WEEKLY PROGRESS UPDATE
FOR AUGUST 7 – AUGUST 11, 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 August 7 to August 11, 2000.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of August 11 is summarized in Table 1.

Table 1. Drilling progress as of August 11, 2000

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-112	Impact Area Response Well (P-24)	240	90	165-175 195-205
MW-113	Impact Area Response Well (P-25)	250	107	190-200 240-250
MW-114	Demo 1 Response Well	100	18	

bgs = below ground surface
bwt = below water table

Completed well installation on MW-112 (P-24) and MW-113 (P-25). Commenced drilling on MW-114 (Demo 1 Response well). UXO clearance of the J-2 Range drill pads and access roads continued and commenced UXO avoidance flagging of the J-2 Range soil grids. Development of newly installed wells continued.

Samples collected during the reporting period are summarized in Table 2. Groundwater samples were collected from the August Long Term Monitoring wells and on and off Post water supply wells. Groundwater profile samples were collected during the drilling of MW-113 and MW-114. Deep soil samples were collected during the drilling of MW-114. Soil samples were collected from grids in the J-3 Range (Area 101) in accordance with the draft workplan and subsequent comments and responses.

The Guard, EPA, and MADEP had a meeting on August 10 to discuss technical issues, including the following:

- Jacobs presented an update of the CS-19 Investigation. Had a meeting this morning on remediation technologies and objectives. The RCL is expected to be completed early next week. The Feasibility Study continues. A revised schedule will be prepared and distributed. Ogden indicated that CS-19 data would be included in the next monthly progress report.

- The Guard indicated that JPO is still receiving comments on the Water Supply EA. EPA asked Guard/JPO to check on the issue of the extension to the comment period.

- Tetra Tech provided an update on the Munitions Survey. A 1-page handout of the update summary was distributed. A map of the aerial mag survey showing targets was distributed. Ogden noted that they would provide an updated shape file for the targets, as it appears that not all known targets are on

the map. There was a MOR meeting on 8/9/00. The final Work Plan is due on August 31. Brush clearing and grubbing commenced in the HUTA. UXO incident reporting continues and should be completed by August 11. Sampling to start next week prior to UXO detonation. Need to move one of the targets next week. Ogden indicated that they need to coordinate to ensure that the grids around that target have been sampled prior to its removal. EPA asked if Range Control keeps a list of when targets are put in place. Ogden indicated that there is no complete list of target installation dates. EPA requested that Tetra Tech provide a handout to locate referenced activities at the HUTA.

- Ogden provided an update of the Rapid Response Action. A 1-page handout of the update summary was distributed. The DEP RAM Plan was submitted 8/3/00. Final Work Plan was submitted on 8/7/00 and are awaiting EPA approval. The Sandwich Conservation Commission "Order of Conditions" for the J-3 Wetland permit was received on 8/8/00. Data validation is underway for the delineation sampling. Working on a delineation report which indicated that 29 grids require removal to a maximum depth of 3 feet, for a total of 750 cubic yards of soil requiring treatment. Draft Report of soil washing is in internal review, with a conference call scheduled for 8/11/00 to discuss the report. Preliminary results for interim treatment samples indicate a high likelihood of success. Containment pad design is complete and awaiting subcontractor cost estimates. DEP reminded the Guard that the deadlines for Phase I Tier Classifications are coming up soon and asked who is the point of contact. Ogden indicated that Ben Gregson is the contact for MCP questions and Scott Veenstra is the contact for technical questions.

- Ogden provided an update of the Groundwater Investigation. A 1-page handout of the update summary and a map of the Central Impact Area were distributed. MW-112 and MW-113 will be completed this week. The Demo 1 response well drilling will commence this week and shallow wells in J-2 will commence next week. EPA asked how many wells were going to be shallow. Ogden indicated that 6 would be shallow (J2P1, J2P2, J2P3, J2P5, J2P6, J2P8). P-23 drilling will commence next week but will need to coordinate with Tetra Tech due to its location near the HUTA. Groundwater sampling continues for the August Long Term Monitoring round and groundwater was collected from the on and off base water supply wells. UXO clearance of the J-2 Range will be completed this week. Avoidance flagging in the J-1/J-3 Range should start this week. Soil sampling of the J-2 Range grids started this week. No air samples were collected at the SAR firing due to insufficient number of rounds to be fired. EPA asked for an update on the J-2 Range wipe samples. Ogden will look into the status of the wipe samples. Ogden is currently working on a schedule for the field investigation in the J1/J3/L Ranges and will distribute it when completed.

