WEEKLY PROGRESS UPDATE
FOR MARCH 6 – MARCH 10, 2000

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 March 6 to March 10, 2000.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of March 10 is summarized in Table 1.

Table 1. Drilling progress as of March 10, 2000

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-88	Impact Area Response Well (P-15)	245	102	
MW-89	Impact Area Response Well (P-14)	245	101	

bgs = below ground surface
bwt = below water table

Drilling was completed at MW-88 (Impact Area response well P-15) and on MW-89 (Impact Area response well P-14). UXO clearance continued at the Impact Area response well pads and the access road to the mortar target well at Target 9. Well development continued on the newly installed Impact Area response wells. UXO was identified on the access road to the new well location at Mortar Target 9 and at Demo Area 1.

Samples collected during the reporting period are summarized in Table 2. Groundwater sample collection continued for the second round of sampling Group 2 new far field wells (MW-56, MW-57, and MW-84). Groundwater profile samples were collected from MW-88 and MW-89. Two additional profile samples were collected from the Power Punch demonstration at MW-77. The 0" to 6" and the 18" to 24" soil samples were collected at future Impact Area response well locations (P-1, 2, 3, 4, 5, 6, 10, 11,and 13) and at MW-87. Surface and deep soil samples were collected during drilling at the borings for MW-88 and –89. The soil sample (95B) was collected from inside the bunker at BK-1 (CS-19 Area) that was inadvertently omitted during the trench sampling. Post detonation soil samples were collected from the craters of the UXO detonated on 3/3/00 in Demo 1. Soil sampling was completed for the Mortar Target overhang locations.

EPA convened a meeting of the Impact Area Review Team on March 8. Topics for the meeting included an IAGS Update, the Rapid Response Action Plan, the Public Participation Plan, JPO's Water Supply Program Modeling, and a Detonation Chamber Update. The next meeting was scheduled for April 5.

The Guard, EPA, and MADEP had a meeting on March 9 to discuss technical issues, including the following:

- An update of the CS-19 investigation was presented by Jacobs Engineering. Jacobs indicated that the drilling is behind schedule and the report may be delayed by one week. A third rig has been added to the program to shorten the turn around time. The water level contour map is currently being worked on. Groundwater sampling has been completed on IRP wells and has been started on Guard wells. Surface and subsurface soil sampling have been completed. Surface soil results have detections of

volatile organic compounds, and they are looking into possible causes. EPA requested an estimate of when they will have an answer. Jacobs indicated they should have an answer by early next week. In a related issue, Ogden distributed a 2-page proposal on procedures to investigate the recent acetone detections in the IAGS soil samples, which appear to be related to the new preservation procedures. Comments on this proposal are requested by next week's technical meeting.

- The water supply investigation was updated by JPO. JPO indicated that the wells have been installed at all 5 sites. They continue to develop sites 5, 4, and 3 and should finish this week. They indicated that they should start receiving results of groundwater samples over the next month. Pump tests are scheduled for mid-May to mid-June.

- The munitions survey investigation was updated by Tetra Tech. The geophysics has been completed at the gun and mortar positions and they are completing the post-processing. This does not include the gun and mortar pathways. Demo 1 brush clearing is on hold due to the location of UXO, but this survey is still on schedule. A site walk of the J-2 Range with EPA and Tetra Tech was completed today. The Guard will coordinate Tetra Tech's and Ogden's investigations and provide a proposal to the agencies on how to proceed with the munitions survey. Tetra Tech is completing the draft HUTA Workplan. UXO crews will walk the HUTA to determine the level of work in this area. The Guard provided an update of the UXO located. Two 3.5" rockets were located in Demo 1 and a 4.2" mortar was located on the access road to Target 9. The Guard indicated that a notification of a blow in place was coming out soon.

- Ogden provided an update on the RRA status. Input was requested from the agencies on the draft workplan and cleanup standards, to allow the pre-removal site characterization to proceed. EPA indicated that the cleanup standards must be based on leaching to groundwater, and that the GW1/S1 standards cited for some compounds aren't always based on leaching. EPA requested that the "Method 2" calculation based on leaching be completed for cleanup standards for those compounds where the GW1/S1 standards are not based on leaching. DEP suggested that the Guard discuss these standards with Paul Locke (DEP). DEP asked when the comments from the agencies were due. Ogden indicated that they are requested by March 29th. EPA also requested that cleanup standards are calculated for all metals, including those in soil removed from the steel-lined pit. The clearance samples from around the pit will be compared to the cleanup standards. EPA also requested a clearer explanation of the cleanup standard process as it relates to aluminum and magnesium.

