WEEKLY PROGRESS UPDATE
FOR MARCH 27 – MARCH 31, 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 27 to March 31, 2000.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of March 31 is summarized in Table 1.

Table 1. Drilling progress as of March 31, 2000

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-91	Impact Area Response Well (P-7)	205	79	-2 to 8 44 to 54
MW-92	Impact Area Response Well (P-1)	221	80	-2 to 8 25 to 35
MW-93	Impact Area Response Well (P6)	210	80	
MW-94	Downgradient of Mortar Target 5 Well	132	6	

bgs = below ground surface
bwt = below water table

Well installation was completed at MW-91 (Impact Area response well P-7) and MW-92 (Impact Area response well P-1). Drilling commenced on MW-93 (Impact Area response well P-6) and on MW-94 (Mortar Target 5 well). UXO clearance continued for the Mortar Target 9 drilling pad and access road. The development of newly installed wells continued. The UXO located during the reconnaissance of J-2 Range was detonated. Additional UXO was located at the Mortar Target 9 drilling pad.

Samples collected during the reporting period are summarized in Table 2. Groundwater sampling was continued for the third round of Phase IIa wells. Groundwater profile samples were collected from MW-93 (P-6), and MW-94 (Mortar Target 5 well). Deep soil samples were collected during drilling at the boring for MW-93, MW-94, and MW-95. Soil samples were also collected from the UXO detonation craters on the J-2 Range.

The Guard, EPA, and MADEP had a meeting on March 30 to discuss technical issues, including the following:

- There was a brief discussion of RRA cleanup standards. It was agreed that there was concurrence on most of the standards, with additional work needed to resolve the standards for dieldrin, 2,4-DNT, and metals. The EPA suggested that the Guard review leaching-based cleanup standards developed by IRP for some of these compounds.
- There was a brief discussion of the Long Term Monitoring Plan. EPA was unclear on the proposed monitoring locations and indicated the plan needed map(s) showing which wells are/aren't proposed for sampling. EPA indicated the plan will be disapproved because analyte types are being deleted too early in the monitoring program. EPA will provide written comments shortly, and will meet with the Guard and MADEP soon after to discuss.

- The Impact Area Response Well locations were discussed, and handouts were provided showing the preliminary results along the inner and outer transects, and the plan view of the wells. It was agreed to move the proposed location of P-21 north so that it lies on a particle track (to be determined) from P-16. The next locations to be installed are P-10, P-11, and P-13; then P-21 will be installed after those. P-17 will likely be relocated due to the nearby well installation by IRP, but the new location will be decided after additional results are available from the other wells underway.
- The Guard indicated that scoping discussions are underway with Tetra Tech and USACE for revising the ASR.
- There was a brief discussion of plume design recapping a discussion of several weeks ago when Mr. Gregson and LTC Knott were unavailable. EPA suggested that the RDX plume at Demo 1 be drawn to show levels >ND and <HA, >HA and <10ppb, and >10 ppb. EPA suggested discussion with the IART prior to finalizing this design.
- Jacobs provided a 2-page handout and update of CS-19 activities. Sampling is complete and data evaluation is underway. There was disagreement between VOC results for 2 splits, one sample frozen and one not frozen. EPA requested that a 5-way split of soil VOC samples be performed, with freezing for preservation, to resolve the VOC detects.
- DEP indicated that results of the new proposed water supply well locations are expected on the following dates: wells 3 & 5 on 4/7/00, wells 1 & 4 on 4/14/00, and well 2 on 4/21/00. DEP will check on which wells were sampled and the screen depths. Guard will mention to JPO that data should be provided as soon as available.
- Tetra Tech provided an update of munitions survey activities. Demo 1 geophysics field work is expected to be complete by 4/9/00. The plan for work at J-2 Range is currently under review by Guard. A hydrographic survey of Gibbs, Donnelly, Deep Bottom, Bailey, and Grassy Ponds was conducted. Geophysics surveys of the ponds will begin next week. There was a discussion of the survey methods and potential wetlands NOI/RFD issues for the Good News Bog (a.k.a. J-3 Wetland). The preparation for geophysics survey at the slit trench is nearly complete.
- Ogden provided an update on the RRA Workplan. DEP expects to submit comments early next week. A meeting was scheduled for 1000 on 4/5/00 to discuss comments and schedule. UXO avoidance and preparation of an FSP are expected to start the week of 4/10. Delineation of the Good News wetland is expected to start the week of 4/17.
- There was a brief update on IAGS field work. Drilling continues at P-1, P-6, and downgradient of Mortar Target 5. Sampling of far field Group 2 wells continue.
- The Guard and DEP will discuss how/whether to provide a summary of the MCP process to the IART. This topic might be included in the RRA discussion at the IART meeting.
- EPA expected to provide the TOSC team comments on the fate/transport modeling Scope of Work (SOW) by 4/3 or 4/4. EPA will also forward the INEL comments on the SOW. EPA and DEP will discuss how to move forward on the SOW once all comments are received. EPA will be sending a request to the Guard to conduct a tour of MMR for the TOSC team.
- There was a brief discussion of the timing of the J Range Workplans. The Phase I Report from Textron is expected within the next few days. The Guard's J-2 Range Workplan is due 4/7, and the J-1/J-3/L Range Workplan will be submitted 4/21. The latter will consider the info from Textron, to the extent possible considering the timing.
- EPA's request for sampling the targets on or southeast of Tank Alley was discussed. The Guard indicated that, after the targets were identified and scope of work developed, there would be 4 weeks needed for contracting and 2 weeks needed for mobilization. It was agreed to develop maps of current and historic targets by the 4/6 tech meeting.
- The action items for the IART meeting were discussed again. For the ASP inventory, Guard and EPA will discuss what information can be provided without creating a security issue. The Otis Rod & Gun club was in use during the weekend of February 26-27, and this may be the firing heard offsite. A report was provided (6-page handout) on the excavation of drums from the J-2 Range which occurred in April 1999. EPA requested a copy of the munition inventory for the APC, as the rounds found on