- A handout of the Document Status was distributed for review. The MOR for the J1/J3/L Ranges Work Plan should be out tomorrow but still have some unresolved questions on the radiological analysis. The RCL for the Supplemental Response Plan for the Central Impact Area is due out Monday 8/14; hope to have the resolution meeting Thursday 8/17. The Feasibility Study RCL is being postponed due to significant issues but the date of the final FS Workplan (9/25) proposed in the revised schedule of 7/27/00 is being maintained for now. The Guard needs to propose an alternative date of the Central Impact Area Tech Memo if it will include results of investigations beyond P-21. EPA has suggested combining this document with the screening report.

- A summary prepared by Ogden of the 102 FW response to the 104e Information Request was distributed. Records are only kept for two years. The 102 FW was more active in the J Ranges in the mid 80's. Not active in the 90's except for emergencies and UXO identification. The response information does not suggest that changes to the J Range Workplans are needed at this time.

- The format of the Gun and Mortar Tech Memo was discussed. The agencies indicated that alternative data presentations were not needed at this time. It was agreed that a primary issue for the tech memos

is the method of identifying contaminants for the FS. The Guard is working on a proposal to the agencies.

- There was a discussion on the CHPPM results distributed during last weeks Technical Meeting. Still no 8321 data for the aqueous explosive samples. P qualifier by the CHPPM lab indicates a 25% difference between the two columns, which usually becomes a J qualifier after validation. E qualifier indicated that the concentration has exceeded the calibration range. After the results of the 8321 analysis have been received the Guard will submit a letter report to evaluate results of 8321 and CHPPM methods, compared to 8330. EPA indicated that they have not fully reviewed the data but believe that CHPPM and 8321 should be selectively used.

  Regarding the 8321 study for the dyes analysis, Ogden indicated that the Method Detection Limit study is still ongoing, which will cause a delay in the training areas field investigation. The extent of the delay is unclear at this time. The Guard will submit a letter requesting an extension when the completion date can be determined.

- The results of the wood chip analysis along with a memo from Tetra Tech on how the samples were collected were distributed. The sample consisted of a 5- point composite from the chip piles. There were no confirmed detections of explosive compounds, although several false positives were identified. Ogden indicated that Dr. Jenkins stated there is lots of interference with the 8330 method when analyzing organic material. EPA asked the Guard to identify methods used for analysis of biota in other studies.

- EPA updated the DEP on the MW-113 results. Explosives were detected in 50 to 60 feet of the aquifer. The highest RDX detection was 11 ppb.

- EPA asked the Guard to include the ZOCs from the new water supply locations on the Central Impact Area maps. These will be requested from JPO.

- EPA indicated that there was a meeting scheduled for discussion of the J1/J3 Ranges with EPA, DEP, Tetra Tech, and the Guard after the Tech 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 sample from MW-1M2, MW-2M1, MW2M2, MW-25S, and MW-75M2 had detections of RDX, which were verified by PDA spectra. These detections were similar to the previous round of samping with the exception of MW-2M1, which had ND for previous rounds.

- The groundwater sample from MW-1S and MW-76S had detections had detections of RDX and HMX, which were verified by the PDA spectra. The previous round of sampling had similar detections.

- The groundwater sample from MW-19S had detections of RDX, HMX, TNT, 2-4-dinitrotoluene, 2-amino-4,6-dinitrotoluene, and 4-amino-2,6-dinitrotoluene, which were verified by PDA spectra. Previous sampling rounds had similar detections.

- The groundwater sample from MW-76M2 had detections of RDX, HMX, and 1,3,5-trinitrobenzene, which were verified by PDA spectra. The previous sampling rounds had detections of RDX and HMX.

- The groundwater sample from MW-77M2 had detections of RDX, HMX, and 4-amino-2,6-dinitrotoluene, which were verified by the PDA spectra. Previous rounds of sampling had similar detections.

- The groundwater profile samples from MW-113 had detections of picric acid (6 intervals), RDX (7 intervals), and HMX (2 interval). The RDX in 6 intervals and the HMX were verified by the PDA spectra.

3. DELIVERABLES SUBMITTED

The following deliverables were submitted during the reporting period.