  EPA indicated that the dieldrin "exemption" has not been used at MMR, and the Guard should calculate a Method 2 cleanup standard. DEP suggested that the use of dieldrin for mosquito control at wetlands could result in levels above a Method 2 standard. Both agencies suggested that remedies based on dieldrin exceedances would have to be considered on a case-by-case basis considering ecological and other impacts.

  The Guard asked if EPA wanted to be the clearinghouse for comments from the public. EPA indicated that comments should go to JPO. It was agreed to discuss sample locations and depths at next week's tech meeting. DEP indicated that before the remediation starts that approval is required by the DEP. The Guard indicated that the plan would be submitted to the DEP as a RAM Plan. The DEP asked why there was so much time between the draft and final plans. The Guard indicated that it allowed for two comment periods. The DEP asked why the duration of the treatability study was so long. The Guard indicated that the treatability study would be going on concurrently with the delineation. TRC stated that the plan does not include an explanation of how the excavation will be completed. Ogden responded that the excavation would occur in 1-foot lifts and that post excavation samples would be collected. If the post excavation sample had concentrations above the cleanup standards, then another 1-foot lift would be removed. TRC indicated that composite sampling should not be used in the delineation, or the cleanup standards should be adjusted based on the compositing.

It was agreed to check EPA and DEP guidance regarding compositing. TRC indicated that a list of proposed disposal facilities is needed in accordance with the SOW. TRC expressed concern for spreading the contamination during the transportation from the trucking of the soil and that there was no provision to monitor dust at the fence line. Questions were raised about permitting, and DEP indicated the RAM would not require state permits. TRC asked if the wetland work would be done under the local conservation commission and Army Corps. The Guard indicated that it does not fall under the Army Corps permitting because it is not a stream and that the Guard will work with the local conservation commission. TRC indicated that they would like to see the conservation commission in the schedule.

- Ogden presented an update of the Groundwater Study. Both rigs have completed drilling on MW-88 and MW-89 and will need to have a conference call tomorrow to select screens. Continue to sample groundwater from the second round of Group 2 new far field wells. Mortar Target overhang samples have been collected. A 1-page handout of the particle tracks from Targets 5, 6, 9, and 10 was distributed. It was agreed to install a well 100' to 200' down gradient from Target 9 and along Pocasset/Sandwich Road downgradient of Target 5. EPA indicated that unvalidated detects of PCBs in two wells appear to have been validated nondetect, and requested an explanation.

- A 3-page (double-sided) hand out of the combined schedule was distributed, this time including FS activities for Demo 1. EPA provided a letter approving last week's version of the combined schedule. EPA indicated that they would review and comment regarding the FS timeline. EPA asked that the Guard develop a version of the combined schedule showing full details as the original separate schedules had shown. DEP asked on the status of the 104e request to Textron. The Guard indicated that they have received information from Textron and have a copy for EPA.

- A 1-page handout of the document status was distributed for review.

- The Guard requested a discussion to resolve comments on the Training Areas Workplan. The agencies indicated that they had a meeting at 2 p.m. and there would not be time for this discussion today.

- EPA indicated that Ogden needs to check whether the correct Reportable Concentrations were used in the table of dioxin results for Demo 1.

- EPA asked why CHPPM was not doing the "CHPPM Method" analysis. Ogden indicated that a number of commercial laboratories had been contacted, and qualification/MDL information for the selected lab would be sent in the next day for agency approval.

- The Guard indicated that they are preparing an IRA plan for Demo 1 with the same format as Demo 2 but with more detail to meet DEP requirements. This plan is expected by next week.

- EPA indicated that the modeling memo was OK to finalize. EPA indicated that they would like to discuss Demo 1 graphics and the J-2 scrap drums at next week's Technical meeting.

