WEEKLY PROGRESS UPDATE
FOR NOVEMBER 15 – NOVEMBER 19, 1999

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 November 15 to November 19, 1999.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of November 19 is summarized in Table 1.

Table 1. Drilling progress as of November 19, 1999

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-48	Re-drill of MW-48S	111	10	99-109
MW-57b	Sandwich far field well	225	137	
MW-75	Demo 1 response well	200	117	
MW-77	Demo 1 response well	190	105	83-93 120-130 180-190

bgs = below ground surface
bwt = below water table

Samples collected during the reporting period are summarized in Table 2. Groundwater sampling continued for third round of Phase II (a) wells, the third round of Far Field Group 1 wells, and the first round of "new" Group 2 far field wells (LRWS-3 wells). Groundwater sampling was completed for the "supplemental" IRP wells. Groundwater profile samples were collected from MW-75; the location and drilling status for this well are indicated in Table 1. Soil sampling continued at areas 59 (GP-8) and 60 (GP-10).

The Guard, EPA, and MADEP had a meeting on November 18 to discuss technical issues, including the following:

- Jacobs provided an update on the activities at CS-19. Their UXO subcontractor commenced work today and should finish by Wednesday (11/24). Soil sampling is scheduled to start on December 6th.

- A 2-page handout of the data and a map showing the locations of the post excavation samples from the UXO detonation at Demo 2 were provided. Explosives have been detected but concentrations have been reduced from the original sampling. The Guard proposes to use a backhoe to remove an additional 6 inches of soil over the same area and re-sample. TRC asked if SVOC were sampled. The Guard stated that SVOC samples were collected on the first sampling round but not on this current round of sampling. The Guard stated that the final closure sampling will have SVOC samples collected if they are a constituent of concern in the initial samples. The Guard hopes to conduct the additional excavation during the week of 11/29/99 but needs to coordinate the schedule with Range Control because there is hunting that week. The detonation area will be covered to reduce infiltration prior to excavation.

- A 1-page handout of the soil sample locations from the APC was distributed. The analytical results from these samples were faxed out on November 11th and had explosives detected. The Guard proposed to collect more samples in the area to find the extent of contamination. The Guard will prepare a sampling plan by Tuesday. EPA asked if this APC may have been a target. The Guard stated that it may have been. EPA agreed that the proposed sampling should be performed in grids.

- A 2-page handout of the document status was distributed. Ogden stated that the table has been modified to show more detail on document revision status. The table will be updated periodically. The Guard requested that Tetra Tech format their table in the same format. The status of the various documents was discussed. It was agreed to conduct comment resolution for the Mortar Target FSP via a conference call at 0800 on 11/29, in order to meet the deadline of completing the FSP by 12/6/99. The timing of the Interim Longterm Monitoring Report and the Phase II CWR were explained as being dependent on the results of 3rd round sampling of Group 1 and Group 2 (original) wells, respectively.

- The e-mail between EPA and Ogden on the differences between compositions of Gun and Mortar propellant was discussed. EPA will contact Mr. Feigenbaum to determine what he was requesting in the last IART meeting. The Guard will have a propellant expert available to answer questions at the next IART meeting.

- The field activity update was given by Ogden and Tetra Tech. The Tetra Tech crew is performing work at the calibration area and is awaiting a shipment of additional inert rounds. They are about to award the geophysical contract and are preparing bids to go to the surveyor. Tetra Tech requested any bench marks that Ogden's surveyor has installed. Ogden is continuing to drill at MW-75 and MW-57, groundwater sample, and collect soil samples at GP-8. EPA will e-mail the approval to discharge water from the decon pad per Ogden's request. Ogden stated that the EPA method 8321 laboratory will be online in January and will need EPA comments in the next few weeks on locations to sample. DEP requested that Don Muldoon be included on all correspondence relating to the PEP comments.

