WEEKLY PROGRESS UPDATE
FOR APRIL 10 – APRIL 14, 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 April 10 to April 14, 2000.

1. SUMMARY OF ACTIONS TAKEN

Drilling progress as of April 14 is summarized in Table 1.

Table 1. Drilling progress as of April 14, 2000

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-95	Impact Area Response (P-13)	230	103	125-135 167-177 202-212
MW-96	Impact Area Response Well (P-10)	240	104	
MW-97	Impact Area Response Well (P-11)	130	5	
MW-98	Impact Area Response Well (P-2)	32		

bgs = below ground surface
bwt = below water table

Well installation was completed at MW-95 (Impact Area response well P-13). Drilling was completed on MW-96 (Impact Area response well P-10). Drilling commenced on MW-97 and MW-98 (Impact Area response wells P-11 and P-2). UXO clearance continued for the ground scars, bunkers, and trenches. The development of newly installed wells continued.

Samples collected during the reporting period are summarized in Table 2. Groundwater sampling was completed for the third round of Group 2 far field wells and Phase IIa wells. Groundwater profile samples were collected from MW-96 (P-10), and MW-97 (P-11). Deep soil samples were collected during drilling at the boring for MW-96, MW-97, and MW-98.

The Guard, EPA, and MADEP had a meeting on April 12 to discuss technical issues, including the following:

- It was reported that no explosives have been detected in the first of the proposed water supply wells under JPO's study. The Guard will check with JPO to see if copies of results are available.

- Tetra Tech provided an update on the munition survey. The geophysical survey at Demo 1 is now complete. The survey at the slit trench will begin shortly. Evaluation continues on geophysical methods appropriate for the water bodies. To date, five LAW rounds and three 81mm rounds have been discovered at the J2 Range.

- Ogden provided an update on the Rapid Response Action (RRA). Ogden is currently addressing the agency and public comments received on the RRA Workplan. Official public comments total eleven (eight oral and three written). EPA is waiting on the transcription of oral comments. A response to

comments is expected by the week of 4/24. A meeting will be scheduled to review responses. The final workplan is expected to be submitted with a follow-up meeting in early May. EPA will generate an acceptance letter and the final plan then will be formally submitted to MADEP as the RAM plan under Guard's LSP signature.

- RRA UXO avoidance will start on 4/17. The treatability study is forecasted to start as scheduled. An updated schedule that includes other tie-ins requested by the agencies will be included in the revised workplan. Work is continuing on the draft FSP. Wetland delineation will begin on 4/17; Ogden will coordinate with Camp Good News through JEG. The Guard will continue coordination with the Sandwich Conservation Commission agent.

- Ogden provided an update on the IAGS. Drilling is near completion on P-10 (MW-95). Boring P-11 has stopped at 37 feet bgs due to drilling equipment problems. Installation of MW-94 is nearly finished. Boring location for P-21 is currently being prepared. Sampling of the Group 2 far-field wells will be completed this week. Sampling of the remaining Phase II wells will be completed this week as well. The Impact Area Response wells have been developed and sampling will begin once the dedicated pumps are received and installed. Ogden predicts this sampling effort will begin within three weeks. Samples collected will be on a five-day turn for explosives.

- Action Items from the 4/5/00 IART Meeting were reviewed. (Item 7) A request for delineating the limits of contaminant migration based on groundwater profiling data was discussed. It was agreed that defining "plumes" with the profile data was probably not appropriate given the presumed accuracy of profile data. Options discussed for better presentations include vertical cross-sections as are used by the technical team for screen selection, color-coding, and waiting to present well sample results only. The Guard will review these options and discuss at a future technical meeting. (Item 8) It was agreed that the reference to "mortar" will be removed from future target names, and the numbering scheme continues as before.