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 profile samples from MW-88 had detections of 1,3,5-trinitrobenzene (4 intervals), 2-amino-4,6-dinitrotoluene (1 interval), 3-nitrotlouene (3 intervals), 4-nitrotoluene (2 intervals), nitroglycerin (11 intervals), RDX (3 intervals), HMX (2 intervals), and picric acid (1 interval). The RDX and HMX were verified by PDA spectra.

- The groundwater profile samples from MW-89 (P-14) had detections of 1,3,5-trinitrobenzene (3 intervals), nitroglycerin (8 intervals), RDX (7 intervals), and HMX (3 intervals). The RDX and HMX were verified by PDA spectra.

3. DELIVERABLES SUBMITTED

The following deliverables were submitted during this reporting period:

Weekly Update for February 14 – 18	3/5/00
Weekly Update for February 21 – 25	3/5/00
Final IAGS Technical Team Memorandum 99-2, Deep Soil Sampling of Demo 1	3/6/00
Final Evaluation of Remediation Technologies for Demolition Area 1	3/7/00
Monthly Progress Report (February)	3/10/00

4. SCHEDULED ACTIONS

Scheduled actions for the week of March 13 include the completion of the well installation of Impact Area response wells at location P-14 (MW-89) and P-15 (MW-88) and the commencement of the drilling of Impact Area response wells at locations P-1, P-3, and P-8. . The UXO located on the access road to Mortar Target 9 is scheduled for detonation next week and soil samples will be collected from the detonation craters.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

Additional UXO were located in Demo 1, which postponed the brush clearing. The UXO located in Demo 1 is scheduled for detonation next week and soil samples will be collected from the craters. Crews will continue the Munitions Survey work in Demo 1.

TABLE 2
SAMPLING PROGRESS
3/6/00-3/10/00

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G88DGE	FIELDQC	03/08/2000	FIELDQC	0.00	0.00		
G89DGE	FIELDQC	03/07/2000	FIELDQC	0.00	0.00		
HCOHT1AAE	FIELDQC	03/08/2000	FIELDQC	0.00	0.00		
HDDEMO137MM-I	FIELDQC	03/06/2000	FIELDQC	0.00	0.00		
P01-ER	FIELDQC	03/10/2000	FIELDQC	0.00	0.00		
P01-TB	FIELDQC	03/10/2000	FIELDQC	0.00	0.00		
P11-ER	FIELDQC	03/09/2000	FIELDQC	0.00	0.00		
S89DJE	FIELDQC	03/06/2000	FIELDQC	0.00	0.00		
W57M1T	FIELDQC	03/07/2000	FIELDQC	0.00	0.00		
W57M3T	FIELDQC	03/09/2000	FIELDQC	0.00	0.00		
W84M1T	FIELDQC	03/06/2000	FIELDQC	0.00	0.00		
W56M1A	MW-56	03/06/2000	GROUNDWATER	156.00	166.00	76.98	86.98
W57DDA	MW-57	03/07/2000	GROUNDWATER	213.00	223.00	124.48	134.48
W57M1A	MW-57	03/07/2000	GROUNDWATER	188.00	198.00	99.53	109.53
W57M3A	MW-57	03/09/2000	GROUNDWATER	117.00	127.00	28.40	38.40
W84M1A	MW-84	03/06/2000	GROUNDWATER	140.00	150.00	100.03	110.03
W84M1D	MW-84	03/06/2000	GROUNDWATER	140.00	150.00	100.03	110.03
DW8608	GAC WATER	03/08/2000	IDW				
G88DAA	MW-88	03/06/2000	PROFILE	150.00	150.00	7.20	7.20
G88DBA	MW-88	03/07/2000	PROFILE	150.00	150.00	7.20	7.20
G88DCA	MW-88	03/07/2000	PROFILE	160.00	160.00	17.20	17.20
G88DDA	MW-88	03/07/2000	PROFILE	170.00	170.00	27.20	27.20
G88DDD	MW-88	03/07/2000	PROFILE	170.00	170.00	27.20	27.20
G88DEA	MW-88	03/07/2000	PROFILE	180.00	180.00	37.20	37.20
G88DFA	MW-88	03/07/2000	PROFILE	190.00	190.00	47.20	47.20
G88DGA	MW-88	03/08/2000	PROFILE	200.00	200.00	57.20	57.20
G88DHA	MW-88	03/08/2000	PROFILE	210.00	210.00	67.20	67.20
G88DHD	MW-88	03/08/2000	PROFILE	210.00	210.00	67.20	67.20
G88DIA	MW-88	03/08/2000	PROFILE	220.00	220.00	77.20	77.20
G88DJA	MW-88	03/08/2000	PROFILE	230.00	230.00	87.20	87.20
G88DKA	MW-88	03/08/2000	PROFILE	240.00	240.00	97.20	97.20
G88DLA	MW-88	03/08/2000	PROFILE	245.00	245.00	102.20	102.20
G89DAA	MW-89	03/06/2000	PROFILE	145.00	145.00	0.65	0.65
G89DBA	MW-89	03/07/2000	PROFILE	150.00	150.00	5.65	5.65
G89DCA	MW-89	03/07/2000	PROFILE	160.00	160.00	15.65	15.65
G89DDA	MW-89	03/07/2000	PROFILE	170.00	170.00	25.65	25.65
G89DEA	MW-89	03/07/2000	PROFILE	180.00	180.00	35.65	35.65
G89DFA	MW-89	03/07/2000	PROFILE	190.00	190.00	45.65	45.65
G89DFD	MW-89	03/07/2000	PROFILE	190.00	190.00	45.65	45.65
G89DGA	MW-89	03/07/2000	PROFILE	200.00	200.00	55.65	55.65
G89DHA	MW-89	03/07/2000	PROFILE	210.00	210.00	65.65	65.65
G89DIA	MW-89	03/07/2000	PROFILE	220.00	220.00	75.65	75.65
G89DID	MW-89	03/07/2000	PROFILE	220.00	220.00	75.65	75.65
G89DJA	MW-89	03/07/2000	PROFILE	230.00	230.00	85.65	85.65

