WEEKLY PROGRESS UPDATE
FOR JUNE 12 – JUNE 16, 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 June 12 to June 16, 2000.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of June 16 is summarized in Table 1.

Table 1. Drilling progress as of June 16, 2000

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-105	Impact Area Response Well (P-19)	335	205	165-175 205-215
MW-107	Impact Area Response Well (P-20)	210	88	125-135 155-165
MW-108	Impact Area Response Well (P-22)	40		
MW-109	KD Range Firing Point Well	150	59	

bgs = below ground surface
bwt = below water table

Drilling was completed on MW-109 (KD Range). Wells were constructed on MW-105 (P-19) and MW-107 (P-20). Drilling commenced on MW-108 (P-22). The development of newly installed wells continued. UXO clearance commenced at the supplemental Impact Area Response wells. The contents of the Popper Kettle were removed and examined for ordnance.

Samples collected during the reporting period are summarized in Table 2. Groundwater sampling continued for Long Term Monitoring wells and Impact Area Response wells. A groundwater sample was collected from a residential well on Old Snake Pond Road. Profile samples were collected during drilling at the boring for MW-109. Deep soil samples were collected during drilling at the borings for MW-108 and MW-109. Samples were collected from the soil under six pieces of C-4 located in Demo 2. Soil samples were collected from a grid in GS-6 (Area 100) where UXO were located. Additional delineation grid soil samples were collected at the APC and the KD Range (Area 44) as part of the RRA.

The Guard, EPA, and MADEP had a meeting on June 15 to discuss technical issues, including the following:

- Jacobs provided an update of the CS-19 investigation. A handout of the revised schedule and summary of the investigation were distributed. The draft RI Report is due on June 28. The summary does not include the modeling and the risk assessment. The summary indicated that the surface soil is contaminated and the groundwater is contaminated with explosives. No end of the plume was determined from this investigation. Explosives in groundwater are the risk driver. Final figures will be available next week. EPA asked for a presentation of the figures next week. EPA asked if the parameters from all the sampling were used in the modeling. Jacobs indicated that only the recent round of data were included in the model. EPA stated that they don't believe that enough information

has been collected to make the statement that the contamination has peaked. DEP asked Jacobs to confirm the detections of MCPP as validated.

- The Guard updated the Water Supply Investigation. The Site 1 pump test was completed this week with a pump rate of 900,000 gallons per day. Eight feet of draw down was measured at the pump well and less than 1 foot was measured in a monitoring well approximately 100' away. The Site 2 pump test is scheduled for after July 4. The Guard checked with Tom Cambareri and he has received all the information requested. EPA asked the status and the location of the rifle grenades mentioned last week.
- Tetra Tech provided an update to the Munitions Survey Investigation. A 1-page handout of the summary of field activities was distributed. Continue UXO clearance, finalizing the land survey, and updating the REC in the J-2 Range. Notification of UXO findings was discussed. The land survey and grid layout continues for the HUTA. The REC has been submitted for the Turpentine Road, Process Holding Area, and Tank Alley improvements. Once the REC is approved, then brush clearing will commence. Ogden requested the layout of the HUTA so that Ogden can complete the work in the area prior to the HUTA investigation startup. The site walk for the J-1/J-3 Range was completed with EPA. The areas of concern will be selected at a later date. The collection of data at Donnely Pond will be completed by June 16. The slit trench geophysical survey will be completed by June 16. EPA asked if the surface debris has been relocated. Tetra Tech indicated that it would be relocated today. EPA requested an update of what was found in the debris for next week's meeting. The airborne survey will begin the week of the June 19 and is expected to last for 10 days. EPA asked if they had anything that was holding up the schedule. Tetra Tech indicated that they did not believe so. Ogden requested a revised J-2 Range map showing the extent of the geophysics survey. EPA asked the status of Ogden's sampling of the J-2 Range. Ogden indicated that the sampling should commence on July 5. EPA asked for a more detailed J-2 Range schedule for the IAGS sampling. Ogden indicated that during the grenade court reconnaissance, it was observed that there might be some overlap with areas surveyed by geophysics at GP-11. Ogden will review the survey map for GP-11. EPA asked of a copy of the field notes from that reconnaissance.
- Ogden provided an update of the Rapid Response Action. The redline revision of the work plan was submitted to the agencies on June 13. EPA indicated that they would have their review done by Monday and DEP should be finished tomorrow. The response to comments and public comments will be included as attachments to the work plan. EPA asked if the Foothill comments were addressed. Ogden indicated that they have not been included but will be. The J-3 NOI was submitted to the Sandwich Conservation Commission on June 12. There will be an informal meeting on June 21 and the first public hearing on July 5. Copies of the NOI were distributed to the agencies. Handouts of the KD Range, J-3 wetland, GP-7, and APC delineation data and figures were distributed. The data indicates that the KD Range and APC require additional delineation sampling. The data and additional sample locations were reviewed. EPA asked for a figure of the APC data on the 1991 aerial photo to help explain the lateral extent of explosives. EPA asked when the results for these additional sample grids would be ready. Ogden indicated on June 29. EPA asked when the excavation was scheduled to start. Ogden indicated that the RRA is still on schedule.
- Ogden provided an update of the Groundwater Investigation. Currently drilling on MW-108 (P-22) and MW-109 (KD Range). MW-109 should be completed today and will need to select screens on Monday. Continue to collect groundwater samples from the Long Term Monitoring wells and the Impact area response wells. Continue to develop the newly installed wells and should be done with the last of the Impact Area Response wells (MW-107) this week. Collected soil samples from the UXO detonation craters at the Anti Tank Gravity Range. Collected soil samples from the GS-6 UXO location. Collected soil samples from the six C-4 locations in Demo 2. The Guard indicated that one of the locations contained approximately a half-pound of C-4 and 500 feet of time fuze. EPA requested a write up of Demo 2 C-4 and indicated that they would have to check to see if the buried C-4 will require a RCRA permit for the CDC disposal. The additional profile data from MW-105 (P-19) were distributed.