the J-2 Range apparently went there. Range Control does not maintain records of target use, but the last HE mortar fire was from positions 3, 4, and 8. Mortar Target 9 would be an "easy" target from MP-8. Ogden provided the EDB data via email.

- The UXO types recently found at J-2 were provided in the last weekly report. There was a discussion of the other UXO finds in this area, and the need for a full UXO survey.
- EPA located a list of J-2 Range operators but asked for copies of the 104 (e) requests that were sent. The Guard indicated that requests were sent to Textron, MIT, Raytheon, Masco (Hesse), and Atlantic Research. No addresses could be found for National Fireworks or Susquehanna Corp. EPA also asked for a copy of the letter sent to Yuma PG. EPA also recommended the Guard send a letter to Picatinny Arsenal requesting info on American Potash and/or other lease operators.
- The agencies have no further comments on the revised proposal for soil sampling to investigate the acetone detections.
- The plan for sampling the Small Arms Ranges was discussed. EPA asked that at least one of the ranges to be sampled have had M16 firing. It is not imperative that a range on Greenway Road be included, unless it is selected due to high use or other considerations. EPA asked the Guard to schedule the investigation for the spring, as had been previously discussed. A revised plan is needed to address comments and proceed toward sampling.
- The reconnaissance of the Training Areas in accordance with the final workplan was discussed. The Guard will develop a list of potential areas for reconnaissance for the 4/6 tech meeting. Some areas may be toured following the 4/6 meeting if time allows. EPA will also review potential areas with a goal of developing a final list for touring after the 4/13 tech meeting.
- The timing and content of the final Phase I and draft Phase II reports were discussed. It was agreed to develop a summary for the Phase I areas of what has been addressed and what needs further work, to ensure that appropriate follow-up is taken. EPA suggested that the Phase II report be rescheduled for Fall 2000 to allow incorporation of results currently being obtained.
- A 1-page summary of results for the Mortar Target overhang samples was provided.
- The Guard provided an updated inventory for the CDC.

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 and the quality assurance duplicate sample from MW-57S had detections of 1,3,5-trinitrobenzene, which were not verified by PDA.

- The groundwater profile samples from MW-92 had detections of 1,3,5-trinitrobenzene (6 intervals), 2-amino-4,6-dinitrotoluene (6 intervals), 2-nitrotoluene (1 interval), 3-nitrotoluene (6 intervals), 4-

nitrotoluene (5 intervals), 1,3-dinitrobenzene (4 intervals), TNT (2 intervals), and RDX (1 interval). The RDX was verified by PDA spectra.