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
3/6/00-3/10/00

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G89DKA	MW-89	03/08/2000	PROFILE	240.00	240.00	95.65	95.65
G89DLA	MW-89	03/08/2000	PROFILE	245.00	245.00	100.65	100.65
PP77MCA	PP77M	03/07/2000	PROFILE	120.00	125.00	35.00	40.00
PP77MDA	PP77M	03/07/2000	PROFILE	130.00	135.00	45.00	50.00
P01-A	01-A	03/10/2000	SOIL BORING	0.00	0.50		
P01-B	01-B	03/10/2000	SOIL BORING	1.50	2.00		
P02-A	02-A	03/10/2000	SOIL BORING	0.00	0.50		
P02-B	02-B	03/10/2000	SOIL BORING	1.50	2.00		
P03-A	03-A	03/10/2000	SOIL BORING	0.00	0.50		
P03-B	03-B	03/10/2000	SOIL BORING	1.50	2.00		
P04-A	04-A	03/10/2000	SOIL BORING	0.00	0.50		
P04-B	04-B	03/10/2000	SOIL BORING	1.50	2.00		
P05-A	05-A	03/10/2000	SOIL BORING	0.00	0.50		
P05-B	05-B	03/10/2000	SOIL BORING	1.50	2.00		
P06-A	06-A	03/10/2000	SOIL BORING	0.00	0.50		
P06-B	06-B	03/10/2000	SOIL BORING	1.50	2.00		
P10-A	10-A	03/09/2000	SOIL BORING	0.00	0.50		
P10-B	10-B	03/09/2000	SOIL BORING	1.50	2.00		
P11-A	11-A	03/09/2000	SOIL BORING	0.00	0.50		
P11-B	11-B	03/09/2000	SOIL BORING	1.50	2.00		
P13-A	13-A	03/10/2000	SOIL BORING	0.00	0.50		
P13-B	13-B	03/10/2000	SOIL BORING	1.50	2.00		
S87AAA	MW-87	03/10/2000	SOIL BORING	0.00	0.50		
S87BAA	MW-87	03/10/2000	SOIL BORING	1.50	2.00		
S88DAA	MW-88	03/10/2000	SOIL BORING	0.00	0.50		
S88DBA	MW-88	03/10/2000	SOIL BORING	1.50	2.00		
S88DLA	MW-88	03/06/2000	SOIL BORING	100.00	102.00		
S88DMA	MW-88	03/06/2000	SOIL BORING	110.00	112.00		
S88DMD	MW-88	03/06/2000	SOIL BORING	110.00	112.00		
S88DNA	MW-88	03/06/2000	SOIL BORING	120.00	122.00		
S88DOA	MW-88	03/06/2000	SOIL BORING	130.00	132.00		
S88DPA	MW-88	03/06/2000	SOIL BORING	140.00	142.00		
S89DAA	MW-89	03/10/2000	SOIL BORING	0.00	0.50		
S89DBA	MW-89	03/10/2000	SOIL BORING	1.50	2.00		
S89DJA	MW-89	03/06/2000	SOIL BORING	80.00	84.00		
S89DKA	MW-89	03/06/2000	SOIL BORING	90.00	92.00		
S89DLA	MW-89	03/06/2000	SOIL BORING	100.00	102.00		
S89DLD	MW-89	03/06/2000	SOIL BORING	100.00	102.00		
S89DMA	MW-89	03/06/2000	SOIL BORING	110.00	112.00		
S89DNA	MW-89	03/06/2000	SOIL BORING	120.00	122.00		
S89DOA	MW-89	03/06/2000	SOIL BORING	130.00	132.00		
S89DPA	MW-89	03/06/2000	SOIL BORING	140.00	142.00		
HC95B1AAA	95B	03/08/2000	SOIL GRID	0.00	0.25		
HCDEMO13.5IN	HCDEMO13.5IN	03/06/2000	SOIL GRID	0.00	0.25		