- A 2-page handout of Mortar Target FSP change pages was distributed. The reconnaissance of potential targets along Turpentine Road was discussed. These scrap piles don't appear to be targets, and sampling is not proposed for these areas. The 1997 profile data from MW-15 were discussed along with the need to install an additional well downgradient of the mortar targets. It was agreed to include two wells in this plan and that their locations would depend on soil sampling results. Ogden indicated that the comment response and additional change pages would be sent on Friday (11/19).

- A 4-page handout of Trench FSP change pages was distributed. The reconnaissance of the CS-19 bunker cleared area and the trench along Turpentine Road were discussed. The comment response and additional change pages will be sent on Friday (11/19).

- A 1-page figure depicting the Former H Range was distributed. Ogden indicated that the locations of the soil grids were revised because of a problem with the historic aerial photo. EPA requested that the monitoring well locations for the CS-1 area be checked.

- A 5-page handout of the preliminary results for the first round of sampling base water supply wells was provided. There was one result above the MCL for lead at the ASP. The Guard indicated that the well was not used for drinking water. Additional monitoring is continuing in accordance with the Workplan for Completion of Phase I Activities.

- A 1-page handout of the letter that was distributed to the Raccoon Lane and Snake Pond area residences on the results of the well sampling was provided. There were no detections of explosives in any of the residential well samples.

- The status of the groundwater sampling of the supplemental IRP well 90MW0004 was discussed because it could not be sampled due to an obstruction. Ogden indicated that there were no other wells in the area that are not already being sampled.

- An 8-page handout of the MP-8 Range Packet was distributed for review. The packet includes information on what activities were authorized at that range.

- An 8-page handout of the non-explosive results from the August 1999 UXO detonation soil samples was provided. These samples were collected from the areas around MW-37, MW-40, Avery Road, and J-Range. There were no exceedances of MCP Reportable Concentrations (RCS1) for these samples. The Guard indicated that they would prepare a report summarizing all results for these samples.

- The EPA requested that the sampling of the MW-57 wells be rushed and that the VOC samples be submitted on a quick turn around. The agency would like VOC results before the 12/15 IART meeting. A response plan may be needed if the PCE detects in profile samples are confirmed.

- EPA mentioned potential NFA decisions by AFCEE for CS-22 and CS-8 (USCG).

- The EPA requested an update on the 95-14 sample results. Ogden will look into it.

- EPA requested an update on the status of the Gun and Mortar wells. Ogden indicated that all have been sampled and an update on results will be provided Friday (11/19).

- EPA requested that MW-16 and the LRWS 1 ZOC be discussed at the next technical meeting.

- Ogden asked whether the Phase II CWR should include risk assessment where there are three rounds of groundwater monitoring results. EPA will discuss internally and with DEP, to consider how to factor in the MCP approach.

- EPA requested that the Guard be present at any of the JPAT meetings when CS-19 or CS-18 are discussed. The next meeting is 1/12/00 and it is likely that CS-18 and CS-19 will be discussed.

2. SUMMARY OF DATA RECEIVED

Rush data are summarized in Table 3. These data are for analyses that are performed on a fast turnaround time, typically 1-5 days. Explosive analyses for monitoring wells, and explosive and VOC analyses for groundwater profile samples, are conducted in this timeframe. The rush data are not validated, but are provided as an indication of the most recent preliminary results. Table 3 summarizes only detects, and does not show samples with non-detects.

The status of the detections with respect to confirmation using Photo Diode Array (PDA) spectra is indicated in Table 3. PDA is a procedure that has been implemented for the explosive analysis, to reduce the likelihood of false positive identifications. Where the PDA status is “YES” in Table 3, the detected compound is verified as properly identified. Where the status is “NO”, the identification of an explosive has been determined to be a false positive. Where the status is blank, PDA has not yet been used to evaluate the detection, or PDA is not applicable because the analyte is a VOC. Most explosive detections

verified by PDA are confirmed to be present upon completion of validation. Table 3 includes the following detections:

- The groundwater sample from well 27MW0017B had a detection of picric acid that was not verified with the PDA spectra.
- The groundwater sample from MW-38M3 had a detection of RDX that was verified with the PDA spectra. This explosive was also detected in previous rounds of sampling.
- The groundwater sample from MW-39M2 had a detection of HMX that was verified by PDA spectra. This explosive was also detected in previous rounds of sampling.
- The groundwater sample from MW-53D had a detection of PETN, which was not confirmed by PDA spectra.
- The groundwater sample from MW-54 had detections of 1,3,5-trinitrobenzene, which was not confirmed by the PDA spectra.
- Groundwater profile samples from MW-75 (Demo 1 response well) had detections of 3-nitrotoluene (2 intervals), nitroglycerin (1 interval), picric acid (1 interval), and RDX (3 intervals). Only the RDX detections were verified by the PDA spectra.
- The duplicate profile sample from MW-77 had detections of RDX and HMX, which were verified by PDA spectra. The previous week's progress report indicated that the regular sample from the same interval at MW-77 also had detections of RDX and HMX confirmed by PDA spectra, and also had 4-amino-2,6-dinitrotoluene detected and verified by PDA spectra.
- Post excavation soil samples from Demo-2 had detections of RDX in three samples and HMX in 1 sample, which were verified by PDA spectra.

3. DELIVERABLES SUBMITTED

Weekly Progress Report (November 1-5)	11/17/99
Weekly Progress Report (November 8-12)	11/21/99

4. SCHEDULED ACTIONS

Scheduled actions for the week of November 22 include completion of drilling MW-75 (Demo 1 response well), continue drilling on MW-57b (Sandwich far field well); development and sampling of newly installed wells; repeat sampling of existing wells; and continued soil sampling of Gun and Mortar positions.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

Well installation was completed in MW-77 located downgradient directly on the flow path from Demo 1. Groundwater profiling was completed at the downgradient well MW-75 located north of the flow path from Demo 1. Profile results from the upper portion of MW-75 indicate that RDX and HMX are present at depths consistent with migration from Demo 1. Profile results from the remainder of MW-75 will be received next week, and used to select well screen depths.

