	Soil: 18-24 inch			
Area 10 Grid E	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/17	9/17
	Soil: 18-24 inch			
Area 14 Grid A	Soil: 0-6 inch	TNT/DNT[S]	9/16	9/16
	Soil: 18-24 inch			
Area 14 Grid B	Soil: 0-6 inch	TNT/DNT[S]	9/16	9/16
	Soil: 18-24 inch			
Area 14 Grid C	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S]	9/16	9/16
	Soil: 18-24 inch			
Area 14 Grid D	Soil: 0-6 inch	TNT/DNT[S]	9/16	9/16
	Soil: 18-24 inch			
Area 14 Grid E	Soil: 0-6 inch	TNT/DNT[S]	9/16	9/16
	Soil: 18-24 inch			
Area 1 Grid A	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/19	9/19
	Soil: 18-24 inch			

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
Area 1 Grid B	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/19	9/19
	Soil: 18-24 inch			
Area 1 Grid C	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/19	9/19
	Soil: 18-24 inch			
Area 1 Grid D	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/19	9/19
	Soil: 18-24 inch			
Area 1 Grid E	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/19	9/19
	Soil: 18-24 inch			
Area 1 Grid F	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/20	9/20
	Soil: 18-24 inch			
Area 1 Grid G	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/20	9/20
	Soil: 18-24 inch			
Area 1 Grid H	Soil: 0-6 inch	TNT/DNT[S] **ND**	9/20	9/20
	Soil: 18-24 inch			
Area 4 Grid A	Soil: 0-6 inch	10/22	10/22	10/22
	Soil: 18-24 inch			
Area 4 Grid B	Soil: 0-6 inch	10/22	10/22	10/22
	Soil: 18-24 inch			
Area 4 Grid C	Soil: 0-6 inch	10/22	10/22	10/22

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 18-24 inch			
Area 4 Grid D	Soil: 0-6 inch	10/22	10/22	10/22
	Soil: 18-24 inch			
Area 4 Grid E	Soil: 0-6 inch	10/22	10/22	10/22
	Soil: 18-24 inch			
Area 4 Grid F	Soil: 0-6 inch	10/22	10/22	10/22
	Soil: 18-24 inch			
Area 7 Grid A	Soil: 0-6 inch	TNT/DNT[S] **10/23**	10/23	10/23
	Soil: 18-24 inch			
Area 7 Grid B	Soil: 0-6 inch	TNT/DNT[S] **10/23**	10/23	10/23
	Soil: 18-24 inch			
Area 7 Grid C	Soil: 0-6 inch	ND	10/23	10/23
	Soil: 18-24 inch			
Area 7 Grid D	Soil: 0-6 inch	TNT/DNT[S] **10/23**	10/23	10/23
	Soil: 18-24 inch			
Area 7 Grid E	Soil: 0-6 inch	TNT/DNT[S] **10/23**	10/23	10/23
	Soil: 18-24 inch			
Area 8 Grid A	Soil: 0-6 inch	TNT/DNT[S] **10/24**	10/24	10/24
	Soil: 18-24 inch			

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
Area 8 Grid B	Soil: 0-6 inch	TNT/DNT[S] **10/24**	10/24	10/24
	Soil: 18-24 inch			
Area 8 Grid C	Soil: 0-6 inch	TNT/DNT[S] **10/24**	10/24	10/24
	Soil: 18-24 inch			
Area 8 Grid D	Soil: 0-6 inch	ND	10/24	10/24
	Soil: 18-24 inch			
Area 8 Grid E	Soil: 0-6 inch	TNT/DNT[S] **10/24**	10/24	10/24
	Soil: 18-24 inch			
Area 6 Grid A	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S] **10/28**	10/25	10/25
	Soil: 18-24 inch			
Area 6 Grid B	Soil: 0-6 inch	TNT/DNT[S] **10/28**	10/25	10/25
	Soil: 18-24 inch			
Area 6 Grid C	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S] **10/28**	10/25	10/25
	Soil: 18-24 inch			
Area 6 Grid D	Soil: 0-6 inch	TNT/DNT[S] RDX/HMX[S] **10/28**	10/25	10/25
	Soil: 18-24 inch			
Area 6 Grid E	Soil: 0-6 inch	TNT/DNT[S] **10/28**	10/25	10/25