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
3/6/00-3/10/00

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HCDEMO137MM	HCDEMO137MM	03/06/2000	SOIL GRID	0.00	0.25		
HCOHT1AAA	HCOHT1AAA	03/08/2000	SOIL GRID	0.00	0.25		
HCOHT4AAA	HCOHT4AAA	03/08/2000	SOIL GRID	0.00	0.25		
HCOHT7AAA	HCOHT7AAA	03/08/2000	SOIL GRID	0.00	0.25		
HCOHT8AAA	HCOHT8AAA	03/08/2000	SOIL GRID	0.00	0.25		
HCOHT8AAD	HCOHT8AAD	03/08/2000	SOIL GRID	0.00	0.25		
HDDEMO13.5IN	HDDEMO13.5IN	03/06/2000	SOIL GRID	0.00	0.25		
HDDEMO137MM	HDDEMO137MM	03/06/2000	SOIL GRID	0.00	0.25		

Profiling methods include: Volatiles and Explosives
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SBD = Sample Begin Depth, measured in feet bgs
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TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 3/6/00-3/10/00

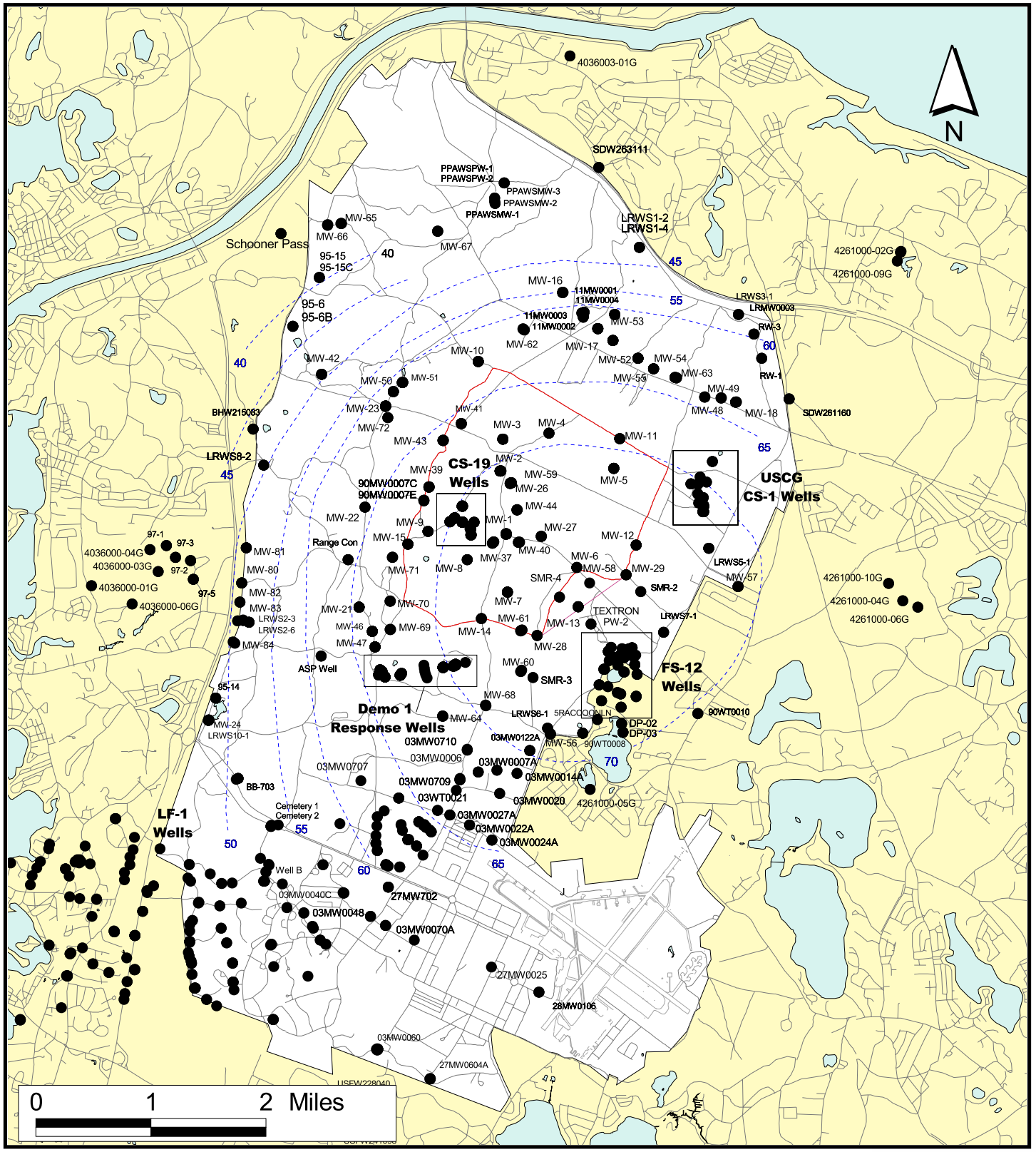
OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G88DAA	MW-88	03/06/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	1,3,5-TRINITROBENZENE	NO
G88DAA	MW-88	03/06/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G88DAA	MW-88	03/06/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	3-NITROTOLUENE	NO
G88DAA	MW-88	03/06/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	4-NITROTOLUENE	NO
G88DAA	MW-88	03/06/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	NITROGLYCERIN	NO
G88DBA	MW-88	03/07/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	1,3,5-TRINITROBENZENE	NO
G88DBA	MW-88	03/07/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	3-NITROTOLUENE	NO
G88DBA	MW-88	03/07/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	4-NITROTOLUENE	NO
G88DBA	MW-88	03/07/2000	PROFILE	150.00	150.00	7.20	7.20	8330N	NITROGLYCERIN	NO
G88DCA	MW-88	03/07/2000	PROFILE	160.00	160.00	17.20	17.20	8330N	1,3,5-TRINITROBENZENE	NO
G88DCA	MW-88	03/07/2000	PROFILE	160.00	160.00	17.20	17.20	8330N	3-NITROTOLUENE	NO