- The EPA asked the status of the Popper Kettle. The Guard indicated that the work would be completed this week which would consist of the kettle being cleared for UXO, the contents emptied and searched for ordnance, the contents would be drummed, samples would be collected from the contents and the soil under the kettle.
- The Guard indicated that Textron was tasking HLA to sample the ricochet trough and will get back on the date. The Guard will split samples with HLA.
- Ogden suggested a conference call with Textron to review schedules to insure no conflicts next week.
- EPA would like the Information Request Table to have RCRA 3007 added to the Textron line, to have the 102 FW RCRA request added, and have it included in the weekly. The Guard distributed Raytheon's 104e response. EPA will check to see if they have obtained any information on Susquehanna by tomorrow.
- Ogden asked for guidance regarding EPA comment #22 on the Interim Results Report. The comment suggests that conclusions regarding the "significance" of detections should be deleted from the report. Ogden asked EPA for input on how data evaluation should be conducted without drawing such conclusions. EPA will review this comment and provide input.
- Ogden requested a 2-week extension on the Gun and Mortar Tech Memo due date because the large volume of data for validation and evaluation. EPA indicated that the request should be submitted in a letter.
- EPA will review the Small Arms Range response to comments and the J-3 Wetland next week.
- A map was distributed with proposed up and down gradient Central Impact Area wells. DEP suggested that two wells proposed on the eastern side of the impact area be the first installed to help define the top of the mound. Ogden expressed concern with starting with these two wells because the UXO safety zone may shut down other contractors. Ogden will prepare a plan and submit it to the Guard next week.
- The updated Central Impact Area well results were distributed. It was noted that explosives were detected in MW-98 monitoring well but not in the profile samples. The data will be added to the cross sections. EPA indicated that the ground scars tech memo suggests no further investigation at GS-7 because nothing was detected in the profile samples.
- Tetra Tech presented the summary of the geophysical data from Demo 1.
- The agenda was set for the next IART meeting:
  - 6:00 – 6:15 Introduction
  - 6:15 – 7:45 Groundwater update (Ogden)
  - 7:45 – 8:00 IART Facilitator (Guard)
  - 8:00 – 8:30 PIP (DEP/EPA)
  - 8:30 - Other (popper kettle, etc.)
- EPA requested that the revised text be provided in response to comment #30 on the J-2 Range Plan. EPA indicated that the response to comment #36 should indicate it was agreed not to sample the tank in area 2.
- EPA requested a discussion of the IART action items at next week's 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 crater grab sample from 37MM3 had detections of RDX and HMX that were verified by PDA spectra.
- The crater grab sample from 37MM4 had detections of RDX that were verified by PDA spectra.
- The groundwater sample from 90LWA0007 had detections of 2-nitrotoluene, 3-nitrotoluene, and 4-nitrotoluene, which were not verified by PDA spectra.
- The groundwater samples from 90WT0004 and MW-30S had a detection of HMX, which were verified by PDA spectra. Previous sampling rounds from these wells had similar detections.
- The groundwater sample from MW-100M1 had detections of RDX and HMX, which were verified by PDA spectra. This was the first sampling round for this well.
- The groundwater sample from MW-59S had detections of RDX and HMX, which were verified by PDA spectra. Previous sampling rounds from this well had similar detections.
- The groundwater sample from MW-100M2, MW-101M2, and MW-101S had detections of RDX, which were verified by PDA spectra. This was the first sampling round for these wells.
- Groundwater profile samples from MW-105 had detections of picric acid (4 intervals) and 2,6-dinitrotoluene (1 interval), which were not verified by the PDA spectra.
- A groundwater profile sample from MW-106 had a detection of PETN, which was not verified by PDA spectra.
- Groundwater profile samples from MW-109 had detections of acetone (7 intervals), chloroethane (1 interval), MEK (7 intervals), chloroform (4 intervals), 3-nitrotoluene (5 intervals), and picric acid (1 interval). The explosive detections were not verified by PDA spectra.
- The soil sample HDD114AAA had detections of RDX and HMX, which were verified by PDA spectra. This sample was collected from a location at Demo 1 where C-4 residual was present.
- The soil grid HDD115AAA had detections of RDX, 2-amino-4,6-dinitrotoluene, and 4-amino-2,6-dinitrotoluene, which were verified by PDA spectra. This sample was collected from a location at Demo 1 where C-4 residual was present.
- The soil grid HDD116AAA had detections of RDX, 2-amino-4,6-dinitrotoluene, and HMX, which were verified by PDA spectra. This sample was collected from a location at Demo 1 where C-4 residual was present.