Weekly Progress Update (July 24-28)	08/08/00
Final Turpentine Road and Tank Alley Field Sampling Plan	08/08/00
Monthly Progress Report #40 (July 2000)	08/10/00
Weekly Progress Update (July 31-Aug 4)	08/11/00

4. SCHEDULED ACTIONS

Scheduled actions for the week of August 14 include the drilling and well installation at MW-114 (Demo 1 response well) and drilling and well installation at MW-115 (P-23); the continued UXO clearance of the drilling pads and soil grids in the J-2 Range; continued groundwater sampling of the August LTM wells; and development of newly installed wells.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

EPA provided comments on the draft FS Workplan for AO3 (including Demo 1). The regulatory agencies and other stakeholders are reviewing the draft technical memorandum for the Demo 1 response actions submitted 6/8/00. The Guard is awaiting the results of the soil sampling of the nine additional deep soil borings, which should be available the week of 8/14/00.

TABLE 2
SAMPLING PROGRESS
08/6/2000-08/12/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G113DGE	FIELDQC	08/07/2000	FIELDQC	0.00	0.00		
G114DAE	MW-114	08/11/2000	FIELDQC	0.00	0.00		
HC101DA1AAT	FIELDQC	08/08/2000	FIELDQC	0.00	0.00		
HC101DA1BAT	FIELDQC	08/09/2000	FIELDQC	0.00	0.00		
HC101DC1AAE	FIELDQC	08/10/2000	FIELDQC	0.00	0.00		
HD101DA1AAE	FIELDQC	08/09/2000	FIELDQC	0.00	0.00		
HD101FA1AAE	FIELDQC	08/11/2000	FIELDQC	0.00	0.00		
HD101FA1AAT	FIELDQC	08/11/2000	FIELDQC	0.00	0.00		
S114DAE	FIELDQC	08/10/2000	FIELDQC	0.00	0.00		
S114DAT	FIELDQC	08/10/2000	FIELDQC	0.00	0.00		
W18M2F	FIELDQC	08/07/2000	FIELDQC	0.00	0.00		
W18M2T	FIELDQC	08/07/2000	FIELDQC	0.00	0.00		
4036000-01G	4036000-01G	08/07/2000	GROUNDWATER				
4036000-02G	4036000-02G	08/07/2000	GROUNDWATER				
4036000-04G	4036000-04G	08/07/2000	GROUNDWATER				
4036000-06G	4036000-06G	08/07/2000	GROUNDWATER				
4261000-02G	4261000-02G	08/08/2000	GROUNDWATER				
4261000-03G	4261000-03G	08/08/2000	GROUNDWATER				
4261000-04G	4261000-04G	08/08/2000	GROUNDWATER				
4261000-05G	4261000-05G	08/08/2000	GROUNDWATER				
4261000-06G	4261000-06G	08/08/2000	GROUNDWATER				
4261000-09G	4261000-09G	08/08/2000	GROUNDWATER				
4261000-10G	4261000-10G	08/08/2000	GROUNDWATER				
4261000-11G	4261000-11G	08/08/2000	GROUNDWATER				
ASPWELL	ASPWELL	08/08/2000	GROUNDWATER				
ASPWELLD	ASPWELL	08/08/2000	GROUNDWATER				
RANGECON	RANGECON	08/07/2000	GROUNDWATER				
USCGANTST	USCGANTST	08/07/2000	GROUNDWATER				
W07DDA	MW-7	08/09/2000	GROUNDWATER	332.00	342.00	223.56	233.56
W07M1A	MW-7	08/08/2000	GROUNDWATER	240.00	245.00	131.61	136.61
W07M2A	MW-7	08/08/2000	GROUNDWATER	170.00	175.00	61.37	66.37
W07SSA	MW-7	08/07/2000	GROUNDWATER	103.00	113.00	-5.24	4.76
W10DDA	MW-10	08/10/2000	GROUNDWATER	351.50	361.50	200.06	210.06
W10DDA	MW-10	08/11/2000	GROUNDWATER	351.50	361.50	200.06	210.06
W10M1A	MW-10	08/09/2000	GROUNDWATER	280.00	285.00	129.56	134.56
W10M1D	MW-10	08/09/2000	GROUNDWATER	280.00	285.00	129.56	134.56
W10SSA	MW-10	08/09/2000	GROUNDWATER	145.00	155.00	-6.62	3.38
W17DDA	MW-17	08/07/2000	GROUNDWATER	320.00	330.00	192.35	202.35
W17SSA	MW-17	08/07/2000	GROUNDWATER	120.00	130.00	-6.54	3.46
W18DDA	MW-18	08/07/2000	GROUNDWATER	265.00	275.00	218.93	228.93
W18M1A	MW-18	08/07/2000	GROUNDWATER	171.00	176.00	125.91	130.91
W18SSA	MW-18	08/07/2000	GROUNDWATER	35.00	45.00	-10.65	-0.65
W19DDA	MW-19	08/08/2000	GROUNDWATER	293.00	298.00	247.55	252.55
W19SSA	WL-19	08/08/2000	GROUNDWATER	38.00	48.00	-7.20	2.80