- The groundwater profile samples from MW-93 had detections of RDX (8 intervals), nitroglycerine (5 intervals), HMX (2 intervals), 1,3,5-trinitrobenzene (3 intervals), picric acid (4 intervals). The RDX and HMX were verified by PDA spectra.

- The soil samples collected from under the suspected C-4 in Demo 1 (location 11) had detections of RDX and HMX in one interval, which were verified by PDA.

- The soil samples collected from under the suspected C-4 in Demo1 (location 12) had detections of RDX (3 intervals) and HMX (3 intervals), which were verified by PDA.

- The soil samples collected from beneath the suspected C-4 in Demo 1 (location 13) had detections of RDX (3 intervals) and HMX (2 intervals), which were verified by PDA.

3. DELIVERABLES SUBMITTED

Weekly Update for March 13 – March 17	3/28/00
Weekly Update for March 20 – March 24	3/29/00

4. SCHEDULED ACTIONS

Scheduled actions for the week of April 3 include the construction of monitoring wells at MW-93; continued drilling and construction of monitoring wells at Impact Area response wells at locations P-13 and the Mortar Target 5 well; commencement of the drilling of the Impact Area response well at location P-10; the continued development of newly installed wells; and groundwater sampling of round 3 of Group 2 far field wells and round 3 of the remaining Phase IIa wells.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

The geophysical survey of Demo 1 continued this week.

TABLE 2
SAMPLING PROGRESS
3/27/00-3/31/00

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G93DAE	FIELDQC	03/30/2000	FIELDQC	0.00	0.00		
G94DAE	FIELDQC	03/31/2000	FIELDQC	0.00	0.00		
G94DAT	FIELDQC	03/31/2000	FIELDQC	0.00	0.00		
HCJ281MME	FIELDQC	03/31/2000	FIELDQC	0.00	0.00		
S93DCE	FIELDQC	03/28/2000	FIELDQC	0.00	0.00		
S93DJE	FIELDQC	03/30/2000	FIELDQC	0.00	0.00		
S94DCE	FIELDQC	03/30/2000	FIELDQC	0.00	0.00		
S94DCF	FIELDQC	03/29/2000	FIELDQC	0.00	0.00		
S94DCT	FIELDQC	03/29/2000	FIELDQC	0.00	0.00		
S95DCE	FIELDQC	03/31/2000	FIELDQC	0.00	0.00		
W37M1T	FIELDQC	03/27/2000	FIELDQC	0.00	0.00		
W44M1T	FIELDQC	03/28/2000	FIELDQC	0.00	0.00		
W37M1A	MW-37	03/27/2000	GROUNDWATER	181.00	191.00	64.00	74.00
W37M2A	MW-37	03/27/2000	GROUNDWATER	145.00	155.00	28.00	38.00
W40SSA	MW-40	03/28/2000	GROUNDWATER	115.50	125.50		
DW9131	GAC WATER	03/31/2000	IDW				
G93DAA	MW-93	03/30/2000	PROFILE	135.00	135.00	5.50	5.50
G93DBA	MW-93	03/30/2000	PROFILE	140.00	140.00	10.50	10.50
G93DCA	MW-93	03/30/2000	PROFILE	150.00	150.00	20.50	20.50
G93DDA	MW-93	03/31/2000	PROFILE	160.00	160.00	30.50	30.50
G93DEA	MW-93	03/31/2000	PROFILE	170.00	170.00	40.50	40.50
G93DED	MW-93	03/31/2000	PROFILE	170.00	170.00	40.50	40.50
G93DFA	MW-93	03/31/2000	PROFILE	180.00	180.00	50.50	50.50
G93DGA	MW-93	03/31/2000	PROFILE	190.00	190.00	60.50	60.50
G93DHA	MW-93	03/31/2000	PROFILE	200.00	200.00	70.50	70.50
G93DHD	MW-93	03/31/2000	PROFILE	200.00	200.00	70.50	70.50
G93DIA	MW-93	03/31/2000	PROFILE	210.00	210.00	80.50	80.50
G94DAA	MW-94	03/31/2000	PROFILE	130.00	132.00		
S93DCA	MW-93	03/28/2000	SOIL BORING	10.00	12.00		
S93DDA	MW-93	03/28/2000	SOIL BORING	22.00	24.00		
S93DEA	MW-93	03/28/2000	SOIL BORING	30.00	32.00		
S93DFA	MW-93	03/29/2000	SOIL BORING	40.00	42.00		
S93DGA	MW-93	03/29/2000	SOIL BORING	50.00	52.00		
S93DHA	MW-93	03/29/2000	SOIL BORING	60.00	62.00		
S93DHD	MW-93	03/29/2000	SOIL BORING	60.00	62.00		
S93DIA	MW-93	03/29/2000	SOIL BORING	70.00	72.00		
S93DJA	MW-93	03/30/2000	SOIL BORING	80.00	82.00		
S93DKA	MW-93	03/30/2000	SOIL BORING	90.00	92.00		
S93DLA	MW-93	03/30/2000	SOIL BORING	100.00	102.00		
S93DMA	MW-93	03/30/2000	SOIL BORING	110.00	112.00		
S93DMD	MW-93	03/30/2000	SOIL BORING	110.00	112.00		
S93DNA	MW-93	03/30/2000	SOIL BORING	120.00	122.00		
S93DOA	MW-93	03/30/2000	SOIL BORING	130.00	132.00		
S94DCA	MW-94	03/29/2000	SOIL BORING	10.00	12.00		