3. DELIVERABLES SUBMITTED

The following deliverables were submitted during the reporting period.

Weekly Progress Update May 29-June 2	06/13/00
Draft Phase II(a) Field Sampling Plan for Training Areas	06/13/00

4. SCHEDULED ACTIONS

Scheduled actions for the week of June 19 include the construction of monitoring wells at MW-109 (KD Range); the commencement of drilling of MW-108 (P-22); the continued groundwater sampling of the Impact Area response wells; and the continued UXO clearance of the supplemental Impact Area Response Wells.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

The geophysical data for Demo 1 were presented at the June 15 technical meeting. The draft technical memorandum for the Demo 1 response actions was submitted and is now under review by the regulatory agencies and other stakeholders. The draft FS Workplan for AO3 (including Demo 1) is under review by the regulatory agencies and other stakeholders. UXO clearance of the 9 soil boring locations in Demo 1 will commence.

TABLE 2
SAMPLING PROGRESS
06/11/2000-06/17/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
27MW0017A-E	FIELDQC	06/12/2000	FIELDQC	0.00	0.00		
27MW0108A-E	FIELDQC	06/16/2000	FIELDQC	0.00	0.00		
97-3-E	FIELDQC	06/13/2000	FIELDQC	0.00	0.00		
97-3-T	FIELDQC	06/13/2000	FIELDQC	0.00	0.00		
DEMO2-C4-6E	FIELDQC	06/13/2000	FIELDQC	0.00	0.00		
G109DAE	FIELDQC	06/15/2000	FIELDQC	0.00	0.00		
HCJ1KPAAE	FIELDQC	06/15/2000	FIELDQC	0.00	0.00		
HD100A1AAE	FIELDQC	06/14/2000	FIELDQC	0.00	0.00		
S108DCE	FIELDQC	06/15/2000	FIELDQC	0.00	0.00		
S108DCT	FIELDQC	06/15/2000	FIELDQC	0.00	0.00		
S109DCT	FIELDQC	06/14/2000	FIELDQC	0.00	0.00		
SDW263111-E	FIELDQC	06/15/2000	FIELDQC	0.00	0.00		
W104SST	FIELDQC	06/12/2000	FIELDQC	0.00	0.00		
27MW0017A	27MW0017A	06/12/2000	GROUNDWATER	132.00	142.00	48.49	58.49
27MW0108A	27MW0108A	06/16/2000	GROUNDWATER	217.00	227.00	76.22	86.22
95-6A	95-6A	06/14/2000	GROUNDWATER	175.00	185.00	146.00	156.00
97-1	97-1	06/13/2000	GROUNDWATER	83.00	93.00	62.50	72.50
97-3	97-3	06/13/2000	GROUNDWATER	75.00	85.00	37.15	47.15
97-5	97-5	06/10/2000	GROUNDWATER	84.00	94.00	76.20	86.20
LRWS2-3	LRWS2-3	06/15/2000	GROUNDWATER	147.00	157.00	111.05	121.05
RS0012OSNK	12 Old Snake Po	06/13/2000	GROUNDWATER				
SDW263111	SDW263111	06/14/2000	GROUNDWATER	99.00	109.00	5.82	15.82
SMR-2	SMR-2	06/12/2000	GROUNDWATER	121.00	131.00	16.42	26.42
W103M1A	MW-103	06/16/2000	GROUNDWATER	298.00	308.00	153.66	163.66
W103M2A	MW-103	06/16/2000	GROUNDWATER	282.00	292.00	137.67	147.67
W103SSA	MW-103	06/16/2000	GROUNDWATER	143.00	153.00	-1.38	8.62
W104M1A	MW-104	06/12/2000	GROUNDWATER	155.00	165.00	34.50	44.50
W104M2A	MW-104	06/12/2000	GROUNDWATER	135.00	145.00	14.68	24.68
W104SSA	MW-104	06/12/2000	GROUNDWATER	118.00	128.00	-2.30	7.70
W23SSA	MW-23	06/13/2000	GROUNDWATER	122.50	132.50	-6.87	3.13
W46SSA	MW-46	06/15/2000	GROUNDWATER	154.00	164.00	-8.92	1.08
DW0613	GAC WATER	06/13/2000	IDW				
G109DAA	MW-109	06/15/2000	PROFILE	95.00	95.00	3.90	3.90
G109DBA	MW-109	06/15/2000	PROFILE	100.00	100.00	8.90	8.90