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
	Soil: 18-24 inch			
Area 11 Grid A	Soil: 0-6 inch	TNT/DNT[S] **10/30**	10/28	10/28
	Soil: 18-24 inch			
Area 11 Grid B	Soil: 0-6 inch	TNT/DNT[S] **10/30**	10/28	10/28
	Soil: 18-24 inch			
Area 11 Grid C	Soil: 0-6 inch	TNT/DNT[S] **10/30**	10/28	10/28
	Soil: 18-24 inch			
Area 11 Grid D	Soil: 0-6 inch	ND	10/28	10/28
	Soil: 18-24 inch			
Area 11 Grid E	Soil: 0-6 inch	TNT/DNT[S] **10/30**	10/28	10/28
	Soil: 18-24 inch			
Area 15 Grid A	Soil: 0-6 inch	RDX/HMX[S] **10/30**	10/28	10/28
	Soil: 18-24 inch			
Area 15 Grid B	Soil: 0-6 inch	RDX/HMX[S] **10/30**	10/28	10/28
	Soil: 18-24 inch			
Area 13 Grid A	Soil: 0-6 inch	10/29	10/29	10/29
	Soil: 18-24 inch			
Area 13 Grid B	Soil: 0-6 inch	10/29	10/29	10/29
	Soil: 18-24 inch			

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
Area 13 Grid C	Soil: 0-6 inch	10/29	10/29	10/29
	Soil: 18-24 inch			
Area 13 Grid D	Soil: 0-6 inch	10/30	10/30	10/30
	Soil: 18-24 inch			
Area 13 Grid E	Soil: 0-6 inch	10/30	10/30	10/30
	Soil: 18-24 inch			
Obs. Point A	Soil: 0-6 inch	10/30	10/30	10/30
	Soil: 18-24 inch			
Obs. Point B	Soil: 0-6 inch	10/30	10/30	10/30
	Soil: 18-24 inch			
Obs. Point C	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			
Obs. Point D	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			
Obs. Point E	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			
Mortar 5 Grid A	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			
Mortar 5 Grid B	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			
Mortar 5 Grid C	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
Mortar 5 Grid D	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			
Mortar 5 Grid E	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			
Mortar 6 Grid A	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			
Mortar 6 Grid B	Soil: 0-6 inch	10/31	10/31	10/31
	Soil: 18-24 inch			

Table 1
Summary of Preliminary Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Type	Explosives	Inorganics	Other Analytes
Notes:				
7/22	= date sample received for analysis			
ND	= not detected			
s	= result from screening method (colorimetric for soil or high-level 8330 for groundwater)			
BOLD	= result from 8330 method			
(V)	= analyzed for volatile organic compounds only			
*	= expedited (5-day TAT)			
EXP	= explosives			
Tol	= toluene			
Ace	= acetone			
Benz	= benzene			
CB	= chlorobenzene			
DCB	= 2,4-dichlorobenzene			
TCB	= 1,2,4 -Trichlorobenzene			
HCB	= hexachlorobenzene			
THM	= trihalomethanes			
MeCl	= methylene chloride			
1,1-DCE	= 1,1-dichloroethylene			
TCE	= trichloroethylene			
But	= 2-butanone			
MP	= 4-methyl-2-pentanone			
Hex	= 2-hexanone			
CD	= carbon disulfide			
DCBA	= 3,5-dichlorobenzoic acid			
BEHP	= Bis (2-ethylhexyl) phthalate			
DIHP	= di-n-butylphthalate			
DIEP	= diethylphthalate			
Phe	= phenol			
PCP	= pentachlorophenol			
Nn	= N-nitrosodiphenylamine-1			
Hept	= heptachlor epoxide			
Endo	= Endosulfan I			
bBHC	= beta-BHC			
dBHC	= delta-BHC			
gBHC	= gamma-BHC			
Pic	= Picloram			
Die	= Dieldrin			
Bent	= Bentazon			
DDT	= 4,4-DDT			

