WEEKLY PROGRESS UPDATE
FOR JULY 10 – JULY 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 July 10 to July 14, 2000.

1. SUMMARY OF ACTIONS TAKEN

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

Table 1. Drilling progress as of July 14, 2000

Boring Number	Purpose of Boring/Well	Total Depth (ft bgs)	Saturated Depth (ft bwt)	Completed Well Screens (ft bgs)
MW-108	Impact Area Response Well (P-22)	370	203	282-292 297-307
MW-108b	Impact Area Response Well (P-22)	10		
MW-110	Impact Area Response Well (P-27)	350	174	220.5-230.5 248.5-258.5 315.5-325.5
MW-111	Impact Area Response Well (P-26)	34		

bgs = below ground surface
bwt = below water table

Wells were completed on MW-108 (P-22) and MW-110 (P-27). Drilling commenced on MW-108b (P-22) and on MW-111 (P-26). UXO clearance of the J-2 Range drill pads and access roads commenced. UXO located on the J-2 Range that could not be relocated for disposal in the Controlled Detonation Chamber were detonated on 7/13/00. Development of newly installed wells continued.

Samples collected during the reporting period are summarized in Table 2. Samples were collected from the soil under the pyrotechnic residue and the 30mm projectile casing located on the J-2 Range. Soil samples were collected from the craters of the UXO items detonated on the J-2 Range on 7/13/00. Soil samples were collected from the grids located around the UXO detonation craters at Turpentine Road and CS-19. Groundwater sampling was completed for the third round of the Group II new far field wells. Groundwater profile samples were collected during drilling at the boring for MW-108. Shallow soil samples (0”-6” and 18”-24”) were collected from MW-108, MW-109, P-23, and P-26 (MW-111). Deep soil samples were collected during the drilling of MW-111.

The Guard, EPA, and MADEP had a meeting on July 13 to discuss technical issues, including the following:

- The Guard provided an update of the water supply investigation. The pump test for Site 2 has been completed. Currently working on the final design for the pipeline. The Environmental Assessment (EA) has been submitted for public comment. The Guard will ask JPO if the agencies had comments to the EA. EPA asked the Guard to produce several copies of the EA. The groundbreaking ceremony for the pipeline is scheduled for the last week in August.

- Tetra Tech provided an update of the Munitions Survey investigation. The aerial survey of the impact area is completed. Currently processing the data and it looks good so far. The response to EPA comments on the HUTA workplan will be submitted today and the response to DEP comments will be submitted by July 19. The Record of Environmental Consideration for the HUTA work was reviewed and signed by the NGB Representative & MAARNG Natural Resources Manager, but final approval of REC is being withheld by MAARNG State Environmental Supervisor pending evaluation/coordination with NGB concerning cumulative impacts of AO activities on local environment. The vegetation clearance for the HUTA and the screening area is scheduled to start today. The Guard asked when the digging is scheduled to start. Tetra Tech indicated that the digging is scheduled to start by mid August. Ogden requested that Tetra Tech provide a map of the HUTA work area and access road to minimize interference with any proposed Groundwater Investigation work. Temporarily discontinuing work in the J-2 Range because Ogden is currently preparing for soil sampling and well installation in the area. There will be a blow in place of 8 items in the J-2 Range today. Tetra Tech proposes to validate the Gun and Mortar Position anomalies by digging all anomalies in MP-5 and GP-5. Four pages of handouts of the anomalies and the validation locations were distributed to EPA. EPA asked when the other positions are scheduled for validation. The Guard indicated that excavation of all anomalies is not part of the munitions survey, only the HUTA and validation will be excavated. EPA agreed and suggested that validation be done at positions were there is evidence of burial (GP-11 and GP-16). EPA requested copies of the anomaly maps from each position to aid in the selection of the validation areas. Tetra Tech will provide EPA all of the anomaly maps and the calibration area map today. The validation of Demo 1 will use a 45mV threshold. Five trenches are proposed (3 inside the bowl and 2 outside) to be excavated. Tetra Tech will coordinate with Ogden on the anomalies detected in the soil borings located east of MW-19. The water bodies will be validated using visual observation from the shore and a boat. EPA asked if there was a response to comments on Tetra Tech's J-2 Estimation Plan; Tetra Tech will check. EPA requested the status of the radiological survey. The Guard was under the impression that the plan was if the steel plates were located then further investigations would be required. EPA indicated that it was previously agreed that soil samples would be collected at several locations and that a plan was required. Tetra Tech will prepare a plan before next weeks Tech Meeting. EPA requested an update of the start of work in the J1/J3 Ranges. Tetra Tech indicated that they have been concentrating their effort on the HUTA. EPA reminded Tetra Tech that their schedule has work starting on the J1/J3 Ranges in May.