G109DBD	MW-109	06/15/2000	PROFILE	100.00	100.00	8.90	8.90
G109DCA	MW-109	06/15/2000	PROFILE	110.00	110.00	18.90	18.90
G109DDA	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90
G109DDD	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90
G109DEA	MW-109	06/15/2000	PROFILE	130.00	130.00	38.90	38.90
G109DFA	MW-109	06/15/2000	PROFILE	140.00	140.00	48.90	48.90
G109DGA	MW-109	06/15/2000	PROFILE	150.00	150.00	58.90	58.90
S108DCA	MW-108	06/15/2000	SOIL BORING	10.00	12.00		
S108DDA	MW-108	06/15/2000	SOIL BORING	20.00	22.00		
S108DEA	MW-108	06/15/2000	SOIL BORING	30.00	32.00		

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
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TABLE 2
SAMPLING PROGRESS
06/11/2000-06/17/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
S109DCA	MW-109	06/14/2000	SOIL BORING	10.00	12.00		
S109DDA	MW-109	06/14/2000	SOIL BORING	20.00	22.00		
S109DEA	MW-109	06/14/2000	SOIL BORING	30.00	32.00		
S109DFA	MW-109	06/14/2000	SOIL BORING	40.00	42.00		
S109DGA	MW-109	06/14/2000	SOIL BORING	50.00	52.00		
S109DGD	MW-109	06/14/2000	SOIL BORING	50.00	52.00		
S109DHA	MW-109	06/14/2000	SOIL BORING	60.00	62.00		
S109DIA	MW-109	06/14/2000	SOIL BORING	70.00	72.00		
S109DJA	MW-109	06/14/2000	SOIL BORING	80.00	82.00		
S109DKA	MW-109	06/14/2000	SOIL BORING	90.00	92.00		
DEMO2-C4-1	DEMO2-C4-1	06/13/2000	SOIL GRID	0.00	0.25		
DEMO2-C4-2	DEMO2-C4-2	06/13/2000	SOIL GRID	0.00	0.25		
DEMO2-C4-3	DEMO2-C4-3	06/13/2000	SOIL GRID	0.00	0.25		
DEMO2-C4-4	DEMO2-C4-4	06/13/2000	SOIL GRID	0.00	0.25		
DEMO2-C4-5	DEMO2-C4-5	06/13/2000	SOIL GRID	0.00	0.25		
DEMO2-C4-6	DEMO2-C4-6	06/13/2000	SOIL GRID	0.00	0.25		
HCJ1KPAAA	HCJ1KPAAA	06/15/2000	SOIL GRID				
HD100A1AAA	100A	06/14/2000	SOIL GRID	0.00	0.25		
HD100A1BAA	100A	06/14/2000	SOIL GRID	0.25	0.50		
HD100A1CAA	100A	06/14/2000	SOIL GRID	0.50	1.00		
HD100B1AAA	100B	06/14/2000	SOIL GRID	0.00	0.25		
HD100B1BAA	100B	06/14/2000	SOIL GRID	0.25	0.50		
HD100B1CAA	100B	06/14/2000	SOIL GRID	0.50	1.00		
HD100C1AAA	100C	06/14/2000	SOIL GRID	0.00	0.25		
HD100C1BAA	100C	06/14/2000	SOIL GRID	0.25	0.50		
HD100C1CAA	100C	06/14/2000	SOIL GRID	0.50	1.00		
HD100D1AAA	100D	06/14/2000	SOIL GRID	0.00	0.25		
HD100D1BAA	100D	06/14/2000	SOIL GRID	0.25	0.50		
HD100D1CAA	100D	06/14/2000	SOIL GRID	0.50	1.00		
HD100E1AAA	100E	06/14/2000	SOIL GRID	0.00	0.25		
HD100E1BAA	100E	06/14/2000	SOIL GRID	0.25	0.50		
HD100E1CAA	100E	06/14/2000	SOIL GRID	0.50	1.00		
HC44CAA1AAE	FIELDQC	06/12/2000	FIELDQC	0.00	0.00		
HCAPC3BA1AAE	FIELDQC	06/14/2000	FIELDQC	0.00	0.00		
HC44CAA1AAA	44CA	06/12/2000	SOIL GRID	0.00	0.50		
HC44CAA1AAD	44CA	06/12/2000	SOIL GRID	0.00	0.50		
HC44CAB1AAA	44CA	06/14/2000	SOIL GRID	0.00	0.50		
HC44CCA1AAA	44CC	06/12/2000	SOIL GRID	0.00	0.50		
HC44DAA1AAA	44DA	06/12/2000	SOIL GRID	0.00	0.50		
HC44DAB1AAA	44DA	06/12/2000	SOIL GRID	0.00	0.50		
HC44ECA1AAA	44EC	06/12/2000	SOIL GRID	0.00	0.50		
HC44ECB1AAA	44EC	06/14/2000	SOIL GRID	0.00	0.50		
HCAPC3B1CAA	APC3B	06/12/2000	SOIL GRID	1.50	2.00		
HCAPC3BA1AAA	APC3B	06/14/2000	SOIL GRID	0.00	0.50		