- The status of documents and other submittals was discussed.
  - The resolution meeting for the PEP Report responses is scheduled for 4/20. DEP has not commented individually on the various companion submittals and requests that the table indicates that no comments will be forthcoming on these submittals.
  - Activities under the Workplan for Soil Maintenance Action Project have been completed. Ogden will include an addendum to the earlier report on the separation process after reviewing the Peer report. The disposition of the separated cobbles is pending approval by EPA of the 2/25/00 letter.
  - EPA will provide input on the CWR response to comments, but will not be expecting a revision to be prepared.
  - EPA expects to submit comments on the interim results report by the end of next week – many of the issues raised in this package will be common to other Guard submittals and would best be addressed in those documents.
  - The Phase IIb Workplan responses will be submitted to the agencies on 4/27. EPA would like to have a meeting with the Guard during that week to discuss the scope and schedule for Phase IIb activities.
  - The resolution meeting for the Fate and Transport Measurements comments will be moved to 4/27 due to travel during the week of 5/1. The Guard will have comment responses to the agencies by 4/19.
  - Discussion of comments on the Proposed Groundwater Model will be covered next week – the measurements component will be discussed on 4/27.
  - Comment resolution for the KD/U Range workplan will be held next week. EPA indicates that this will be an extensive discussion.

- EPA will look at the August BIP Report ASAP, at least for format so that the remaining reports can be completed efficiently. Agencies would like to see a discussion of the disposition of soils included in future reports. For clarity, the agencies would like to see a monthly BIP report as opposed to individual report on each BIP. MADEP recommended that soil be immediately excavated and drummed at each BIP site to eliminate the need to temporarily cover sites with plastic until lab results are available to determine its ultimate disposition.
- The SAR Workplan and the RRA Workplan will be added to the status table.
- The Demo 1 response plan TM will consider all data currently available.
- There may be some overlap in the J3 Range workplans prepared by the Guard and Textron. Table 6-1 provided in Textron's Phase I report summarizes what they plan to do. MADEP strongly urges the Guard to coordinate with Textron, as they want to see one set of MCP submittals for the J1/J3 Ranges. They also reminded the Guard that removal activities could only begin after a RAM plan had been submitted and approved.

- EPA asked about the status of results for the "trench" soil samples. Ogden will provide a table of detects for explosives.

- EPA wants to accompany Ogden on their scheduled visit to the J3 Range tomorrow. The Guard will contact Textron and USACE regarding oversight of closeout activities at the J3 Range. MADEP recommends the Guard issue a request letter to Textron on disclosing all past closeout activities and specifying a due date for responding.

- EPA asked that the public meeting map for metals be revised to show wells having detects < MCL/HA.

- EPA asked for updates of the transect cross sections used for well screen selection.

- An EOD team from Alabama is arriving today and will be on-site for approximately two days. They will be submitting a report of findings to allow for proper storage and disposal of currently identified UXO. The EOD team will be back onsite full time starting the week of 4/23.

- Reconnaissance of the Training Areas was discussed. EPA requests that in addition to the two days of ground reconnaissance, a Training Areas fly-over will be necessary. LTC Fitzpatrick indicated that a three-week notice is necessary to arrange for helicopter flights. Tentative passenger list includes T.Borci, J. Drake, B. Gregson, CPT Myer, LTC Fitzpatrick, M. Grant, J. Rice, and B. Rice. The second day of ground recon was tentatively scheduled for next Wednesday (4/19). Attendees to the ground recon scheduled for today agreed to reconvene at Range Control 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 profile samples from MW-96 had detections of 1,3,5-trinitrobenzene (5 intervals), RDX (2 intervals), nitroglycerin (9 intervals), 2,4-dinitrotoluene (2 intervals), picric acid (3 intervals), TNT (1 interval), 2-nirtotoluene (1 interval), 3-nitrotoluene (2 intervals), and 4-nitrotoluene (1 interval). The RDX detections were verified by PDA spectra.