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
Other Sample Types methods are variable
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SAMPLING PROGRESS
08/6/2000-08/12/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
W21DDA	MW-21	08/08/2000	GROUNDWATER	302.00	312.00	128.02	138.02
W21M2A	MW-21	08/07/2000	GROUNDWATER	226.00	236.00	51.27	61.27
W21M3A	MW-21	08/07/2000	GROUNDWATER	196.00	206.00	21.21	31.21
W21SSA	MW-21	08/08/2000	GROUNDWATER	164.00	174.00	-10.32	-0.32
W23DDA	MW-23	08/09/2000	GROUNDWATER	272.00	282.00	142.51	152.51
W23M1A	MW-23	08/08/2000	GROUNDWATER	225.00	235.00	95.85	105.85
W23M2A	MW-23	08/09/2000	GROUNDWATER	189.00	194.00	59.68	64.68
W23M3A	MW-23	08/08/2000	GROUNDWATER	156.00	161.00	26.70	31.70
W25SSA	MW-25	08/08/2000	GROUNDWATER	108.00	118.00	-5.82	4.18
W26SSA	MW-26	08/08/2000	GROUNDWATER	129.00	139.00	-6.68	3.32
W27SSA	MW-27	08/09/2000	GROUNDWATER	117.00	127.00	-5.94	4.06
W28SSA	MW-28	08/09/2000	GROUNDWATER	95.00	105.00	-5.80	4.20
W31DDA	MW-31	08/09/2000	GROUNDWATER	133.00	138.00	43.10	48.10
W31M1A	MW-31	08/09/2000	GROUNDWATER	113.00	123.00	22.85	32.85
W31SSA	MW-31	08/09/2000	GROUNDWATER	98.00	103.00	7.76	12.76
W34M1A	MW-34	08/11/2000	GROUNDWATER	151.00	161.00	71.00	81.00
W34M2A	MW-34	08/10/2000	GROUNDWATER	131.00	141.00	49.20	59.20
W34M3A	MW-34	08/10/2000	GROUNDWATER	111.00	121.00	28.00	38.00
W35M1A	MW-35	08/09/2000	GROUNDWATER	155.00	165.00	65.27	75.27
W35M2A	MW-35	08/09/2000	GROUNDWATER	100.00	110.00	10.26	20.26
W35SSA	MW-35	08/10/2000	GROUNDWATER	84.00	94.00	-5.72	4.28
W36M1A	MW-36	08/10/2000	GROUNDWATER	151.00	161.00	72.10	82.10
W36M2A	MW-36	08/10/2000	GROUNDWATER	175.00	185.00	36.53	46.53
W38DDA	MW-38	08/11/2000	GROUNDWATER	242.00	252.00	120.20	130.20
W38M1A	MW-38	08/10/2000	GROUNDWATER	217.00	227.00	95.11	105.11
W38M2A	MW-38	08/10/2000	GROUNDWATER	187.00	197.00	65.02	75.02
W38M3A	MW-38	08/11/2000	GROUNDWATER	170.00	180.00	48.26	58.26
W39M1A	MW-39	08/10/2000	GROUNDWATER	220.00	230.00	81.70	91.70
W39M2A	MW-39	08/10/2000	GROUNDWATER	175.00	185.00	36.53	46.53
W41M1A	MW-41	08/10/2000	GROUNDWATER	235.00	245.00	105.01	115.01
W41M2A	MW-41	08/11/2000	GROUNDWATER	194.00	204.00	63.90	73.90
W47M1A	MW-47	08/11/2000	GROUNDWATER	169.00	179.00	69.16	79.16
W47M2A	MW-47	08/11/2000	GROUNDWATER	131.50	141.50	31.37	41.37
W47M3A	MW-47	08/11/2000	GROUNDWATER	115.00	120.00	15.00	20.00
W51DDA	MW-51	08/11/2000	GROUNDWATER	264.00	274.00	115.74	125.74
W51M1A	MW-51	08/11/2000	GROUNDWATER	234.00	244.00	85.80	95.80
DW0809	GAC WATER	08/09/2000	IDW				
G113DGA	MW-113	08/07/2000	PROFILE	200.00	200.00	57.20	57.20
G113DHA	MW-113	08/07/2000	PROFILE	210.00	210.00	67.20	67.20
G113DIA	MW-113	08/07/2000	PROFILE	220.00	220.00	77.20	77.20
G113DJA	MW-113	08/07/2000	PROFILE	230.00	230.00	87.20	87.20
G113DKA	MW-113	08/07/2000	PROFILE	240.00	240.00	97.20	97.20
G113DLA	MW-113	08/07/2000	PROFILE	250.00	250.00	107.20	107.20
G114DAA	MW-114	08/11/2000	PROFILE	83.00	83.00	1.30	1.30