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
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06/11/2000-06/17/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HCAPC3BB1AAA	APC3B	06/14/2000	SOIL GRID	0.00	0.50		
HCAPC3BC1AAA	APC3B	06/14/2000	SOIL GRID	0.00	0.50		
HCAPC3C1CAA	APC3C	06/12/2000	SOIL GRID	1.50	2.00		
HCAPC3CA1AAA	APC3C	06/14/2000	SOIL GRID	0.00	0.50		

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TABLE 3
DETECTED COMPOUNDS-UNVALIDATED
SAMPLES COLLECTED 6/11/00-6/17/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
HDGR37MM3	37MM3	06/09/2000	CRATER GRAB	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
HDGR37MM3	37MM3	06/09/2000	CRATER GRAB	0.00	0.25			8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
HDGR37MM4	37MM4	06/09/2000	CRATER GRAB	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
G109DAE	FIELDQC	06/15/2000	FIELDQC	0.00	0.00			OC21V	ACETONE	
90LWA0007	90LWA0007	06/08/2000	GROUNDWATER	32.00	102.00	-61.40	8.60	8330N	2-NITROTOLUENE	NO
90LWA0007	90LWA0007	06/08/2000	GROUNDWATER	32.00	102.00	-61.40	8.60	8330N	3-NITROTOLUENE	NO
90LWA0007	90LWA0007	06/08/2000	GROUNDWATER	32.00	102.00	-61.40	8.60	8330N	4-NITROTOLUENE	NO
90WT0004	90WT0004	06/09/2000	GROUNDWATER	38.00	48.00	4.02	14.02	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W100M1A	MW-100	06/06/2000	GROUNDWATER	179.00	189.00	44.48	54.48	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
W100M1A	MW-100	06/06/2000	GROUNDWATER	179.00	189.00	44.48	54.48	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W100M1D	MW-100	06/06/2000	GROUNDWATER	179.00	189.00	44.48	54.48	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
W100M1D	MW-100	06/06/2000	GROUNDWATER	179.00	189.00	44.48	54.48	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W100M2A	MW-100	06/06/2000	GROUNDWATER	164.00	174.00	29.53	39.53	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
W101M1A	MW-101	06/06/2000	GROUNDWATER	158.00	168.00	25.38	35.38	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
W101SSA	MW-101	06/06/2000	GROUNDWATER	131.00	141.00	-1.75	8.25	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
W30SSA	MW-30	06/09/2000	GROUNDWATER	26.00	36.00	-4.56	5.44	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
W59SSA	MW-59	06/08/2000	GROUNDWATER	128.00	138.00	-5.74	4.26	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,	YES
W59SSA	MW-59	06/08/2000	GROUNDWATER	128.00	138.00	-5.74	4.26	8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
G105DOA	MW-105	06/06/2000	PROFILE	270.00	270.00	140.00	140.00	8330N	PICRIC ACID	NO
G105DPA	MW-105	06/07/2000	PROFILE	280.00	280.00	150.00	150.00	8330N	PICRIC ACID	NO
G105DQA	MW-105	06/07/2000	PROFILE	290.00	290.00	160.00	160.00	8330N	PICRIC ACID	NO
G105DUA	MW-105	06/08/2000	PROFILE	335.00	335.00	205.00	205.00	8330N	2,6-DINITROTOLUENE	NO
G105DUA	MW-105	06/08/2000	PROFILE	335.00	335.00	205.00	205.00	8330N	PICRIC ACID	NO
G106DFA	MW-106	06/01/2000	PROFILE	190.00	190.00	54.60	54.60	8330N	PENTAERYTHRITOL TETRANITF	NO
G109DAA	MW-109	06/15/2000	PROFILE	95.00	95.00	3.90	3.90	8330N	PICRIC ACID	NO
G109DAA	MW-109	06/15/2000	PROFILE	95.00	95.00	3.90	3.90	OC21V	ACETONE	
G109DAA	MW-109	06/15/2000	PROFILE	95.00	95.00	3.90	3.90	OC21V	CHLOROETHANE	
G109DAA	MW-109	06/15/2000	PROFILE	95.00	95.00	3.90	3.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G109DBA	MW-109	06/15/2000	PROFILE	100.00	100.00	8.90	8.90	8330N	3-NITROTOLUENE	NO
G109DBA	MW-109	06/15/2000	PROFILE	100.00	100.00	8.90	8.90	OC21V	ACETONE	
G109DBA	MW-109	06/15/2000	PROFILE	100.00	100.00	8.90	8.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G109DBD	MW-109	06/15/2000	PROFILE	100.00	100.00	8.90	8.90	OC21V	ACETONE	
G109DBD	MW-109	06/15/2000	PROFILE	100.00	100.00	8.90	8.90	OC21V	METHYL ETHYL KETONE (2-BUT	