3. DELIVERABLES SUBMITTED

Monthly Progress Report for March 2000 4/10/00

4. SCHEDULED ACTIONS

Scheduled actions for the week of April 17 include the construction of monitoring wells at MW-96 (P-10); continued drilling and well installation at MW-97 (P-11); continued drilling at MW-98 (P-2); and the continued groundwater sampling of round 3 of Group 2 far field wells and round 3 of Phase IIa wells. The UXO located at the target 9 drilling pad, P-19 drilling pad, P-20 drilling pad, and the J-2 Range are scheduled for detonation on 4/21/00.

5. SUMMARY OF ACTIVITIES FOR DEMO 1

The geophysical survey of Demo 1 has been completed. Data will be processed for evaluation of anomalies.

TABLE 2
SAMPLING PROGRESS
4/10/00-4/14/00

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G96DAE	FIELDQC	04/12/2000	FIELDQC	0.00	0.00		
G96DCE	FIELDQC	04/12/2000	FIELDQC	0.00	0.00		
G96DIE	FIELDQC	04/13/2000	FIELDQC	0.00	0.00		
G97DAE	FIELDQC	04/13/2000	FIELDQC	0.00	0.00		
S96DFE	FIELDQC	04/11/2000	FIELDQC	0.00	0.00		
S96DNE	FIELDQC	04/11/2000	FIELDQC	0.00	0.00		
S97DCE	FIELDQC	04/11/2000	FIELDQC	0.00	0.00		
S97DCT	FIELDQC	04/12/2000	FIELDQC	0.00	0.00		
S97DKE	FIELDQC	04/13/2000	FIELDQC	0.00	0.00		
S98DCE	FIELDQC	04/14/2000	FIELDQC	0.00	0.00		
W40M1T	FIELDQC	04/14/2000	FIELDQC	0.00	0.00		
W44SST	FIELDQC	04/13/2000	FIELDQC	0.00	0.00		
W81M3T	FIELDQC	04/10/2000	FIELDQC	0.00	0.00		
W82M1T	FIELDQC	04/11/2000	FIELDQC	0.00	0.00		
W83SST	FIELDQC	04/13/2000	FIELDQC	0.00	0.00		
W37M3A	MW-37	04/14/2000	GROUNDWATER	130.00	140.00	7.90	17.90
W40M1A	MW-40	04/14/2000	GROUNDWATER	132.50	142.50	11.53	21.53
W44SSA	MW-44	04/13/2000	GROUNDWATER	123.00	133.00	-6.60	3.40
W60SSA	MW-60	04/14/2000	GROUNDWATER	90.00	101.00	-5.68	5.32
W61SSA	MW-61	04/13/2000	GROUNDWATER	98.00	108.00	-4.71	5.29
W62SSA	MW-62	04/14/2000	GROUNDWATER	108.00	118.00	-4.70	5.30
W81M3A	MW-81	04/10/2000	GROUNDWATER	53.00	58.00	22.93	27.93
W82DDA	MW-82	04/11/2000	GROUNDWATER	125.00	135.00	94.37	104.37
W82M1A	MW-82	04/12/2000	GROUNDWATER	104.00	114.00	73.50	83.50
W82M2A	MW-82	04/10/2000	GROUNDWATER	78.00	88.00	47.80	57.80
W82M3A	MW-82	04/11/2000	GROUNDWATER	54.00	64.00	23.52	33.52
W82SSA	MW-82	04/10/2000	GROUNDWATER	25.00	35.00	-4.69	5.31
W82SSD	MW-82	04/10/2000	GROUNDWATER	25.00	35.00	-4.69	5.31
W83DDA	MW-83	04/12/2000	GROUNDWATER	142.00	152.00	106.41	116.41
W83M1A	MW-83	04/12/2000	GROUNDWATER	110.00	120.00	79.99	89.99
W83M2A	MW-83	04/13/2000	GROUNDWATER	85.00	95.00	48.80	58.80
W83M3A	MW-83	04/13/2000	GROUNDWATER	60.00	70.00	23.70	33.70
W83SSA	MW-83	04/13/2000	GROUNDWATER	33.00	43.00	-3.20	6.80
DW9514	GAC WATER	04/14/2000	IDW				
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40
G96DBA	MW-96	04/11/2000	PROFILE	150.00	150.00	14.40	14.40
G96DCA	MW-96	04/12/2000	PROFILE	160.00	160.00	24.40	24.40
G96DDA	MW-96	04/12/2000	PROFILE	170.00	170.00	34.40	34.40
G96DEA	MW-96	04/12/2000	PROFILE	180.00	180.00	44.40	44.40
G96DED	MW-96	04/12/2000	PROFILE	180.00	180.00	44.40	44.40
G96DFA	MW-96	04/12/2000	PROFILE	190.00	190.00	54.40	54.40
G96DGA	MW-96	04/12/2000	PROFILE	200.00	200.00	64.40	64.40
G96DHA	MW-96	04/12/2000	PROFILE	210.00	210.00	74.40	74.40
G96DIA	MW-96	04/13/2000	PROFILE	220.00	220.00	84.40	84.40