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
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08/6/2000-08/12/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G114DBA	MW-114	08/11/2000	PROFILE	90.00	90.00	8.30	8.30
G114DCA	MW-114	08/11/2000	PROFILE	100.00	100.00	18.30	18.30
G114DCD	MW-114	08/11/2000	PROFILE	100.00	100.00	18.30	18.30
S114DAA	MW-114	08/10/2000	SOIL BORING				
S114DBA	MW-114	08/10/2000	SOIL BORING				
S114DCA	MW-114	08/10/2000	SOIL BORING	10.00	12.00		
S114DDA	MW-114	08/10/2000	SOIL BORING	20.00	22.00		
S114DEA	MW-114	08/10/2000	SOIL BORING	30.00	32.00		
S114DFA	MW-114	08/10/2000	SOIL BORING	40.00	42.00		
S114DGA	MW-114	08/10/2000	SOIL BORING	50.00	52.00		
S114DHA	MW-114	08/10/2000	SOIL BORING	60.00	62.00		
S114DHD	MW-114	08/10/2000	SOIL BORING	60.00	62.00		
S114DIA	MW-114	08/10/2000	SOIL BORING	70.00	72.00		
HC101DA1AAA	101DA	08/09/2000	SOIL GRID	0.00	0.25		
HC101DA1BAA	101DA	08/09/2000	SOIL GRID	0.25	0.50		
HC101DA1CAA	101DA	08/09/2000	SOIL GRID	0.50	1.00		
HC101DB1AAA	101DB	08/09/2000	SOIL GRID	0.00	0.25		
HC101DB1BAA	101DB	08/09/2000	SOIL GRID	0.25	0.50		
HC101DB1CAA	101DB	08/09/2000	SOIL GRID	0.50	1.00		
HC101DC1AAA	101DC	08/10/2000	SOIL GRID	0.00	0.25		
HC101DC1BAA	101DC	08/10/2000	SOIL GRID	0.25	0.50		
HC101DC1CAA	101DC	08/10/2000	SOIL GRID	0.50	1.00		
HC101DC1CAD	101DC	08/10/2000	SOIL GRID	0.50	1.00		
HC101EA1AAA	101EA	08/10/2000	SOIL GRID	0.00	0.25		
HC101EA1BAA	101EA	08/10/2000	SOIL GRID	0.25	0.50		
HC101EA1CAA	101EA	08/10/2000	SOIL GRID	0.50	1.00		
HC101EA1CAD	101EA	08/10/2000	SOIL GRID	0.50	1.00		
HC101FA1AAA	101FA	08/11/2000	SOIL GRID	0.00	0.25		
HC101FA1BAA	101FA	08/11/2000	SOIL GRID	0.25	0.50		
HC101FA1CAA	101FA	08/11/2000	SOIL GRID	0.50	1.00		
HC101OA1AAA	101O	08/11/2000	SOIL GRID				
HD05S1AAA	05S	08/10/2000	SOIL GRID				
HD101DB2BAA	101DB	08/09/2000	SOIL GRID	0.25	0.50		
HD101DB3BAA	101DB	08/09/2000	SOIL GRID	0.25	0.50		
HD101DB4BAA	101DB	08/09/2000	SOIL GRID	0.25	0.50		
HD101DB5BAA	101DB	08/09/2000	SOIL GRID	0.25	0.50		
HD101DB7BAA	101DB	08/09/2000	SOIL GRID	0.25	0.50		
HD101DB8BAA	101DB	08/09/2000	SOIL GRID	0.25	0.50		
HD101FA1AAA	101FA	08/11/2000	SOIL GRID	0.00	0.25		
HD101FA1BAA	101FA	08/11/2000	SOIL GRID	0.25	0.50		
HD101FA1CAA	101FA	08/11/2000	SOIL GRID	0.50	1.00		
HD101FA2AAA	101FA	08/11/2000	SOIL GRID	0.00	0.25		
HD101FA2BAA	101FA	08/11/2000	SOIL GRID	0.25	0.50		
HD101FA2CAA	101FA	08/11/2000	SOIL GRID	0.50	1.00		