G88DCA	MW-88	03/07/2000	PROFILE	160.00	160.00	17.20	17.20	8330N	NITROGLYCERIN	NO
G88DDA	MW-88	03/07/2000	PROFILE	170.00	170.00	27.20	27.20	8330N	1,3,5-TRINITROBENZENE	NO
G88DDA	MW-88	03/07/2000	PROFILE	170.00	170.00	27.20	27.20	8330N	NITROGLYCERIN	NO
G88DEA	MW-88	03/07/2000	PROFILE	180.00	180.00	37.20	37.20	8330N	NITROGLYCERIN	NO
G88DFA	MW-88	03/07/2000	PROFILE	190.00	190.00	47.20	47.20	8330N	NITROGLYCERIN	NO
G88DGA	MW-88	03/08/2000	PROFILE	200.00	200.00	57.20	57.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G88DGA	MW-88	03/08/2000	PROFILE	200.00	200.00	57.20	57.20	8330N	NITROGLYCERIN	NO
G88DHA	MW-88	03/08/2000	PROFILE	210.00	210.00	67.20	67.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G88DHA	MW-88	03/08/2000	PROFILE	210.00	210.00	67.20	67.20	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G88DHA	MW-88	03/08/2000	PROFILE	210.00	210.00	67.20	67.20	8330N	PICRIC ACID	NO
G88DIA	MW-88	03/08/2000	PROFILE	220.00	220.00	77.20	77.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G88DIA	MW-88	03/08/2000	PROFILE	220.00	220.00	77.20	77.20	8330N	NITROGLYCERIN	NO
G88DIA	MW-88	03/08/2000	PROFILE	220.00	220.00	77.20	77.20	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G88DJA	MW-88	03/08/2000	PROFILE	230.00	230.00	87.20	87.20	8330N	NITROGLYCERIN	NO
G88DKA	MW-88	03/08/2000	PROFILE	240.00	240.00	97.20	97.20	8330N	NITROGLYCERIN	NO
G88DLA	MW-88	03/08/2000	PROFILE	245.00	245.00	102.20	102.20	8330N	NITROGLYCERIN	NO
G89DAA	MW-89	03/06/2000	PROFILE	145.00	145.00	0.65	0.65	8330N	1,3,5-TRINITROBENZENE	NO
G89DAA	MW-89	03/06/2000	PROFILE	145.00	145.00	0.65	0.65	8330N	NITROGLYCERIN	NO
G89DBA	MW-89	03/07/2000	PROFILE	150.00	150.00	5.65	5.65	8330N	1,3,5-TRINITROBENZENE	NO
G89DBA	MW-89	03/07/2000	PROFILE	150.00	150.00	5.65	5.65	8330N	NITROGLYCERIN	NO
G89DCA	MW-89	03/07/2000	PROFILE	160.00	160.00	15.65	15.65	8330N	NITROGLYCERIN	NO
G89DDA	MW-89	03/07/2000	PROFILE	170.00	170.00	25.65	25.65	8330N	NITROGLYCERIN	NO