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
4/10/00-4/14/00

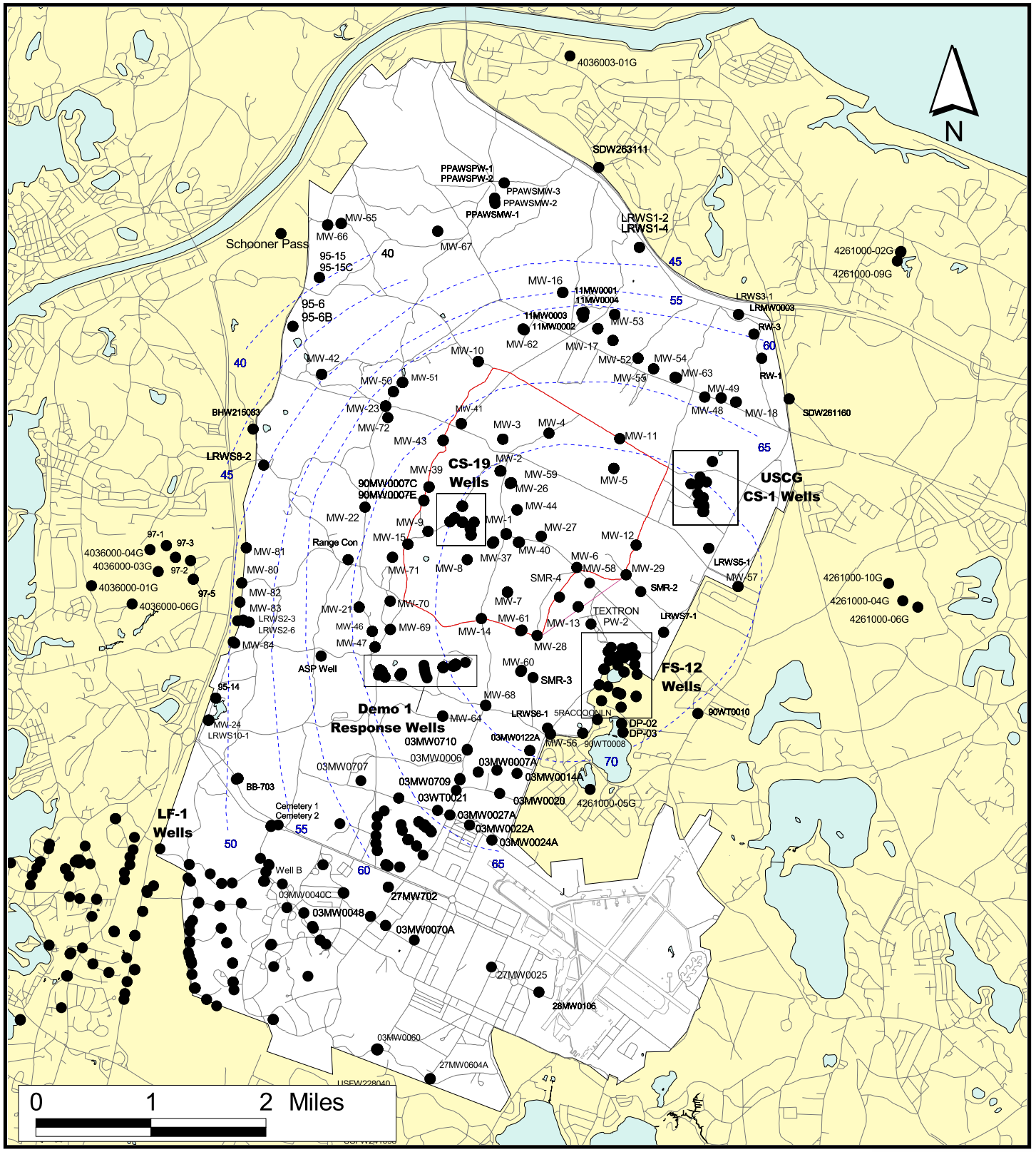
OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
G96DID	MW-96	04/13/2000	PROFILE	220.00	220.00	84.40	84.40
G96DJA	MW-96	04/13/2000	PROFILE	230.00	230.00	94.40	94.40
G96DKA	MW-96	04/13/2000	PROFILE	240.00	240.00	104.40	104.40
G97DAA	MW-97	04/13/2000	PROFILE	125.00	125.00	0.00	0.00
S96DFA	MW-96	04/10/2000	SOIL BORING	40.00	44.00		
S96DFD	MW-96	04/10/2000	SOIL BORING	40.00	44.00		
S96DGA	MW-96	04/10/2000	SOIL BORING	50.00	52.00		
S96DHA	MW-96	04/10/2000	SOIL BORING	60.00	62.00		
S96DIA	MW-96	04/10/2000	SOIL BORING	70.00	72.00		
S96DJA	MW-96	04/10/2000	SOIL BORING	80.00	82.00		
S96DKA	MW-96	04/10/2000	SOIL BORING	90.00	92.00		
S96DLA	MW-96	04/10/2000	SOIL BORING	100.00	102.00		
S96DMA	MW-96	04/10/2000	SOIL BORING	110.00	114.00		
S96DMD	MW-96	04/10/2000	SOIL BORING	110.00	114.00		
S96DNA	MW-96	04/11/2000	SOIL BORING	120.00	120.00		
S96DOA	MW-96	04/11/2000	SOIL BORING	130.00	132.00		
S96DPA	MW-96	04/11/2000	SOIL BORING	140.00	142.00		
S97DCA	MW-97	04/11/2000	SOIL BORING	10.00	12.00		
S97DDA	MW-97	04/11/2000	SOIL BORING	20.00	22.00		
S97DEA	MW-97	04/11/2000	SOIL BORING	30.00	32.00		
S97DFA	MW-97	04/12/2000	SOIL BORING	40.00	42.00		
S97DGA	MW-97	04/12/2000	SOIL BORING	50.00	52.00		
S97DGD	MW-97	04/12/2000	SOIL BORING	50.00	52.00		
S97DHA	MW-97	04/12/2000	SOIL BORING	60.00	62.00		
S97DIA	MW-97	04/12/2000	SOIL BORING	70.00	72.00		
S97DJA	MW-97	04/12/2000	SOIL BORING	80.00	82.00		