Profiling methods include: Volatiles and Explosives
Groundwater methods include: Volatiles, Semivolatiles, Explosives, Pesticides, Herbicides, Metals, and Wet Chemistry
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08/6/2000-08/12/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HD101FA3AAA	101FA	08/11/2000	SOIL GRID	0.00	0.25		
HD101FA3BAA	101FA	08/11/2000	SOIL GRID	0.25	0.50		
HD101FA3CAA	101FA	08/11/2000	SOIL GRID	0.50	1.00		
HD101FA4AAA	101FA	08/11/2000	SOIL GRID	0.00	0.25		
HD101FA4BAA	101FA	08/11/2000	SOIL GRID	0.25	0.50		
HD101FA4CAA	101FA	08/11/2000	SOIL GRID	0.50	1.00		
HD101FA5AAA	101FA	08/11/2000	SOIL GRID	0.00	0.25		
HD101FA5BAA	101FA	08/11/2000	SOIL GRID	0.25	0.50		
HD101FA5CAA	101FA	08/11/2000	SOIL GRID	0.50	1.00		

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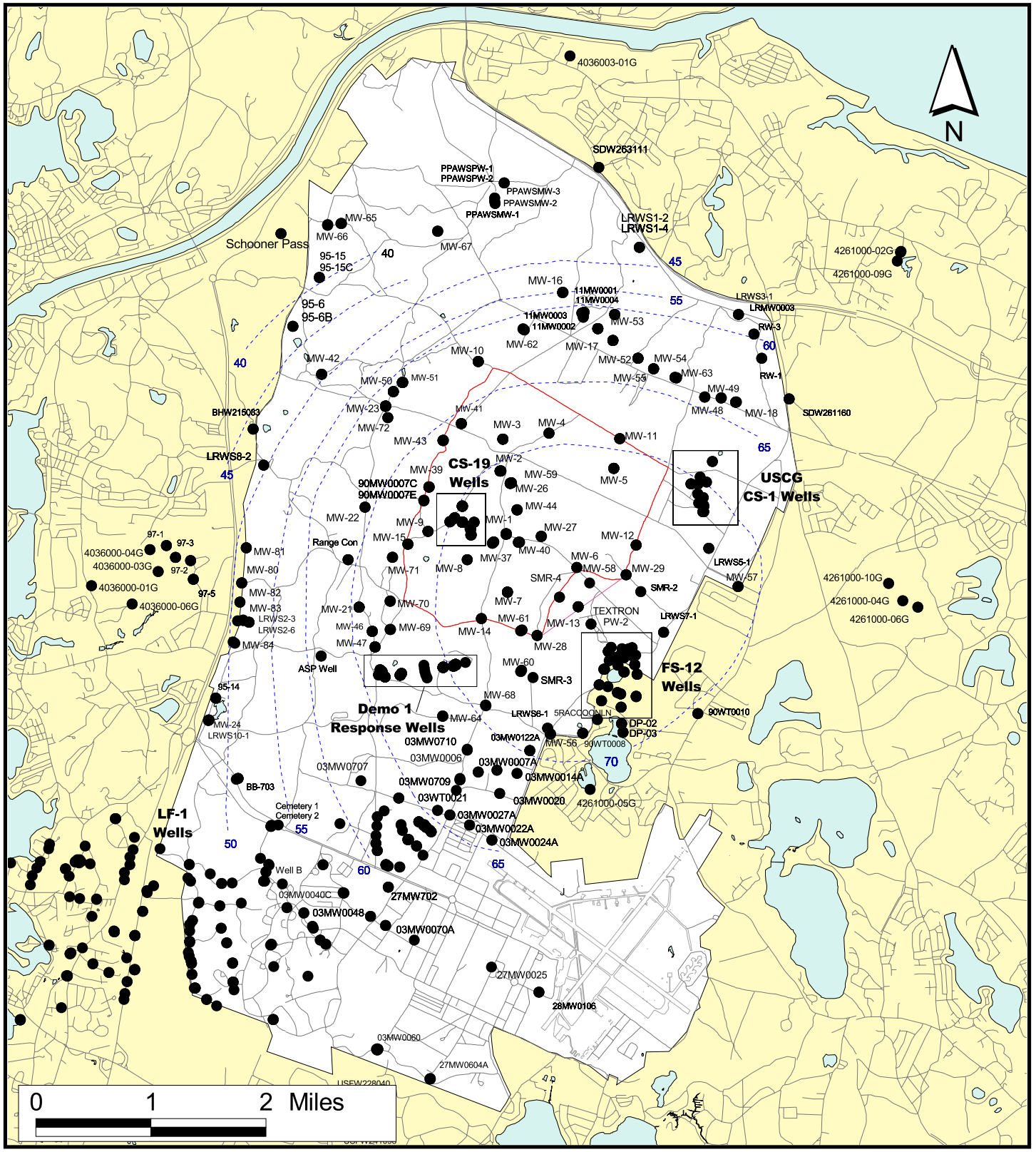
BWTE = Depth below water table, end depth, measured in feet