- The DEP indicated that comments were e-mailed from some of the members on the IART on the soil sampling for the small arms ranges. EPA suggested that the agencies and the Guard discuss these comments at the conclusion of the Technical Meeting. Ogden indicated that comments from IART were requested by 7/19, and were to be resolved by 7/20.

- Ogden provided an update of the Rapid Response Action. Maps with the locations of the additional delineation grids and the data table were distributed. There were detections of nitroglycerin in three grids at the KD Range firing point. Additional soil delineation grids will have to be sampled next week. DEP asked the status of the containment pad design. Ogden indicated that the surveyor was on site this week.

- Ogden provided an update of the Groundwater Investigation. Currently installing the two deep wells at MW-108. The MW-108 blow down boring and well installation will commence next week. Currently installing the monitoring wells at MW-110 and the rig will relocate to the P-23 location next week. Completed the third round of the Group II new far field wells this week. The next scheduled groundwater sampling is the August Long Term Monitoring and the third round of the Demo 1 response wells which will commence July 31. The UXO clearance of the J-2 drilling pads and roads commenced. A 3-page handout of the results of the three soil samples from under the popper kettle was distributed. There are concentrations of lead and antimony above the MCP S-1

standards. The DEP asked how the popper kettle was going to be handled under the MCP. The Guard indicated that they would like to think about the best way to deal with it. EPA was informed the ash sample from the inside of the kettle was sampled for the full suit of analytes but only the explosive results have been received. EPA requested a map showing the locations of all the popper kettle samples. EPA asked the status of the sampling of the white powder observed at GP-11. Ogden indicated that it was not sampled yet but would look into it.

- A 1-page handout of the document status was distributed. EPA requested a complete list of the documents, not just those requiring some action, be e-mail by tomorrow. DEP indicated that they would not be commenting on the BIP reports. EPA asked what documents are the highest priority for EPA comments. Ogden suggested that the Background tech memo, FS Workplan (for DEP), and Demo 1 tech memo are the highest priority. Ogden also indicated that the Training Areas FSP should be reviewed, although the field work would most likely require an extension from EPA due to delays in method development.

- The Guard distributed their reply to Textron's comments to the proposed Phase II Investigation for the J3 and J1 Ranges.

- EPA requested the status of the 8321 and CHPPM Method results; Ogden will check on it. EPA requested an update on the perchlorate sampling. Ogden indicated that the August Long Term Monitoring round includes the perchlorate sampling and would look into the status of the previous perchlorate sampling.

- The IART Agenda was discussed
  6:00-6:10 Introduction
  6:10-6:30 Action Items
  6:30-8:00 Groundwater Update
  8:00-8:30 Munitions Survey
  8:30-8:45 Facilitator
  8:45-9:00 Other
  EPA requested that Tetra Tech provide a summary of their presentation prior to the meeting.

- The Guard distributed a draft map with the RDX detections in the Central Impact Area in a grayed area and a second map of the RDX detections above the health advisory in a grayed area. DEP requested that the proposed supplemental wells be added to the map. EPA requested that both maps be included as one map with different shading and the CS-19 plume be a hatched pattern. EPA suggested that this revised map and cross sections with the same shading be presented at the next IART meeting.

- EPA requested an update on the schedule for the Archive Search work. The Guard will e-mail the final scope to EPA.

- The Guard distributed a revised UXO incident report form and the table of UXO detonated or relocated. EPA requested that the charge used to detonate the item be added to the table.