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
3/27/00-3/31/00

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
S94DDA	MW-94	03/29/2000	SOIL BORING	20.00	24.00		
S94DEA	MW-94	03/29/2000	SOIL BORING	30.00	32.00		
S94DFA	MW-94	03/30/2000	SOIL BORING	40.00	42.00		
S94DGA	MW-94	03/30/2000	SOIL BORING	50.00	52.00		
S94DHA	MW-94	03/30/2000	SOIL BORING	60.00	62.00		
S94DIA	MW-94	03/30/2000	SOIL BORING	70.00	72.00		
S94DID	MW-94	03/30/2000	SOIL BORING	70.00	72.00		
S94DJA	MW-94	03/30/2000	SOIL BORING	80.00	82.00		
S94DKA	MW-94	03/30/2000	SOIL BORING	90.00	92.00		
S94DLA	MW-94	03/30/2000	SOIL BORING	100.00	102.00		
S94DMA	MW-94	03/30/2000	SOIL BORING	110.00	112.00		
S94DMD	MW-94	03/30/2000	SOIL BORING	110.00	112.00		
S94DNA	MW-94	03/30/2000	SOIL BORING	120.00	122.00		
S95DCA	MW-95	03/31/2000	SOIL BORING	10.00	18.00		
S95DDA	MW-95	03/31/2000	SOIL BORING	20.00	22.00		
HCJ281MM	HCJ281MM	03/31/2000	SOIL GRID	0.00	0.25		
HCJ2M7LAWE	HCJ2M7LAWE	03/31/2000	SOIL GRID	0.00	0.25		
HCJ2M7LAWW	HCJ2M7LAWW	03/31/2000	SOIL GRID	0.00	0.25		
HDJ281MM	HDJ281MM	03/31/2000	SOIL GRID	0.00	0.25		
HDJ2M7LAWE	HDJ2M7LAWE	03/31/2000	SOIL GRID	0.00	0.25		
HDJ2M7LAWW	HDJ2M7LAWW	03/31/2000	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 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 3/27/00-3/31/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
W57SSA	MW-57	03/22/2000	GROUNDWATER	85.00	95.00	0.00	10.00	8330N	1,3,5-TRINITROBENZENE	NO
W57SSD	MW-57	03/22/2000	GROUNDWATER	85.00	95.00	0.00	10.00	8330N	1,3,5-TRINITROBENZENE	NO
G92DAA	MW-92	03/21/2000	PROFILE	145.00	145.00	4.35	4.35	8330N	1,3,5-TRINITROBENZENE	NO
G92DAA	MW-92	03/21/2000	PROFILE	145.00	145.00	4.35	4.35	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G92DAA	MW-92	03/21/2000	PROFILE	145.00	145.00	4.35	4.35	8330N	2-NITROTOLUENE	NO
G92DAA	MW-92	03/21/2000	PROFILE	145.00	145.00	4.35	4.35	8330N	3-NITROTOLUENE	NO
G92DAA	MW-92	03/21/2000	PROFILE	145.00	145.00	4.35	4.35	8330N	4-NITROTOLUENE	NO
G92DAA	MW-92	03/21/2000	PROFILE	145.00	145.00	4.35	4.35	8330N	NITROGLYCERIN	NO
G92DBA	MW-92	03/21/2000	PROFILE	150.00	150.00	9.35	9.35	8330N	1,3,5-TRINITROBENZENE	NO
G92DBA	MW-92	03/21/2000	PROFILE	150.00	150.00	9.35	9.35	8330N	1,3-DINITROBENZENE	NO
G92DBA	MW-92	03/21/2000	PROFILE	150.00	150.00	9.35	9.35	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G92DBA	MW-92	03/21/2000	PROFILE	150.00	150.00	9.35	9.35	8330N	3-NITROTOLUENE	NO
G92DBA	MW-92	03/21/2000	PROFILE	150.00	150.00	9.35	9.35	8330N	4-NITROTOLUENE	NO
G92DBA	MW-92	03/21/2000	PROFILE	150.00	150.00	9.35	9.35	8330N	NITROGLYCERIN	NO
G92DCA	MW-92	03/22/2000	PROFILE	160.00	160.00	19.35	19.35	8330N	1,3,5-TRINITROBENZENE	NO
G92DCA	MW-92	03/22/2000	PROFILE	160.00	160.00	19.35	19.35	8330N	1,3-DINITROBENZENE	NO
G92DCA	MW-92	03/22/2000	PROFILE	160.00	160.00	19.35	19.35	8330N	2,4,6-TRINITROTOLUENE	NO
G92DCA	MW-92	03/22/2000	PROFILE	160.00	160.00	19.35	19.35	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G92DCA	MW-92	03/22/2000	PROFILE	160.00	160.00	19.35	19.35	8330N	3-NITROTOLUENE	NO
G92DCA	MW-92	03/22/2000	PROFILE	160.00	160.00	19.35	19.35	8330N	4-NITROTOLUENE	NO
G92DCA	MW-92	03/22/2000	PROFILE	160.00	160.00	19.35	19.35	8330N	NITROGLYCERIN	NO
G92DDA	MW-92	03/22/2000	PROFILE	170.00	170.00	29.35	29.35	8330N	1,3,5-TRINITROBENZENE	NO
G92DDA	MW-92	03/22/2000	PROFILE	170.00	170.00	29.35	29.35	8330N	3-NITROTOLUENE	NO
G92DDA	MW-92	03/22/2000	PROFILE	170.00	170.00	29.35	29.35	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
G92DDA	MW-92	03/22/2000	PROFILE	170.00	170.00	29.35	29.35	8330N	NITROGLYCERIN	NO
G92DDD	MW-92	03/22/2000	PROFILE	170.00	170.00	29.35	29.35	8330N	1,3,5-TRINITROBENZENE	NO
G92DDD	MW-92	03/22/2000	PROFILE	170.00	170.00	29.35	29.35	8330N	3-NITROTOLUENE	NO
G92DDD	MW-92	03/22/2000	PROFILE	170.00	170.00	29.35	29.35	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
G92DDD	MW-92	03/22/2000	PROFILE	170.00	170.00	29.35	29.35	8330N	NITROGLYCERIN	NO
G92DEA	MW-92	03/22/2000	PROFILE	180.00	180.00	39.35	39.35	8330N	1,3,5-TRINITROBENZENE	NO
G92DEA	MW-92	03/22/2000	PROFILE	180.00	180.00	39.35	39.35	8330N	1,3-DINITROBENZENE	NO
G92DEA	MW-92	03/22/2000	PROFILE	180.00	180.00	39.35	39.35	8330N	2,4,6-TRINITROTOLUENE	NO
G92DEA	MW-92	03/22/2000	PROFILE	180.00	180.00	39.35	39.35	8330N	2-AMINO-4,6-DINITROTOLUENE	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 3/27/00-3/31/00