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 7/22/00-8/12/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W01M2A	MW-1	7/31/00	GROUNDWATER	160.00	165.00	40.42	45.42	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W01SSA	MW-1	7/31/00	GROUNDWATER	114.00	124.00	0.00	10.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W01SSA	MW-1	7/31/00	GROUNDWATER	114.00	124.00	0.00	10.00	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W02M1A	MW-2	8/2/00	GROUNDWATER	212.00	217.00	70.16	75.16	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W02M2A	MW-2	8/2/00	GROUNDWATER	170.00	175.00	28.20	33.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W19SSA	WL-19	8/8/00	GROUNDWATER	38.00	48.00	0.00	10.00	8330N	2,4,6-TRINITROTOLUENE	YES
W19SSA	WL-19	8/8/00	GROUNDWATER	38.00	48.00	0.00	10.00	8330N	2,4-DINITROTOLUENE	YES
W19SSA	WL-19	8/8/00	GROUNDWATER	38.00	48.00	0.00	10.00	8330N	2-AMINO-4,6-DINITROTOLUENE	YES
W19SSA	WL-19	8/8/00	GROUNDWATER	38.00	48.00	0.00	10.00	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
W19SSA	WL-19	8/8/00	GROUNDWATER	38.00	48.00	0.00	10.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W19SSA	WL-19	8/8/00	GROUNDWATER	38.00	48.00	0.00	10.00	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W25SSA	MW-25	8/8/00	GROUNDWATER	108.00	118.00	0.00	10.00	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W75M2A	MW-75	8/2/00	GROUNDWATER	115.00	125.00	30.90	40.90	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W76M2A	MW-76	8/2/00	GROUNDWATER	105.00	115.00	34.82	44.82	8330N	1,3,5-TRINITROBENZENE	YES
W76M2A	MW-76	8/2/00	GROUNDWATER	105.00	115.00	34.82	44.82	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W76M2A	MW-76	8/2/00	GROUNDWATER	105.00	115.00	34.82	44.82	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W76SSA	MW-76	8/1/00	GROUNDWATER	85.00	95.00	13.20	23.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W76SSA	MW-76	8/1/00	GROUNDWATER	85.00	95.00	13.20	23.20	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W77M2A	MW-77	8/1/00	GROUNDWATER	120.00	130.00	35.33	45.33	8330N	4-AMINO-2,6-DINITROTOLUENE	YES
W77M2A	MW-77	8/1/00	GROUNDWATER	120.00	130.00	35.33	45.33	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
W77M2A	MW-77	8/1/00	GROUNDWATER	120.00	130.00	35.33	45.33	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
G113DEA	MW-113	8/4/00	PROFILE	180.00	180.00	37.20	37.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G113DEA	MW-113	8/4/00	PROFILE	180.00	180.00	37.20	37.20	8330N	PICRIC ACID	NO
G113DFA	MW-113	8/4/00	PROFILE	190.00	190.00	47.20	47.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G113DFA	MW-113	8/4/00	PROFILE	190.00	190.00	47.20	47.20	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
G113DFA	MW-113	8/4/00	PROFILE	190.00	190.00	47.20	47.20	8330N	PICRIC ACID	NO
G113DGA	MW-113	8/7/00	PROFILE	200.00	200.00	57.20	57.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G113DGA	MW-113	8/7/00	PROFILE	200.00	200.00	57.20	57.20	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
G113DHA	MW-113	8/7/00	PROFILE	210.00	210.00	67.20	67.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G113DHA	MW-113	8/7/00	PROFILE	210.00	210.00	67.20	67.20	8330N	PICRIC ACID	NO
G113DIA	MW-113	8/7/00	PROFILE	220.00	220.00	77.20	77.20	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G113DIA	MW-113	8/7/00	PROFILE	220.00	220.00	77.20	77.20	8330N	PICRIC ACID	NO
G113DJA	MW-113	8/7/00	PROFILE	230.00	230.00	87.20	87.20	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