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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 3/6/00-3/10/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G89DEA	MW-89	03/07/2000	PROFILE	180.00	180.00	35.65	35.65	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G89DEA	MW-89	03/07/2000	PROFILE	180.00	180.00	35.65	35.65	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G89DFA	MW-89	03/07/2000	PROFILE	190.00	190.00	45.65	45.65	8330N	1,3,5-TRINITROBENZENE	NO
G89DFA	MW-89	03/07/2000	PROFILE	190.00	190.00	45.65	45.65	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G89DFA	MW-89	03/07/2000	PROFILE	190.00	190.00	45.65	45.65	8330N	NITROGLYCERIN	NO
G89DGA	MW-89	03/07/2000	PROFILE	200.00	200.00	55.65	55.65	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G89DHA	MW-89	03/07/2000	PROFILE	210.00	210.00	65.65	65.65	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G89DHA	MW-89	03/07/2000	PROFILE	210.00	210.00	65.65	65.65	8330N	NITROGLYCERIN	NO
G89DIA	MW-89	03/07/2000	PROFILE	220.00	220.00	75.65	75.65	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G89DIA	MW-89	03/07/2000	PROFILE	220.00	220.00	75.65	75.65	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G89DJA	MW-89	03/07/2000	PROFILE	230.00	230.00	85.65	85.65	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G89DJA	MW-89	03/07/2000	PROFILE	230.00	230.00	85.65	85.65	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G89DKA	MW-89	03/08/2000	PROFILE	240.00	240.00	95.65	95.65	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G89DKA	MW-89	03/08/2000	PROFILE	240.00	240.00	95.65	95.65	8330N	NITROGLYCERIN	NO
G89DLA	MW-89	03/08/2000	PROFILE	245.00	245.00	100.65	100.65	8330N	NITROGLYCERIN	NO