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-108 had detections of picric acid (3 intervals), 2,6-dinitrotoluene (2 intervals), nitroglycerine (2 intervals), 4-nitrotoluene (1 interval), which were not verified by the PDA spectra.

- A groundwater profile sample for MW-110 had detections of 2,6-dinitrotoluene, 4-nitrotoluene, and picric acid in one interval, which were not verified by the PDA spectra.

3. DELIVERABLES SUBMITTED

The following deliverables were submitted during the reporting period.

Weekly Progress Update (June 26-30)	07/10/00
Monthly Progress Report #39 for June 2000	07/10/00
Draft Phase II (b) FSP for Gravity Anti-Tank Range	07/13/00
Final Phase II (b) Supplemental Workplan	07/14/00
Weekly Progress Update (July 3-7)	07/14/00

4. SCHEDULED ACTIONS

Scheduled actions for the week of July 17 include the construction of monitoring wells at MW-108b (P-22); continue drilling on MW-111 (P-26); collection of additional delineation soil grids in the KD Range as part of the RRA; the continued UXO clearance of the drilling pads and soil grids in the J-2 Range; 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.

TABLE 2
SAMPLING PROGRESS
07/9/2000-07/15/2000

OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
HDJ23.5IN1	HDJ23.5IN1	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ230MM	HDJ230MM	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ230MMD	HDJ230MM	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ260MM1	HDJ260MM1	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ281MM2	HDJ281MM2	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ281MM3	HDJ281MM3	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ281MM4	HDJ281MM4	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ281MM5	HDJ281MM5	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ281MM6	HDJ281MM6	07/14/2000	CRATER GRAB	0.00	0.25		
HDJ2PYRRES	HDJ2PYRRES	07/14/2000	CRATER GRAB	0.00	0.25		
HDCS19105MMSS1	HDCS19105MMSS1	07/11/2000	CRATER GRID	0.00	0.50		
HDCS19105MMSS2	HDCS19105MMSS2	07/11/2000	CRATER GRID	0.00	0.50		
HDCS19105MMSS3	HDCS19105MMSS3	07/11/2000	CRATER GRID	0.00	0.50		
HDCS19105MMSS4	HDCS19105MMSS4	07/11/2000	CRATER GRID	0.00	0.50		
HDCS19105MMSS5	HDCS19105MMSS5	07/11/2000	CRATER GRID	0.00	0.50		
HDCS19105MMSS6	HDCS19105MMSS6	07/11/2000	CRATER GRID	0.00	0.50		
HDCS19105MMSS7	HDCS19105MMSS7	07/11/2000	CRATER GRID	0.00	0.50		
HDCS19105MMSS8	HDCS19105MMSS8	07/11/2000	CRATER GRID	0.00	0.50		
HDCS19105MMSS8D	HDCS19105MMSS8	07/11/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS1	HDTR81MMSS1	07/11/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS2	HDTR81MMSS2	07/10/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS3	HDTR81MMSS3	07/11/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS4	HDTR81MMSS4	07/11/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS5	HDTR81MMSS5	07/11/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS6	HDTR81MMSS6	07/11/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS7	HDTR81MMSS7	07/11/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS8	HDTR81MMSS8	07/11/2000	CRATER GRID	0.00	0.50		
HDTR81MMSS8D	HDTR81MMSS8	07/11/2000	CRATER GRID	0.00	0.50		
G108DUE	FIELDQC	07/10/2000	FIELDQC	0.00	0.00		
HDCS19105MMSS8E	FIELDQC	07/11/2000	FIELDQC	0.00	0.00		
HDJ23.5IN1E	FIELDQC	07/14/2000	FIELDQC	0.00	0.00		
S111DCE	FIELDQC	07/14/2000	FIELDQC	0.00	0.00		
SP26DAT	FIELDQC	07/12/2000	FIELDQC	0.00	0.00		
SP26DBE	FIELDQC	07/12/2000	FIELDQC	0.00	0.00		
W84M1T	FIELDQC	07/10/2000	FIELDQC	0.00	0.00		
W84M1A	MW-84	07/10/2000	GROUNDWATER	140.00	150.00	101.14	111.14
W84M1D	MW-84	07/10/2000	GROUNDWATER	140.00	150.00	101.14	111.14
G108DTA	MW-108	07/10/2000	PROFILE	360.00	360.00	193.10	193.10
G108DUA	MW-108	07/10/2000	PROFILE	370.00	370.00	203.10	203.10
S108DAA	MW108	07/12/2000	SOIL BORING	0.00	0.50		
S108DBA	MW108	07/12/2000	SOIL BORING	1.50	2.00		
S109DAA	MW-109	07/12/2000	SOIL BORING	0.00	0.50		
S109DBA	MW-109	07/12/2000	SOIL BORING	1.50	2.00		
S110DAA	MW-110	07/12/2000	SOIL BORING	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
BWTE = Depth below water table, end depth, measured in feet