DATA REPORTED REFLECT CURRENT DATABASE FOR SAMPLES COLLECTED IN SPECIFIED TIMEFRAME. NOT ALL RESULTS ARE COMPLETE.
SBD = SAMPLE COLLECTION BEGIN DEPTH IN FEET BGS
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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 6/11/00-6/17/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G109DCA	MW-109	06/15/2000	PROFILE	110.00	110.00	18.90	18.90	OC21V	ACETONE	
G109DCA	MW-109	06/15/2000	PROFILE	110.00	110.00	18.90	18.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G109DDA	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	8330N	3-NITROTOLUENE	NO
G109DDA	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	OC21V	ACETONE	
G109DDA	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	OC21V	CHLOROFORM	
G109DDA	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G109DDD	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	8330N	3-NITROTOLUENE	NO
G109DDD	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	8330N	PENTAERYTHRITOL TETRANITF	NO
G109DDD	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	OC21V	ACETONE	
G109DDD	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	OC21V	CHLOROFORM	
G109DDD	MW-109	06/15/2000	PROFILE	120.00	120.00	28.90	28.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G109DEA	MW-109	06/15/2000	PROFILE	130.00	130.00	38.90	38.90	8330N	3-NITROTOLUENE	NO
G109DEA	MW-109	06/15/2000	PROFILE	130.00	130.00	38.90	38.90	OC21V	ACETONE	
G109DEA	MW-109	06/15/2000	PROFILE	130.00	130.00	38.90	38.90	OC21V	CHLOROFORM	
G109DEA	MW-109	06/15/2000	PROFILE	130.00	130.00	38.90	38.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G109DFA	MW-109	06/15/2000	PROFILE	140.00	140.00	48.90	48.90	8330N	3-NITROTOLUENE	NO
G109DFA	MW-109	06/15/2000	PROFILE	140.00	140.00	48.90	48.90	OC21V	ACETONE	
G109DFA	MW-109	06/15/2000	PROFILE	140.00	140.00	48.90	48.90	OC21V	CHLOROFORM	
G109DFA	MW-109	06/15/2000	PROFILE	140.00	140.00	48.90	48.90	OC21V	METHYL ETHYL KETONE (2-BUT	
G109DGA	MW-109	06/15/2000	PROFILE	150.00	150.00	58.90	58.90	8330N	3-NITROTOLUENE	NO
G109DGA	MW-109	06/15/2000	PROFILE	150.00	150.00	58.90	58.90	OC21V	ACETONE	
G109DGA	MW-109	06/15/2000	PROFILE	150.00	150.00	58.90	58.90	OC21V	CHLOROFORM	
G109DGA	MW-109	06/15/2000	PROFILE	150.00	150.00	58.90	58.90	OC21V	METHYL ETHYL KETONE (2-BUT	
HDD114AAA	114A	06/06/2000	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD114AAA	114A	06/06/2000	SOIL GRID	0.00	0.25			8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES
HDD115AAA	115A	06/06/2000	SOIL GRID	0.00	0.25			8330N	2-AMINO-4,6-DINITROTOLUENE	YES
HDD115AAA	115A	06/06/2000	SOIL GRID	0.00	0.25			8330N	4-AMINO-2,6-DINITROTOLUENE	YES
HDD115AAA	115A	06/06/2000	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD116AAA	116A	06/06/2000	SOIL GRID	0.00	0.25			8330N	2-AMINO-4,6-DINITROTOLUENE	YES
HDD116AAA	116A	06/06/2000	SOIL GRID	0.00	0.25			8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
HDD116AAA	116A	06/06/2000	SOIL GRID	0.00	0.25			8330N	OCTAHYDRO-1,3,5,7-TETRANITF	YES