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



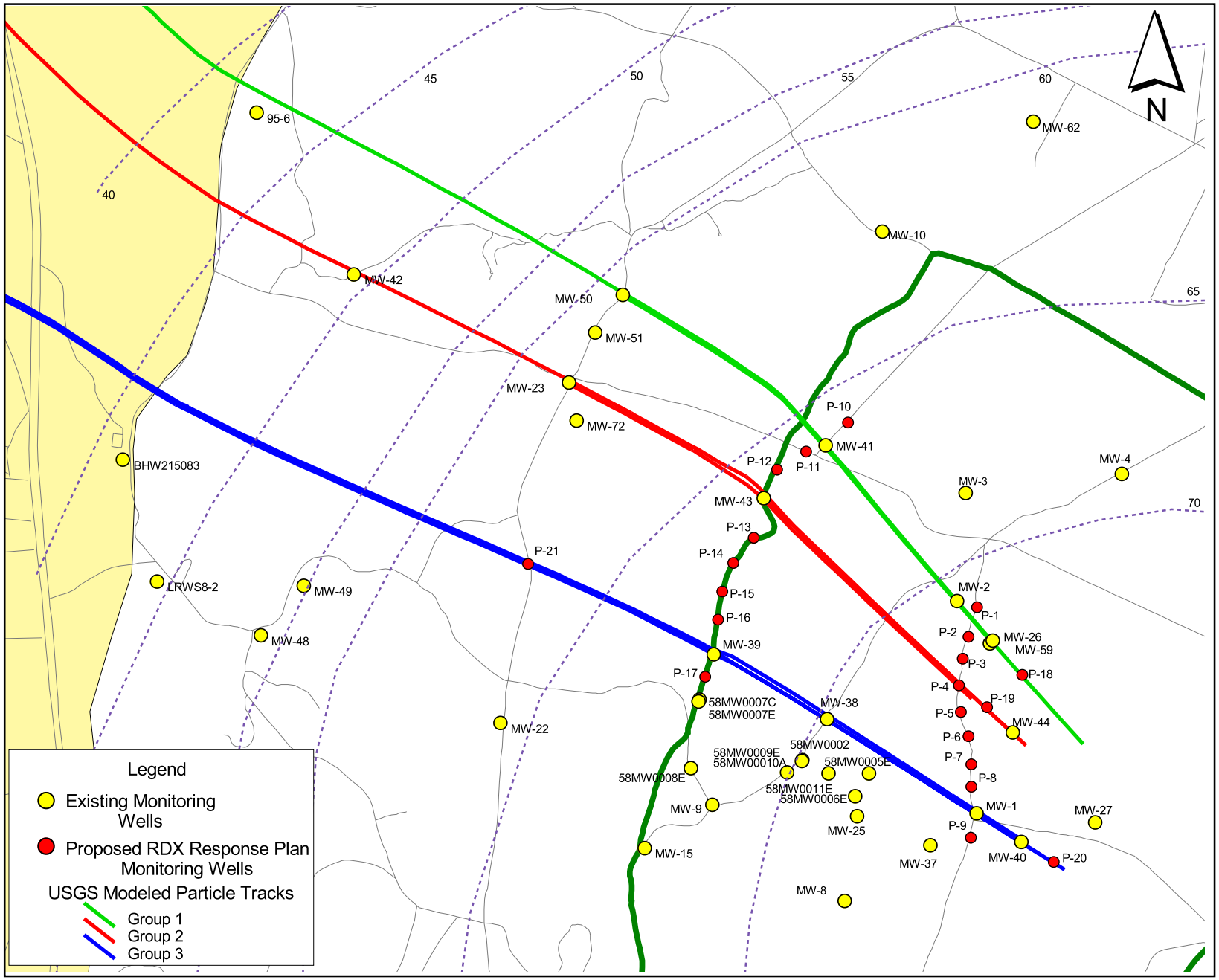
Sources & Notes

Map Coordinates: Stateplane,
NAD83, Zone 4151, Meters
Source: MASSGIS

Location of Existing and Proposed Groundwater Monitoring Wells As Of 12/16/99

L:\MMR\GIS\december99\weekly_figs\dec1699_wells
G:\MMR\well_updates.apr December 20, 1999

December 16, 1999 DRAFT



Proposed RDX Response Plan Wells In The Impact Area

Figure 6