S97DKA	MW-97	04/13/2000	SOIL BORING	90.00	92.00		
S97DLA	MW-97	04/13/2000	SOIL BORING	100.00	102.00		
S97DMA	MW-97	04/13/2000	SOIL BORING	110.00	112.00		
S97DMD	MW-97	04/13/2000	SOIL BORING	110.00	112.00		
S97DNA	MW-97	04/13/2000	SOIL BORING	120.00	122.00		
S98DCA	MW-98	04/14/2000	SOIL BORING	10.00	12.00		
S98DDA	MW-98	04/14/2000	SOIL BORING	20.00	22.00		
S98DEA	MW-98	04/14/2000	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
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 4/10/00-4/14/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40	8330N	1,3,5-TRINITROBENZENE	NO
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40	8330N	2,4,6-TRINITROTOLUENE	NO
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40	8330N	2,4-DINITROTOLUENE	NO
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40	8330N	2-NITROTOLUENE	NO
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40	8330N	3-NITROTOLUENE	NO
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40	8330N	4-NITROTOLUENE	NO
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40	8330N	NITROGLYCERIN	NO
G96DAA	MW-96	04/11/2000	PROFILE	140.00	140.00	4.40	4.40	8330N	PICRIC ACID	NO
G96DBA	MW-96	04/11/2000	PROFILE	150.00	150.00	14.40	14.40	8330N	1,3,5-TRINITROBENZENE	NO
G96DBA	MW-96	04/11/2000	PROFILE	150.00	150.00	14.40	14.40	8330N	2,4-DINITROTOLUENE	NO
G96DBA	MW-96	04/11/2000	PROFILE	150.00	150.00	14.40	14.40	8330N	3-NITROTOLUENE	NO
G96DBA	MW-96	04/11/2000	PROFILE	150.00	150.00	14.40	14.40	8330N	NITROGLYCERIN	NO