TABLE 2
SAMPLING PROGRESS
07/9/2000-07/15/2000

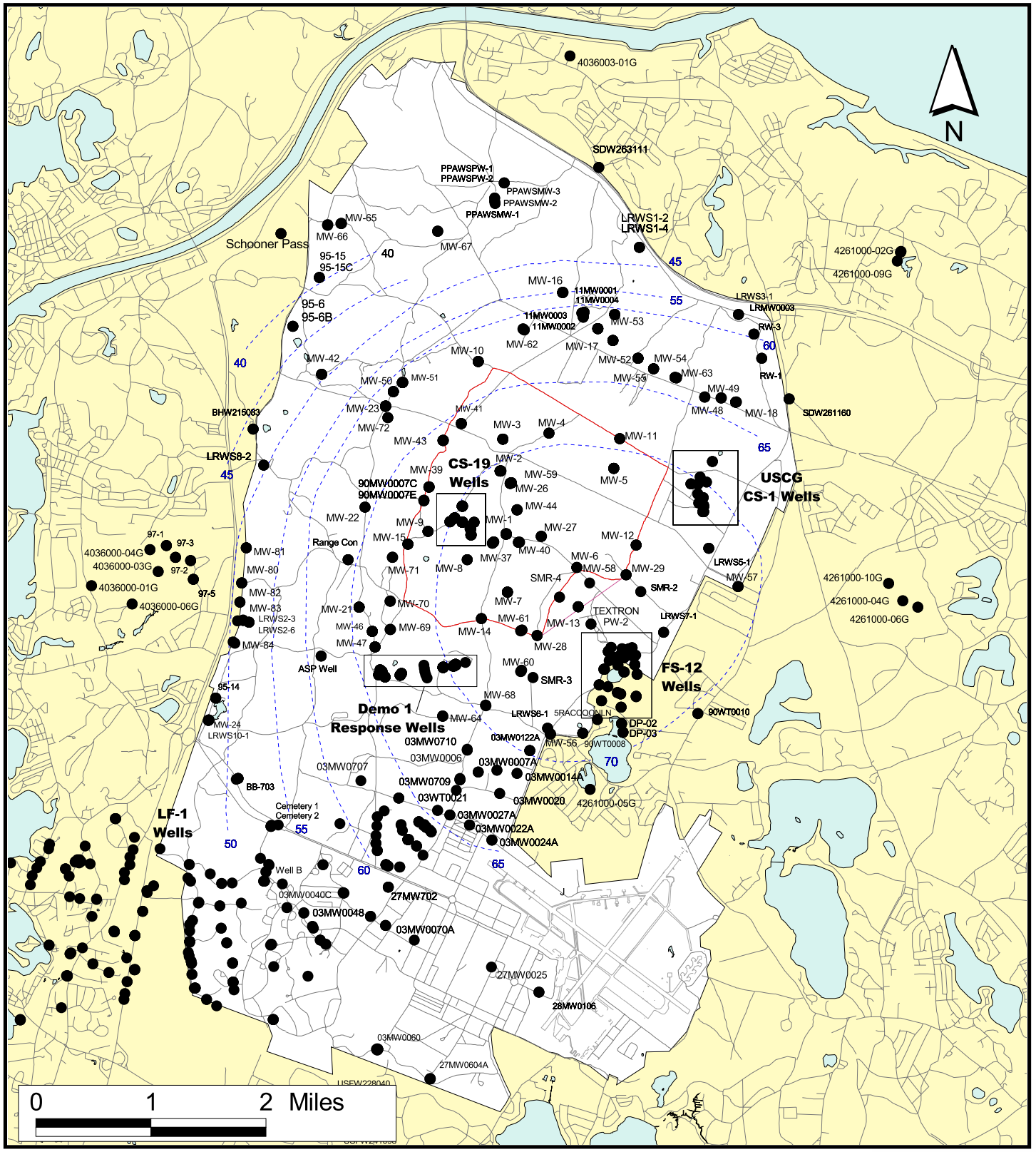
OGDEN_ID	LOCID OR WELL ID	DATE SAMPLED	SAMPLE TYPE	SBD	SED	BWTS	BWTE
S110DBA	MW-110	07/12/2000	SOIL BORING	1.50	2.00		
S111DCA	MW-111	07/14/2000	SOIL BORING	10.00	14.00		
S111DDA	MW-111	07/14/2000	SOIL BORING	20.00	22.00		
S111DEA	MW-111	07/14/2000	SOIL BORING	30.00	34.00		
S111DED	MW-111	07/14/2000	SOIL BORING	30.00	34.00		
SP23DAA	MW-23	07/12/2000	SOIL BORING	0.00	0.50		
SP23DBA	MW-23	07/12/2000	SOIL BORING	1.50	2.00		
SP26DAA	MW-26	07/12/2000	SOIL BORING	0.00	0.50		
SP26DBA	MW-26	07/12/2000	SOIL BORING	1.50	2.00		