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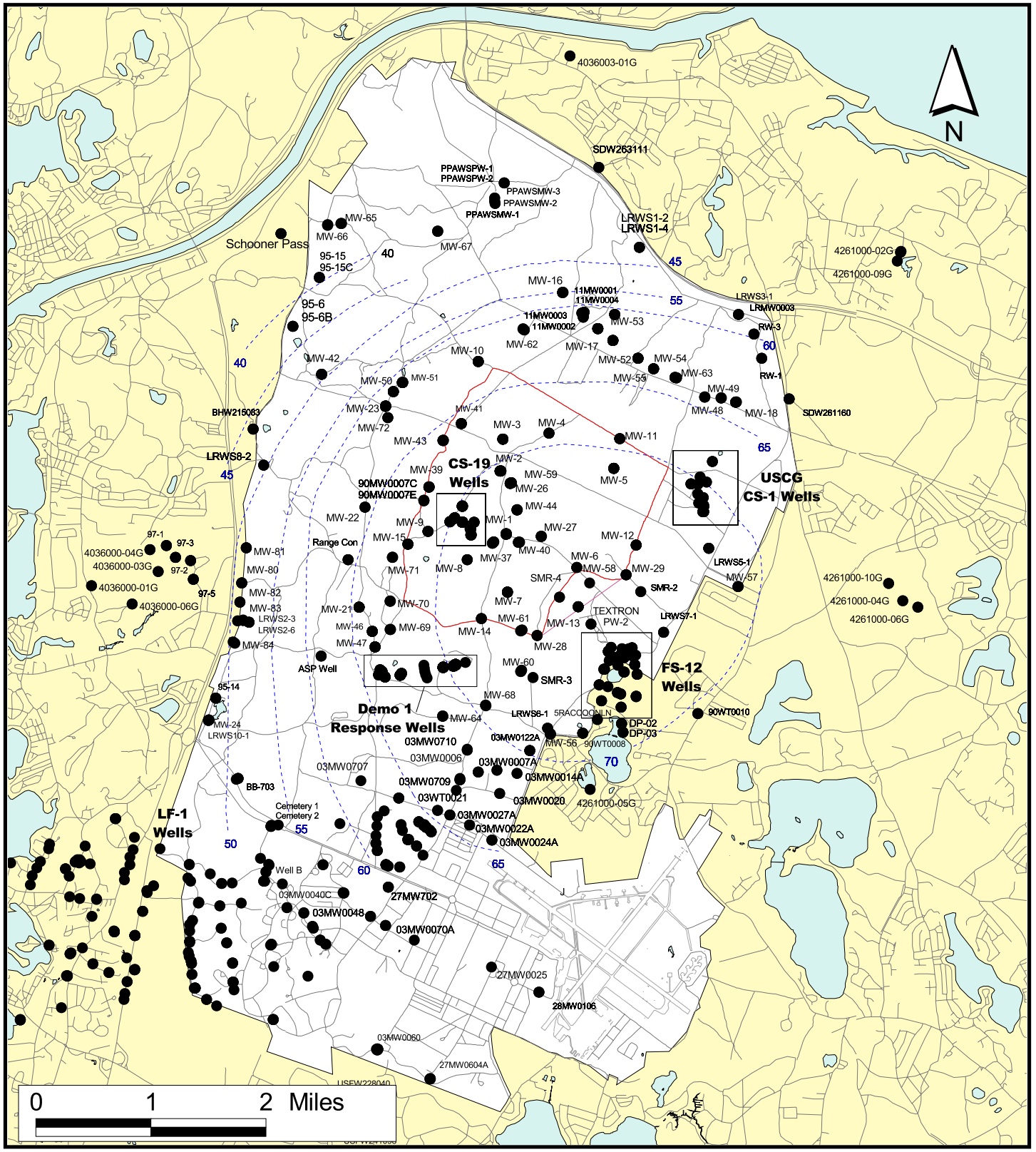