G96DBA	MW-96	04/11/2000	PROFILE	150.00	150.00	14.40	14.40	8330N	PICRIC ACID	NO
G96DCA	MW-96	04/12/2000	PROFILE	160.00	160.00	24.40	24.40	8330N	1,3,5-TRINITROBENZENE	NO
G96DCA	MW-96	04/12/2000	PROFILE	160.00	160.00	24.40	24.40	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G96DCA	MW-96	04/12/2000	PROFILE	160.00	160.00	24.40	24.40	8330N	NITROGLYCERIN	NO
G96DDA	MW-96	04/12/2000	PROFILE	170.00	170.00	34.40	34.40	8330N	HEXAHYDRO-1,3,5-TRINITRO-1,3	YES
G96DDA	MW-96	04/12/2000	PROFILE	170.00	170.00	34.40	34.40	8330N	NITROGLYCERIN	NO
G96DEA	MW-96	04/12/2000	PROFILE	180.00	180.00	44.40	44.40	8330N	NITROGLYCERIN	NO
G96DED	MW-96	04/12/2000	PROFILE	180.00	180.00	44.40	44.40	8330N	1,3,5-TRINITROBENZENE	NO
G96DED	MW-96	04/12/2000	PROFILE	180.00	180.00	44.40	44.40	8330N	NITROGLYCERIN	NO
G96DFA	MW-96	04/12/2000	PROFILE	190.00	190.00	54.40	54.40	8330N	NITROGLYCERIN	NO
G96DGA	MW-96	04/12/2000	PROFILE	200.00	200.00	64.40	64.40	8330N	NITROGLYCERIN	NO
G96DHA	MW-96	04/12/2000	PROFILE	210.00	210.00	74.40	74.40	8330N	NITROGLYCERIN	NO
G96DIA	MW-96	04/13/2000	PROFILE	220.00	220.00	84.40	84.40	8330N	NITROGLYCERIN	NO
G96DIA	MW-96	04/13/2000	PROFILE	220.00	220.00	84.40	84.40	8330N	PICRIC ACID	NO
G96DID	MW-96	04/13/2000	PROFILE	220.00	220.00	84.40	84.40	8330N	1,3,5-TRINITROBENZENE	NO
G96DID	MW-96	04/13/2000	PROFILE	220.00	220.00	84.40	84.40	8330N	NITROGLYCERIN	NO
G96DID	MW-96	04/13/2000	PROFILE	220.00	220.00	84.40	84.40	8330N	PICRIC ACID	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