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 6/25/00-7/15/00

OGDEN_ID	LOCID OR WELL ID	SAMPLED	SAMP_TYPE	SBD	SED	BWTS	BWTE	METHOD	OGDEN_ANALYTE	PDA
G108DOA	MW-108	06/29/2000	PROFILE	310.00	310.00	143.10	143.10	8330N	PICRIC ACID	NO
G108DPA	MW-108	06/29/2000	PROFILE	320.00	320.00	153.10	153.10	8330N	2,6-DINITROTOLUENE	NO
G108DPA	MW-108	06/29/2000	PROFILE	320.00	320.00	153.10	153.10	8330N	NITROGLYCERIN	NO
G108DPA	MW-108	06/29/2000	PROFILE	320.00	320.00	153.10	153.10	8330N	PICRIC ACID	NO
G108DQA	MW-108	06/29/2000	PROFILE	330.00	330.00	163.10	163.10	8330N	2,6-DINITROTOLUENE	NO
G108DQA	MW-108	06/29/2000	PROFILE	330.00	330.00	163.10	163.10	8330N	4-NITROTOLUENE	NO
G108DQA	MW-108	06/29/2000	PROFILE	330.00	330.00	163.10	163.10	8330N	NITROGLYCERIN	NO
G108DQA	MW-108	06/29/2000	PROFILE	330.00	330.00	163.10	163.10	8330N	PICRIC ACID	NO
G108DQD	MW-108	06/30/2000	PROFILE	330.00	330.00	163.10	163.10	8330N	2,6-DINITROTOLUENE	NO
G108DQD	MW-108	06/30/2000	PROFILE	330.00	330.00	163.10	163.10	8330N	4-NITROTOLUENE	NO
G108DQD	MW-108	06/30/2000	PROFILE	330.00	330.00	163.10	163.10	8330N	NITROGLYCERIN	NO
G108DQD	MW-108	06/30/2000	PROFILE	330.00	330.00	163.10	163.10	8330N	PICRIC ACID	NO
G110DQA	MW-110	07/06/2000	PROFILE	340.00	340.00	164.50	164.50	8330N	2,6-DINITROTOLUENE	NO
G110DQA	MW-110	07/06/2000	PROFILE	340.00	340.00	164.50	164.50	8330N	4-NITROTOLUENE	NO
G110DQA	MW-110	07/06/2000	PROFILE	340.00	340.00	164.50	164.50	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