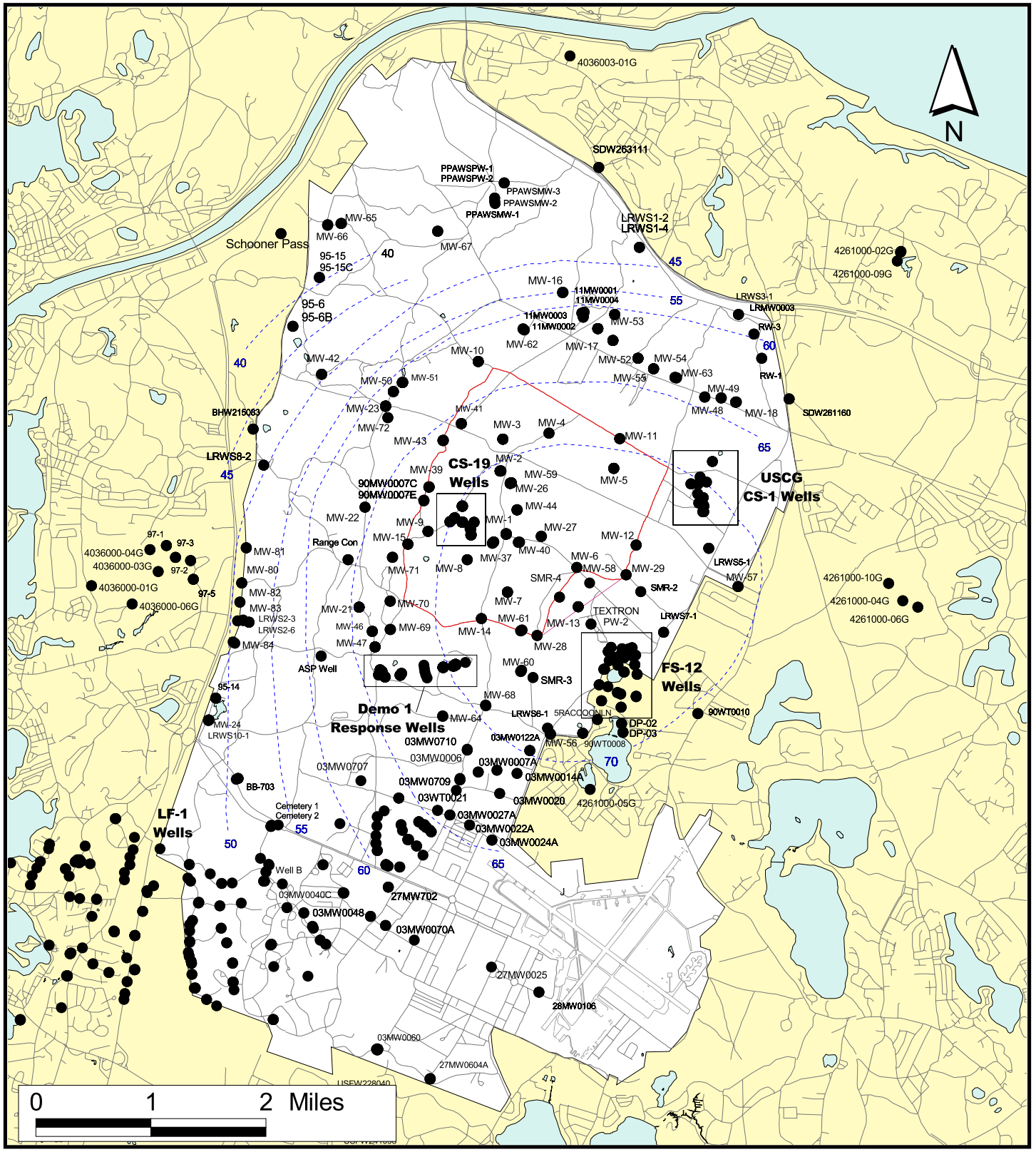
OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G92DFA	MW-92	03/22/2000	PROFILE	190.00	190.00	49.35	49.35	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G92DFA	MW-92	03/22/2000	PROFILE	190.00	190.00	49.35	49.35	8330N	3-NITROTOLUENE	NO
G92DFA	MW-92	03/22/2000	PROFILE	190.00	190.00	49.35	49.35	8330N	4-NITROTOLUENE	NO
G92DFA	MW-92	03/22/2000	PROFILE	190.00	190.00	49.35	49.35	8330N	NITROGLYCERIN	NO
G92DGA	MW-92	03/22/2000	PROFILE	200.00	200.00	59.35	59.35	8330N	1,3,5-TRINITROBENZENE	NO
G92DGA	MW-92	03/22/2000	PROFILE	200.00	200.00	59.35	59.35	8330N	1,3-DINITROBENZENE	NO
G92DGA	MW-92	03/22/2000	PROFILE	200.00	200.00	59.35	59.35	8330N	2-AMINO-4,6-DINITROTOLUENE	NO
G92DGA	MW-92	03/22/2000	PROFILE	200.00	200.00	59.35	59.35	8330N	3-NITROTOLUENE	NO
G92DGA	MW-92	03/22/2000	PROFILE	200.00	200.00	59.35	59.35	8330N	4-NITROTOLUENE	NO
G92DGA	MW-92	03/22/2000	PROFILE	200.00	200.00	59.35	59.35	8330N	NITROGLYCERIN	NO
G92DHA	MW-92	03/22/2000	PROFILE	210.00	210.00	69.35	69.35	8330N	NITROGLYCERIN	NO
G92DIA	MW-92	03/24/2000	PROFILE	220.00	220.00	79.35	79.35	8330N	NITROGLYCERIN	NO
G92DID	MW-92	03/24/2000	PROFILE	220.00	220.00	79.35	79.35	8330N	NITROGLYCERIN	NO
G93DAA	MW-93	03/30/2000	PROFILE	135.00	135.00	5.50	5.50	8330N	1,3,5-TRINITROBENZENE	NO
G93DAA	MW-93	03/30/2000	PROFILE	135.00	135.00	5.50	5.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DAA	MW-93	03/30/2000	PROFILE	135.00	135.00	5.50	5.50	8330N	NITROGLYCERIN	NO
G93DAA	MW-93	03/30/2000	PROFILE	135.00	135.00	5.50	5.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G93DAA	MW-93	03/30/2000	PROFILE	135.00	135.00	5.50	5.50	8330N	PICRIC ACID	NO