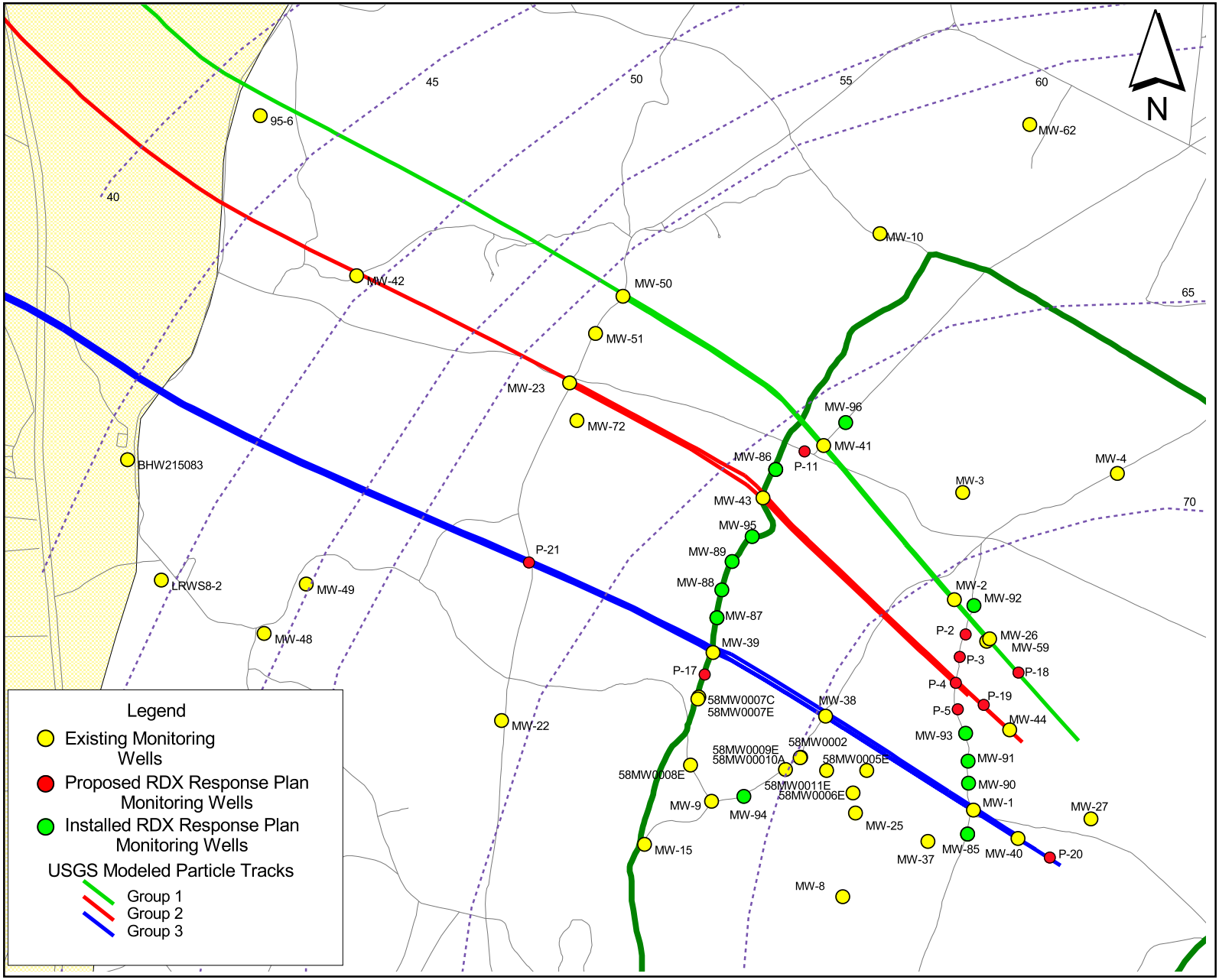
Sources & Notes

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 A