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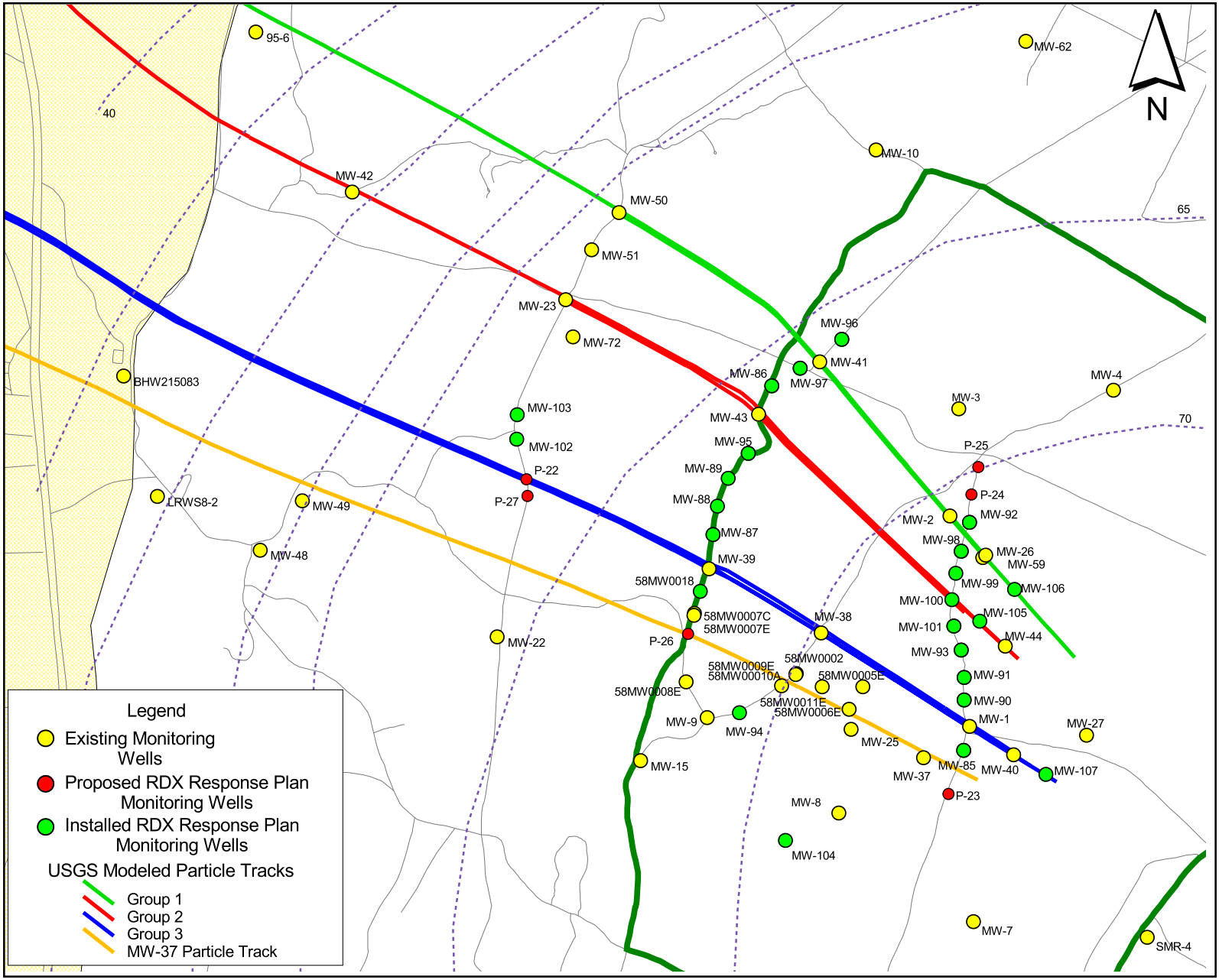
G:\MMR\well_updates.apr December 20, 1999

December 16, 1999 DRAFT



Proposed RDX Response Plan Wells In The Impact Area

Figure A