G93DBA	MW-93	03/30/2000	PROFILE	140.00	140.00	10.50	10.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DBA	MW-93	03/30/2000	PROFILE	140.00	140.00	10.50	10.50	8330N	PICRIC ACID	NO
G93DCA	MW-93	03/30/2000	PROFILE	150.00	150.00	20.50	20.50	8330N	1,3,5-TRINITROBENZENE	NO
G93DCA	MW-93	03/30/2000	PROFILE	150.00	150.00	20.50	20.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DCA	MW-93	03/30/2000	PROFILE	150.00	150.00	20.50	20.50	8330N	NITROGLYCERIN	NO
G93DCA	MW-93	03/30/2000	PROFILE	150.00	150.00	20.50	20.50	8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
G93DCA	MW-93	03/30/2000	PROFILE	150.00	150.00	20.50	20.50	8330N	PICRIC ACID	NO
G93DDA	MW-93	03/31/2000	PROFILE	160.00	160.00	30.50	30.50	8330N	1,3,5-TRINITROBENZENE	NO
G93DDA	MW-93	03/31/2000	PROFILE	160.00	160.00	30.50	30.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DDA	MW-93	03/31/2000	PROFILE	160.00	160.00	30.50	30.50	8330N	NITROGLYCERIN	NO
G93DDA	MW-93	03/31/2000	PROFILE	160.00	160.00	30.50	30.50	8330N	PICRIC ACID	NO
G93DEA	MW-93	03/31/2000	PROFILE	170.00	170.00	40.50	40.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DEA	MW-93	03/31/2000	PROFILE	170.00	170.00	40.50	40.50	8330N	NITROGLYCERIN	NO
G93DED	MW-93	03/31/2000	PROFILE	170.00	170.00	40.50	40.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DFA	MW-93	03/31/2000	PROFILE	180.00	180.00	50.50	50.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DGA	MW-93	03/31/2000	PROFILE	190.00	190.00	60.50	60.50	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

TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 3/27/00-3/31/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G93DHA	MW-93	03/31/2000	PROFILE	200.00	200.00	70.50	70.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DHD	MW-93	03/31/2000	PROFILE	200.00	200.00	70.50	70.50	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G93DIA	MW-93	03/31/2000	PROFILE	210.00	210.00	80.50	80.50	8330N	NITROGLYCERIN	NO
HDD111AAA	D111	03/16/2000	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD111AAA	D111	03/16/2000	SOIL GRID	0.00	0.25			8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
HDD112AAA	D112	03/16/2000	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD112AAA	D112	03/16/2000	SOIL GRID	0.00	0.25			8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
HDD112BAA	D112	03/16/2000	SOIL GRID	0.25	0.50			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD112BAA	D112	03/16/2000	SOIL GRID	0.25	0.50			8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
HDD112CAA	D112	03/16/2000	SOIL GRID	0.50	1.00			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD112CAA	D112	03/16/2000	SOIL GRID	0.50	1.00			8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
HDD113AAA	D113	03/16/2000	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD113AAA	D113	03/16/2000	SOIL GRID	0.00	0.25			8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
HDD113BAA	D113	03/16/2000	SOIL GRID	0.25	0.50			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD113BAA	D113	03/16/2000	SOIL GRID	0.25	0.50			8330N	OCTAHYDRO-1,3,5,7-TETRANITR	YES
HDD113CAA	D113	03/16/2000	SOIL GRID	0.50	1.00			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