Table 2
Summary of Preliminary Monitoring Well Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Location	8330 Explosives	Inorganics	Other Analytes
MW-1	MW-1S	EXP	10/2	10/2
	MW-1I	EXP	10/1	10/1
	MW-1D	ND	10/3	10/3
MW-15	MW-15S	ND	10/9	10/9
	MW-15D	ND	10/10	10/10
MW-25	MW-25S	EXP	10/17	10/17
MW-18	MW-18S	ND	10/11	10/11
	MW-18D	10/24	10/24	10/24
MW-21	MW-21D	ND	10/16	10/16
	MW-21S	10/25	10/25	10/25
CS-19	MW0009E	EXP	10/3	10/3
	MW0006E	EXP	10/4	10/4
	MW0011E	EXP	10/3	10/3
	MW0007C	ND	10/7	10/7
	MW0005E	ND	10/8	10/8
	MW0007E	ND	10/8	10/8
	MW0010A	ND	10/8	10/8
LRWS	8-2	ND	10/16	10/16
	2-6	ND	10/21	10/21
	3-1	10/22	10/22	10/22
Bourne	95-6	ND	10/18	10/18
	95-15	ND	10/18	10/18
Schooner Pass	Residential Well	10/24	10/24	10/24

Table 2
Summary of Preliminary Monitoring Well Analytical Results (not validated)
As of October 30, 1997

Boring	Sample Location	8330 Explosives	Inorganics	Other Analytes
MW-23	MW-23S	10/29	10/29	10/29
	MW-23D	10/29	10/29	10/29
MW-9	MW-9S	10/30	10/30	10/30
MW-8	MW-82	10/31	10/31	10/31

Notes:
7/22 = Date sample recieved by lab
ND = Non-detect
EXP = Explosives present in sample

Table 3
Summary of Monitoring Wells Completed
As of October 30, 1997

Monitoring Well	Screen Interval (feet bgs)	Location	Date Completed
MW-14S	96.0-106.0	Water Table	7/28
MW-23S	122.5-132.5	Water Table	7/29
MW-23D	272.0-282.0	Bottom of Aquifer[1]	7/29
MW-28S	95.2-105.2	Water Table	7/30
MW-29S	98.5-108.5	Water Table	8/1
MW-12S	96.7-106.7	Water Table	8/7
MW-10S	145.0-155.0	Water Table	8/11
MW-10D	351.5-361.5	Bottom of Aquifer[2]	8/11
MW-11S	122.0-132.0	Water Table	8/12

Table 3
Summary of Monitoring Wells Completed
As of October 30, 1997

Monitoring Well	Screen Interval (feet bgs)	Location	Date Completed
MW-4S	137.0-147.0	Water Table	8/18
MW-7S	103.0-113.0	Water Table	8/27
MW-7D	332.0-342.0	Bottom of Aquifer[1]	8/27
MW-17S	120.0-130.0	Water Table	8/27
MW-17D	320.0-330.0	Bottom of Aquifer[1]	8/27
MW-18S	35.0-45.0	Water Table	9/9
MW-18D	265.0-275.0	Bottom of Aquifer[1]	9/9
MW-1D	290.0-300.0	Bottom of Aquifer[1]	9/15
MW-1I	160.0-165.0	45 feet Below Water Table	9/18
MW-1S	114.0-124.0	Water Table	9/18
MW-15S	105.0-115.0	Water Table	9/18
MW-15D	324.0-334.0	Bottom of Aquifer[1]	9/18
MW-21S	164.0-174.0	Water Table	9/22
MW-21D	302.0-312.0	Bottom of Aquifer[1]	9/22
MW-25S	108.0-118.0	Water Table	9/23
MW-22S	170.5-180.5	Water Table	9/24
MW-6S	106.0-116.0	Water Table	9/25
MW-9S	113.0-123.0	Water Table	9/25
MW-20S	92.0-102.0	Water Table	9/25
MW-23M1	225.0-235.0	100 feet Below Water Table	10/1

Table 3
Summary of Monitoring Wells Completed
As of October 30, 1997

Monitoring Well	Screen Interval (feet bgs)	Location	Date Completed
MW-23M2	189.0-194.0	70 feet Below Water Table	10/1
MW-23M3	156.0-161.0	30 feet Below Water Table	10/1
MW-8S	103.0-113.0	Water Table	10/2
MW-27S	117.0-127.0	Water Table	10/7
MW-16S	123.0-135.0	Water Table	10/15
MW-16D	355.0-360.0	Bottom of Aquifer[1]	10/15
MW-10I	280.0-285.0	130 feet Below Water Table	10/16
MW-2S	137.0-147.0	Water Table	10/28
MW-2D	355.0-360.0	Bottom of Aquifer[1]	10/28
MW-30S	26.0-36.0	Water Table	10/28

1 =Well constructed on top of till layer overlying bedrock.
2 =Well constructed on top of bedrock.