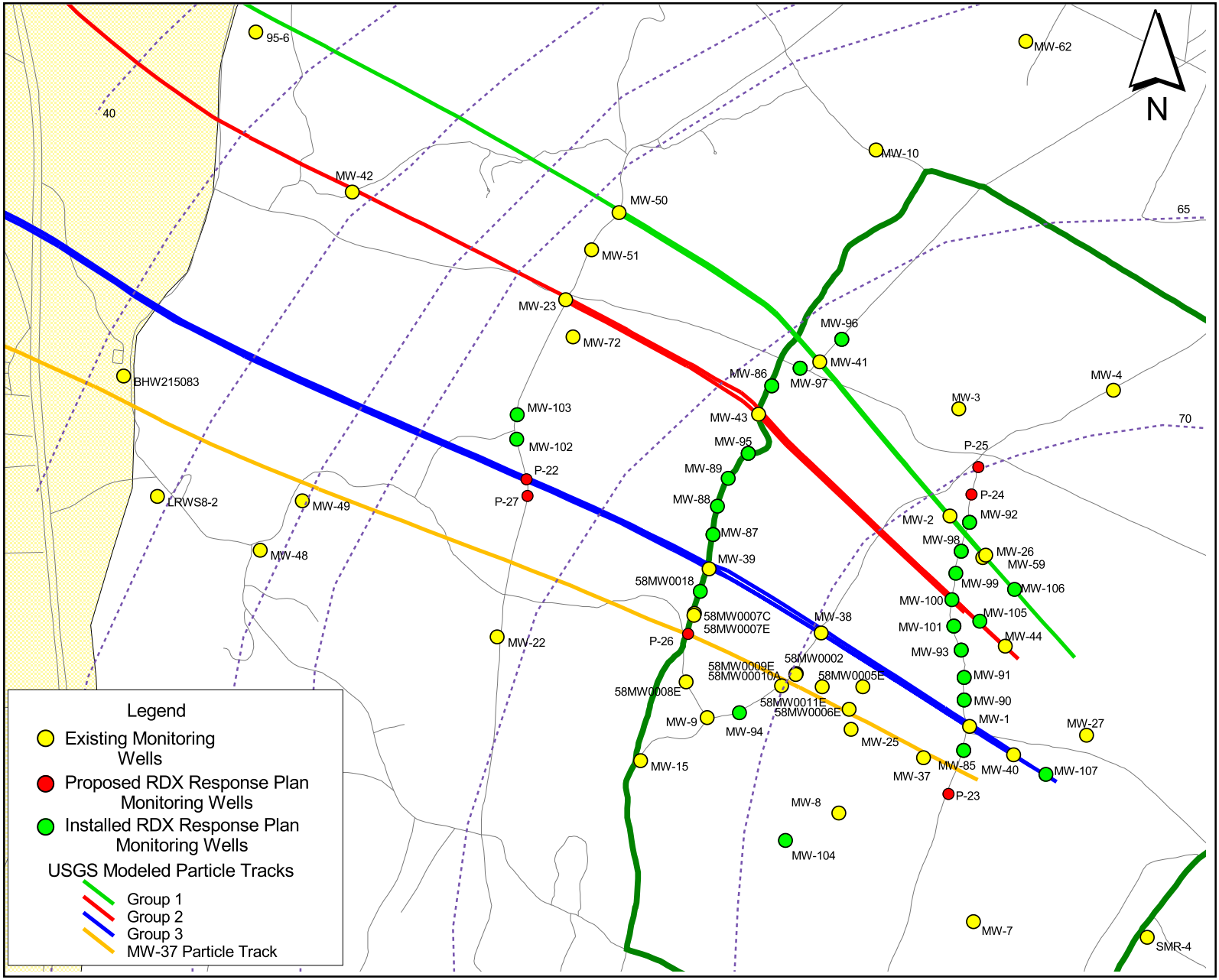
Sources & Notes

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 A