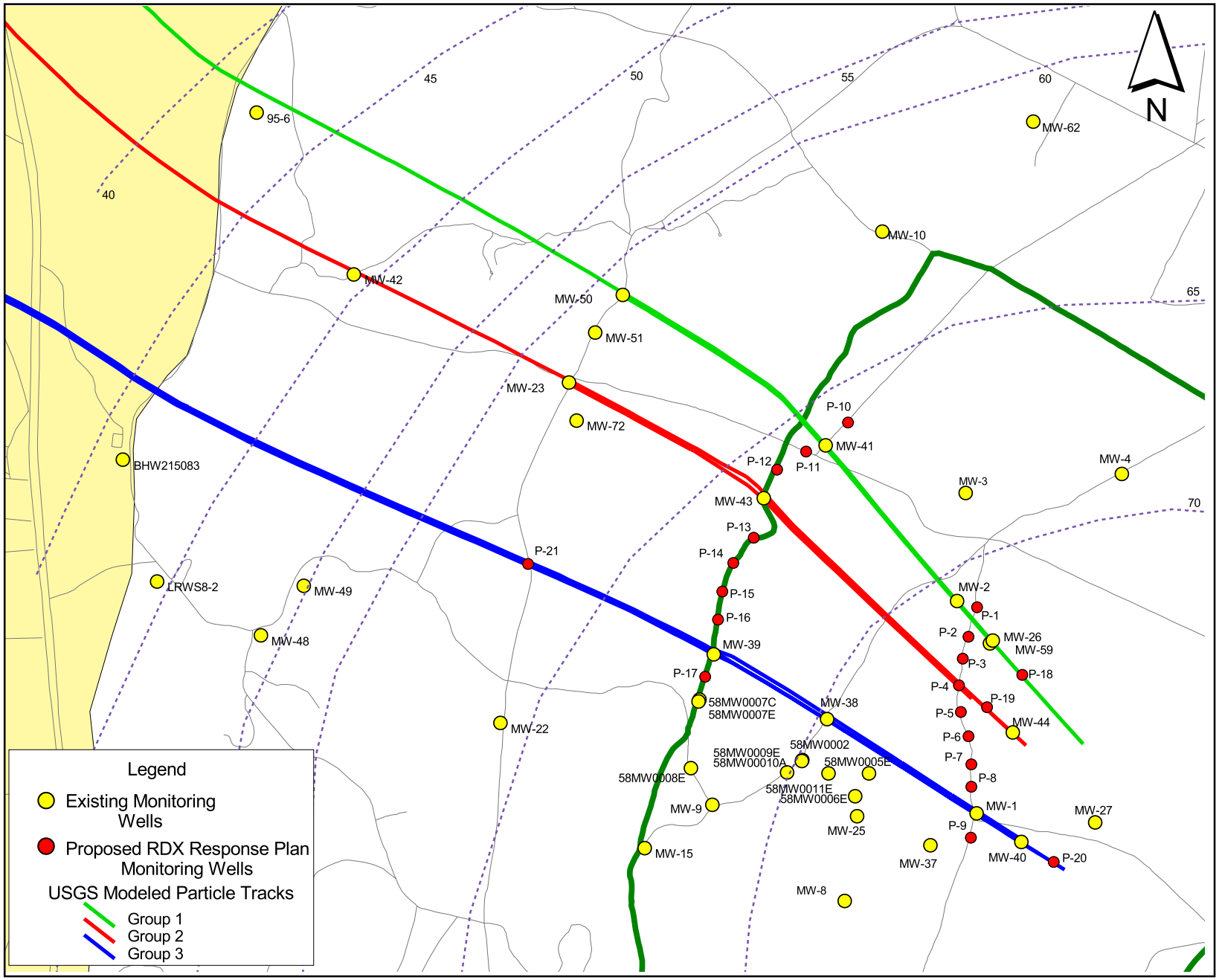
Sources & Notes

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



Proposed RDX Response Plan Wells In The Impact Area

Figure 6