TABLE 2
SAMPLING PROGRESS
11/15-11/19

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
90LWA0007-E	FIELDQC	11/15/1999	FIELDQC	0.00	0.00		
95ES-E	FIELDQC	11/17/1999	FIELDQC	0.00	0.00		
95ES-T	FIELDQC	11/16/1999	FIELDQC	0.00	0.00		
G75MAE	FIELDQC	11/18/1999	FIELDQC	0.00	0.00		
G75MKE	FIELDQC	11/19/1999	FIELDQC	0.00	0.00		
HC59A1AAE	FIELDQC	11/17/1999	FIELDQC	0.00	0.00		
HC59A1AAT	FIELDQC	11/17/1999	FIELDQC	0.00	0.00		
HC59D1AAE	FIELDQC	11/18/1999	FIELDQC	0.00	0.00		
HC59D1AAT	FIELDQC	11/18/1999	FIELDQC	0.00	0.00		
W43SST	FIELDQC	11/15/1999	FIELDQC	0.00	0.00		
W46SST	FIELDQC	11/19/1999	FIELDQC	0.00	0.00		
90LWA0007	90LWA0007	11/15/1999	GROUNDWATER			0.00	10.00
95ES	95ES	11/16/1999	GROUNDWATER			-5.38	4.62
W38SSA	MW-38	11/16/1999	GROUNDWATER			0.00	10.00
W38SSD	MW-38	11/16/1999	GROUNDWATER			0.00	10.00
W39SSA	MW-39	11/17/1999	GROUNDWATER			0.00	10.00
W42M2A	MW-42	11/19/1999	GROUNDWATER			119.00	129.00
W43M1A	MW-43	11/15/1999	GROUNDWATER			93.00	103.00
W43M1D	MW-43	11/15/1999	GROUNDWATER			93.00	103.00
W43M2A	MW-43	11/18/1999	GROUNDWATER			70.00	80.00
W43SSA	MW-43	11/15/1999	GROUNDWATER			0.00	10.00
W45M1A	MW-45	11/15/1999	GROUNDWATER			98.00	108.00
W45M1D	MW-45	11/15/1999	GROUNDWATER			98.00	108.00
W45M2A	MW-45	11/15/1999	GROUNDWATER			18.00	28.00
W45SSA	MW-45	11/16/1999	GROUNDWATER			0.00	10.00
W46SSA	MW-46	11/19/1999	GROUNDWATER			0.00	10.00
W47SSA	MW-47	11/17/1999	GROUNDWATER			0.00	10.00
W47SSD	MW-47	11/17/1999	GROUNDWATER			0.00	10.00
W48M3A	MW-48	11/19/1999	GROUNDWATER			29.73	39.73
W49M3A	MW-49	11/19/1999	GROUNDWATER			29.48	39.48
W49SSA	MW-49	11/19/1999	GROUNDWATER			-2.52	7.48
W52SSA	MW-52	11/18/1999	GROUNDWATER			0.00	10.00
W59M1A	MW-59	11/16/1999	GROUNDWATER			35.00	45.00
W59M1D	MW-59	11/16/1999	GROUNDWATER			35.00	45.00
W59M2A	MW-59	11/18/1999	GROUNDWATER			20.00	30.00
W72SSA	MW-72	11/16/1999	GROUNDWATER			0.00	10.00
DW1116	GAC WATER	11/16/1999	IDW	0.00	0.00		
G75MAA	MW-75	11/18/1999	PROFILE	100.00	100.00	17.00	17.00
G75MBA	MW-75	11/18/1999	PROFILE	110.00	110.00	27.00	27.00
G75MBD	MW-75	11/18/1999	PROFILE	110.00	110.00	27.00	27.00
G75MCA	MW-75	11/18/1999	PROFILE	120.00	120.00	37.00	37.00
G75MDA	MW-75	11/18/1999	PROFILE	130.00	130.00	47.00	47.00
G75MEA	MW-75	11/18/1999	PROFILE	140.00	140.00	57.00	57.00
G75MFA	MW-75	11/18/1999	PROFILE	150.00	150.00	67.00	67.00
G75MGA	MW-75	11/18/1999	PROFILE	160.00	160.00	77.00	77.00
G75MHA	MW-75	11/18/1999	PROFILE	170.00	170.00	87.00	87.00
G75MIA	MW-75	11/18/1999	PROFILE	180.00	180.00	97.00	97.00
G75MID	MW-75	11/18/1999	PROFILE	180.00	180.00	97.00	97.00

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
Other Sample Types methods are variable
SBD = Sample Begin Depth, measured in feet bgs
SED = Sample End Depth, measured in feet bgs
BWTS = Depth below water table, start depth, measured in feet
BWTE = Depth below water table, end depth, measured in feet