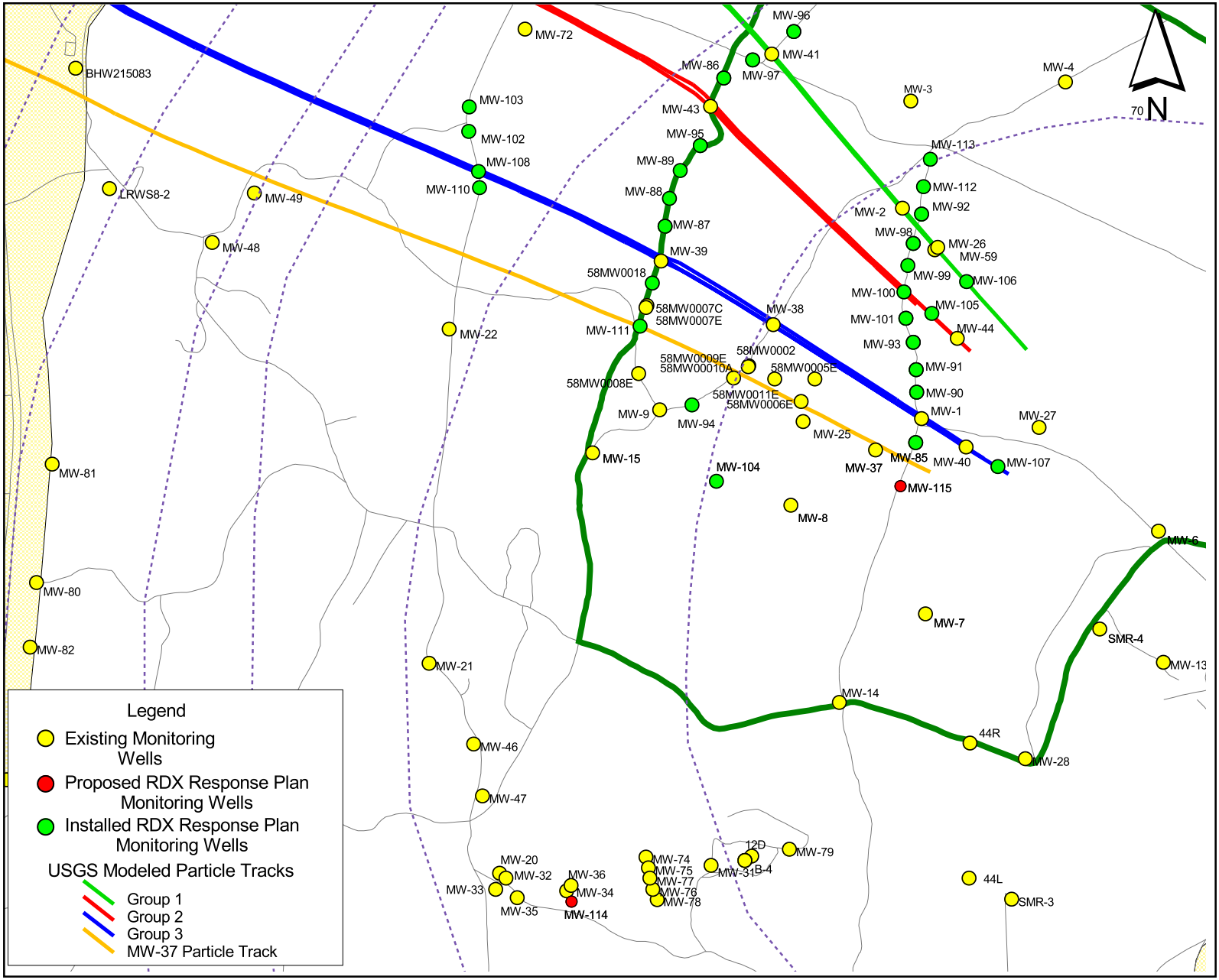
Sources & Notes

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



L:/MMR/GIS/August00/Well_loc_for_TM
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August 16, 2000

Well Locations for Tech Meeting

Figure A