TABLE 2
SAMPLING PROGRESS
11/15-11/19

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G75MJA	MW-75	11/18/1999	PROFILE	190.00	190.00	107.00	107.00
G75MKA	MW-75	11/19/1999	PROFILE	200.00	200.00	117.00	117.00
HC59A1AAA	59A	11/17/1999	SOIL GRID	0.00	0.50		
HC59A1AAD	59A	11/17/1999	SOIL GRID	0.00	0.50		
HC59A1BAA	59A	11/17/1999	SOIL GRID	1.50	2.00		
HC59B1AAA	59B	11/17/1999	SOIL GRID	0.00	0.50		
HC59B1BAA	59B	11/17/1999	SOIL GRID	1.50	2.00		
HC59C1AAA	59C	11/18/1999	SOIL GRID	0.00	0.50		
HC59C1BAA	59C	11/18/1999	SOIL GRID	1.50	2.00		
HC59D1AAA	59D	11/18/1999	SOIL GRID	0.00	0.50		
HC59D1BAA	59D	11/18/1999	SOIL GRID	1.50	2.00		
HC59D1BAD	59D	11/18/1999	SOIL GRID	1.50	2.00		
HC59E1AAA	59E	11/17/1999	SOIL GRID	0.00	0.50		
HC59E1BAA	59E	11/17/1999	SOIL GRID	1.50	2.00		
HC59F1AAA	59F	11/17/1999	SOIL GRID	0.00	0.50		
HC59F1BAA	59F	11/17/1999	SOIL GRID	1.50	2.00		
HC59G1AAA	59G	11/18/1999	SOIL GRID	0.00	0.50		
HC59G1BAA	59G	11/18/1999	SOIL GRID	1.50	2.00		
HC60A1AAA	60A	11/18/1999	SOIL GRID	0.00	0.50		
HC60A1BAA	60A	11/18/1999	SOIL GRID	1.50	2.00		
HC60B1AAA	60B	11/18/1999	SOIL GRID	0.00	0.50		
HC60B1BAA	60B	11/18/1999	SOIL GRID	1.50	2.00		
HC60C1AAA	60C	11/18/1999	SOIL GRID	0.00	0.50		
HC60C1BAA	60C	11/18/1999	SOIL GRID	1.50	2.00		

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
Other Sample Types methods are variable
SBD = Sample Begin Depth, measured in feet bgs
SED = Sample End Depth, measured in feet bgs
BWTS = Depth below water table, start depth, measured in feet
BWTE = Depth below water table, end depth, measured in feet

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 11/1/99-11/19/99

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
27MW0017B	27MW0017B	11/5/1999	GROUNDWATER			21.00	26.00	8330N	PICRIC ACID	NO
W38M3A	MW-38	11/10/1999	GROUNDWATER			53.00	63.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W39M2A	MW-39	11/10/1999	GROUNDWATER			42.00	52.00	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W53DDA	MW-53	11/5/1999	GROUNDWATER			157.00	167.00	8330N	PENTAERYTHRITOL TETRANITR	NO
W54DDA	MW-54	11/5/1999	GROUNDWATER			126.00	136.00	8330N	1,3,5-TRINITROBENZENE	NO
G75MAA	MW-75	11/18/1999	PROFILE	100.00	100.00	17.00	17.00	8330N	3-NITROTOLUENE	NO
G75MAA	MW-75	11/18/1999	PROFILE	100.00	100.00	17.00	17.00	8330N	NITROGLYCERIN	NO
G75MAA	MW-75	11/18/1999	PROFILE	100.00	100.00	17.00	17.00	8330N	PICRIC ACID	NO
G75MBA	MW-75	11/18/1999	PROFILE	110.00	110.00	27.00	27.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G75MCA	MW-75	11/18/1999	PROFILE	120.00	120.00	37.00	37.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G75MDA	MW-75	11/18/1999	PROFILE	130.00	130.00	47.00	47.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G75MJA	MW-75	11/18/1999	PROFILE	190.00	190.00	107.00	107.00	8330N	3-NITROTOLUENE	NO
G77MDD	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G77MDD	MW-77	11/9/1999	PROFILE	120.00	120.00	35.50	35.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
DEMO2PE1	DEMO2PE1	11/5/1999	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
DEMO2PE1	DEMO2PE1	11/5/1999	SOIL GRID	0.00	0.25			8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
DEMO2PE2	DEMO2PE2	11/5/1999	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
DEMO2PE3	DEMO2PE3	11/5/1999	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.
SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BGS
SED = SAMPLE COLLECTION END DEPTH IN FEET BGS
BWTS = DEPTH BELOW WATER TABLE, START DEPTH, MEASURED IN FEET
BWTE = DEPTH BELOW WATER TABLE, END DEPTH, MEASURED IN FEET
PDA/YES = Photo Diode Array, Detect Confirmed
PDA/NO = Photo Diode Array, Detect Not Confirmed